

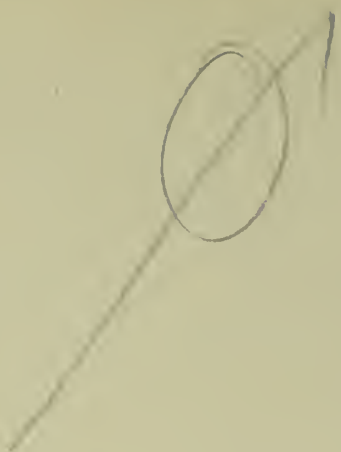




★

fc630.5

p/  
18







0 2007 1258056 8

California State Library









Volume XVIII.]

SAN FRANCISCO, SATURDAY, JULY 5, 1879.

Number 1.

### The Fourth of July.

Again comes the season for uncorking vials of patriotism, that tributes to the glorious past, the unparalleled present, and the transcendent future of our country may flow forth. The idea is one, whether it throbs in the heart beneath the round-about, or flutters within the sacque of silk, or whether it beat with tumultuous emotion against the obverse of an immaculate shirt front. Though the idea be one and the same in all these situations, the manner of its expression is different, and ranges from the bang of cracker and phiz of squib, through the swell of patriotic music heard in leafy groves, to the ponderous eloquence of the platform and the pomp of the parade. Let each one choose his patriotic expression as he will, for freedom is the genius of the day, and its language is in words to this effect: "That all men are created equal; that they are endowed by their Creator with certain inalienable rights; that among these are life, liberty, and the pursuit of happiness." Therefore we insist on the widest freedom in the choice of method for commemorating the nation's birth, and invoke the unchecked flow of all spirits save the alcoholic.

The growth of the country is properly the standard theme for Fourth of July comments. It is well to stop once each year, take new bearings to learn the speed and direction of our progress. This year's occasion will yield abundant material for rejoicing. The clouds of depression which have enclouded the industries of the country for the last few years seem indeed to be breaking away, and, as light follows darkness, so we may expect an era of wide prosperity to succeed the hardship which has been so widespread. The grievous years have been a severe experience, but their lessons have been salutary. In the wisdom of events it was necessary that our people should be purged of the inflated, extravagant and corrupt ideas which followed the waste of war, and every element of the country, from Government to individual, should be forced again into the narrow paths of true economy, industry and honesty. The hardships we have undergone have probably been the salvation of the nation—the refiner's fire and the fuller's soap which expelled our baseness and cleansed our minds of tendencies which would have soon brought us to the verge of ruin. It is fair now to hope that with a purified public service, and with truer aims and methods in the individual, we shall go forward into the possession of a future which we feel strong to realize, and which all the nations generously accord us. Let the Republic live. Let it still stand before the world as the exponent of the people's rights—the light to guide all nations in the reforms which are now in progress in all the countries of the globe; reforms which promise to usher in a day of universal liberty, liberty which shall conform all existing dynasties to the truths of humanity or sweep them from the earth.

To California the coming of the national holiday is of special significance this year, because at this time we come for the first time beneath the authority of the new Constitution. It is true that only those parts relating to the choice of new public servants, for which the Constitution provides, come now into effect; and that existing laws are unchanged. And yet it may be claimed that now the most vital issues will begin their course, for after all a constitution is a distant agency compared with the groups of legislators, judges and executive officers, who are to reduce its precepts to practical application. Therefore from this day let the thought of the people be upon the quality of the men who are claiming their suffrages. Let present professions be judged by their consistency with what is known of the men's lives and associations, with the course of their earlier thoughts, principles and actions. Never before in the history of the State, perhaps, has it been so important that the elective franchise be exercised with the fullest wisdom, honesty and independence.

While we speak of thoughts of duty as pertaining to the day, we do not forget the wisdom

which lies in wholesome amusement and recreation. Let the national holiday in remote homes be a memorable occasion. Borrow from its traditional glories to gild the pathway of the young. Speak to the children of the significance of the day, and stir them with thoughts of the perils attending the early declaration and the joy which crowned the success of the fathers of the republic. Incite them to manly and womanly thoughts by assurance that upon each of them will rest a part of the responsibility of maintaining the freedom and equality so gloriously attained. Give them joy, and teach them that there is a deep significance in the rejoicing. Thus will the day discharge the duty which the

RESTRAINING EARLY BUDS.—Those who find their buds prone to start early and thus subject themselves to nipping frosts, may be interested to hear of a root-chilling process used by a Rhenish land owner. If the trees are inclined to blossom too soon, he digs trenches round about their roots, throws in a few blocks of ice, and covers these over with the soil. Thus sheltered, the ice melts very slowly, and by its refrigerative action retards the further developments of the buds till all danger of night frosts is over. The trouble with this prescription in the warm parts of California is the absence of ice, except that made artificially, and it is in the



MARIPOSA TULIP—*Calochortus*.

fathers placed upon it by its selection as a national holiday.

INTERNATIONAL FLORICULTURE.—Since the recent notable improvements in means for transportation there is hardly anything which does not come within the reach of international exhibitions. The latest proposed is an international floral exhibition to be held in London next year. There was something of the kind in 1866, but now we may expect something embracing a much larger list of countries and a better show. It will indeed be a notable occasion and our coast will doubtless be represented by the many of our floral gems which have been introduced in English gardens and hot-houses.

parts where there is no ice that the need of a bud-repressing process is most felt. A method of saving the fruit by protecting the buds also coming, in this instance, from German sources, but not new, is to place large vessels of water in the immediate neighborhood of the trees, taking care to renew it as it evaporates, and to remove all ice that may form on the surface as it appears. This plan is said to be specially serviceable in the case of apricot and peach trees. The theory is that the water, by virtue of its superior powers of attraction for cold, absorbs it to such an extent as to protect the trees, when a moderate degree of frost only is present. It must be considered easier to get up a smoke than to arrange water tanks near each tree. The smoke method has succeeded well in this State.

### Mariposa or Butterfly Tulips.

(Written for the RURAL PRESS by PROF. J. C. LEMMON.)

"Mariposa" is a sweet, euphonious Spanish name for "butterfly." The name was given to a certain river of the Sierra in an early day, then to a county and a town, etc. Legendary lore hath it that a beautiful lily, or rather tulip, was first found here that so closely resembled certain gaudy butterflies that inspiratively "Mariposa" became the beauty's name.

The less pretty, but most characteristic name of *Calochortus*, has been given by botanists to this interesting family of plants, but in the common vernacular they are called "butterfly tulips". There are perhaps 20 or more species of them, scattered from end to end of the State, and from seaside to Sierra summit.

A glance at the illustrations on this page and on page nine, will serve to instruct one in recognizing the family, however modified the many species. They are of all colors of the spectrum, and vary in size from tiny yellow bells to magnificent tea-cups.

Some peep from out morass and grassy banks, some seek the shady grove, others holdly spread their gaudy corollas on the bare mountain crag. Some have already met with appreciation and awakened in spring to delight foreign eyes; others hide from the sight of all save the native tribes or the intrusive botanist. Within a few years several of the most showy species have been brought to light, chiefly in the hot, forbidding plains of southern California and the interior desert. Notably of these is the superb, purple and golden species of *Calochortus citrinus*, found by Mrs. Bartlett, in Glen Loch near Santa Barbara, and the *C. clovatus*, found near San Luis Obispo by the writer. A splendid flame-colored species, *C. Kennedyi*, was lately found by several parties out in the interior.

All the species yield readily to cultivation, being propagated by bulbs, gathering them after flowering and planting in spring. Few foreign families of plants exceed in beauty and hardiness our own native Mariposa tulips. Let every flower-lover try them.

ABSORPTION OF MOISTURE BY GRAIN.—A very interesting and important subject is brought forward in the graduating thesis of Mr. Edmond O'Neil, which is printed on page 10 of this issue. Mr. O'Neil graduated at the College of Agriculture last month and did well in the selection of his final topic of research at the institution to take a matter of much practical importance to our grain growers. The gain of weight in grain stored in a moist atmosphere has often been commented upon by warehouse men, but we are not aware that accurate experiments to ascertain the possible amount of this gain have hitherto been made in this State. Mr. O'Neil describes his methods and states the results with such clearness that it is only necessary to refer the reader to them. The practical considerations which are influenced by the possible gain in weight under certain conditions are certainly worth looking into, and the possibility of applying this gain to offset the cost of storage and interest, in calculations as to the expense of holding grain for future sale, should be worked out by those who have had experience in holding grain in store. Any observations of our readers in this connection will be gladly received for publication.

APPLYING BISULPHIDE.—Those who are experimenting with bisulphide of carbon for ground pests may like to try the French method, which is said to consist of dipping a few little pieces of brick in the liquid and placing them in the holes, then closing up the hole with dirt. This is said to be an effectual dose for rabbits in France and may suit our squirrels.

FOLIAGE AND RAINFALL.—In the course of an investigation of the relation between forests and the rainfall, M. Fautrat of the Paris Academy of Sciences has ascertained that leafy trees allow 58% of the rain-water which falls on them to go to the ground, while pine trees retain more than half in their branches.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

### Rus in Urbe—A California Home.

EDITORS PRESS:—In the sweet fresh air of this lovely June morning, I took an early drive through Mr. J. P. Pierce's place, in the western part of Santa Clara, in order to carry out a purpose I had formed of taking some notes of his place for the readers of the RURAL PRESS. And, although I had been on the premises before, I had never formed a correct idea of the extent, the neatness and the varied attractions of this beautiful California home.

The location first strikes the visitor as being peculiarly favorable for just such a beautiful place as we find it to be. Fronting, as it does, in its whole length, one of our principal streets, and the entrance to it, the outlook from the front door commands a perspective view of the principal business street of the town. As we approach the wide open gate, a wide and faultlessly smooth avenue bordered with large maple trees leads back to the house, half hid away among trees and vines peculiar to this climate. A large spreading cypress tree standing in the center of a circular plot of grass, divides the carriage way on either side of the house, forming a distinctive feature of the front yard. After passing the house, the carriage way to the stable is through one of the grandest and the most beautiful grape arbors I have ever seen. This arbor is about 22 feet wide and 320 feet in length, with a light corresponding to its width, the pavement as solid as rock and as smooth as a floor. The framework of the arbor is substantial in structure and most graceful in its design; it is painted white and the frame of the arches and the long, straight lattice work contrasts finely with the fresh green foliage of the grapevines that cover it so evenly in every part. The vines, which are of the Isabella variety, seem to be exceedingly vigorous, and have been pruned and trained in the most artistic manner, to cover so evenly every part of the arbor. I have seen this arbor when the fruit on it was ripe, when great purple clusters of luscious grapes were hanging down thick and evenly through the network of white and green, for its whole length—certainly the finest thing of the kind I have ever seen, and worth a trip of many miles to see.

Besides this spacious arbor there are several of less width but about the same length, all substantially built and neatly covered with grapevines; four of these run parallel with the main one, two on either side, and at uniform distance from it. Crossing these at right angles are two other long arbors, forming a grand system of beautiful arched walks of several hundred yards in length, all kept scrupulously neat and clean, as in fact may be said of the whole premises in every department. The squares formed by the arbors are filled with trees, vines and flowers, all under high cultivation.

But Mr. Pierce's place consists of about 100 acres of land, two-thirds, perhaps, of which is devoted to a mixed system of ornamental and business cultures, embracing nearly all the fruits, nuts and ornamental trees and flowers, under high cultivation, adapted to this climate. So a detailed account of everything of interest would far surpass the necessary limits of these notes.

#### Irrigation Arrangements.

His arrangements for irrigation and supplying water for all purposes, seemed very permanent and complete. On the south side of the place are located his wells, tank-house and large reservoir. Well elevated in this substantial building are two iron tanks, one of sufficient capacity to hold 90,000 gallons. The water is elevated by means of a steam engine and a large windmill that surmounts the peak of this unique building. From these tanks, the house, barns, fountains and lawn sprinklers are supplied. Then there is a large reservoir on the east side of the tank-house sufficiently elevated to irrigate all the grounds where water is needed. The reservoir is enclosed by a neat railing, and surrounded by an elevated walk bordered with trees, and on the water were some light pleasure boats.

The grounds immediately about the house on every side, are beautifully and artistically laid out and ornamented. There are smooth rambling walks under the trees, and through velvety plots of grass, clumps of flowers, rustic arbors, fountains, rookeries and beautiful views and vistas, with sunshine and shadows everywhere.

The house itself, though in the midst of such elegant surroundings, is plain and unpretentious, wearing the air of home comfort and convenience, rather than that of architectural display. Another noteworthy feature of Mr. Pierce's place is the number and elegance of the carriage ways. You can visit nearly every part of it without alighting. Many of them seem smooth and hard as of cement, and bordered by neatly painted curbs. The barns, stables, sheds, shops, tool-house, and houses for his employees, are neatly and conveniently arranged in a block some considerable distance west and back of the house. Back of these are corrals, poultry yards, and a pig yard densely shaded by a grove of young locust trees.

In the southwestern portion of the place the drive winds around among fine groves of cuca-

lyptus trees; and fruit trees are everywhere looking thrifty and all full of fruit.

A large portion of the northern part of the place is devoted to a variety of the best foreign grapes. All the avenues that divide this vineyard into square blocks, are bordered with a row of trees on each side. This large vineyard, like every other part of the place, bears the marks of neatness and high cultivation. One row of English walnut trees, the oldest on the place, I noticed were hanging full of nuts. These trees are about 10 years old, and have borne well for several years.

As to the financial question in connection with this kind of farming, I have no facts or figures to give—I only write from a passing observer's standpoint. Obviously, this is not to make money. Many other investments would have paid better. The 100 acres of land if devoted to grain or fruit alone, would have brought in better net profits. An energetic business man, engaged in other pursuits, wished to make a beautiful home for his family, cost what it would, offsetting the account at the same time with the most that could be made from the farm. That is the way it looks to me. And this seems a better use for money than fancy stocks or large tracts of unproductive land. To keep up a place like this, gives employment to many men; creates a demand for much material of different kinds, and many tools and machines are wanted. Every really valuable improvement in a place, adds something to the value of every other property on the place. Beside, surrounding our homes with the beautiful in nature and art does much to elevate the standard of public taste. G. W. M.

Santa Clara, Cal., June 18th, 1879.

### Present State of Agriculture in England.

EDITORS PRESS:—It would be alike satisfactory to you and to me if I could draw a bright picture of the state of the farming interest in the old country instead of a dark one, for a prosperous condition here affects in no small measure the farmers of your State of the setting sun in the same way, and a depressed condition here has its ill effect on the agriculture of California. It is not necessary for me to go into argument to convince your readers that farming is in a sorry plight in old England, for they know it already to their cost and sorrow in diminished prices of wheat and corn—the chief farm products that you export to this country, but I may point out a few facts that will indicate the extent of the depression under which our farmers are groaning.

So far as we are concerned you are interested most in wheat, and I will therefore take it first in order. You have frequently heard it stated in recent years that British wheat growers could with the greatest difficulty sustain the sharp competition of the Western States of the Union, and if such a statement was true two years or one year ago how much more emphatically true is it now. It is estimated that with our careful and concentrated style of husbandry we produce on the average about twenty-eight bushels per acre of wheat in England, and the great bulk of our farmers, as you are aware, pay an annual rent to their landlords, in addition to imperial taxes and local rates, of say 20 to 50 shillings an acre according to quality; and besides these things, our deuse, heavy, sticky wheat soils are vastly more costly to work than are the wheat soils I have seen in some of your Middle States, and good crops can be grown in them only by a system of alternate husbandry, under which the preceding crops of roots and clover in the rotation are designed in a great measure as a preparation for the wheat which follows them. Thus you will easily see that even the large average yield of 28 bushels sold at a fairly good price is necessary to enable our wheat growers to pay their way and make their profit. Well, in the past two years wheat has gone down in price about half a crown a bushel, and this represents a loss to our farmers of 70 shillings, or nearly \$14 per acre, which is about twice as much as the average rent they have to pay. Here is the ruin that is staring our farmers in the face, and at present prices many of them, on our heaviest soils, could not make a living out of wheat growing even if they had their land rent free.

Take next dairy produce, and we find things almost as bad as in wheat. During the last four or five years cheese has gone down about 30 shillings per cwt., or six cents a pound, and butter is little if any more than half the price it was two years ago. These drops are equal to the rent of the land, so that our dairy farmers would be no better off rent free now than they were when paying 30 shillings an acre three or four years ago. If we go on to sheep farming we find ourselves in a similar slough of despond, for fat sheep are worth quite 20 shillings a head less at the present time than they were two years ago, and wool is less than half the price it was half a dozen years ago. I know more than one farmer who has seven years' wool stored up; for the first year's 54 cents a pound was refused; prices have been dropping relentlessly ever since, and now none of the seven years' wool would fetch 24 cents a pound. It is bad to hold anything at high prices.

I have given you the true position of current agriculture in this country, and I will now allude briefly to some of the causes to which it is attributable, after which I will turn for a moment to some of the necessary remedies.

You are aware that England has of late years been, and still is, governed by a ministry, who have a vulgar weakness for brag and bluster; who have got us into two mean and cowardly little wars, the one in Asia and the other in Africa, and who did their utmost to drag us into a big and foolish war in Europe. Six years ago we had great numbers of silly people in this country who were prospering, and who, therefore, thirsted for somebody's blood; these people are now known as "Jingoes," because, when their pockets and stomachs were full and their heads empty, they were constantly singing in season and out of season:

We don't want to fight,  
But by jingo if we do,  
We've got the ships, we've got the men,  
We've got the money, too.

These foolish people sent the present British Cabinet to power, and we see the result in a ruined trade and commerce frightened away by the warlike policy of the government. The Jingoes are quiet enough now, for they are hungry. Their thirst after blood has changed into hunger for food, and what a difference this little change makes in bullies and cowards!

Other causes of the decline of trade are found in the action of our working classes—in strikes and trade-unions; these have driven our manufacturers to produce inferior goods in order to compete with those of other countries where wages are much lower. Another cause is found in the fact that other countries do not follow our example in free trade; and yet another, in over-production.

It has always appeared extraordinary to me that a great and enlightened country like America should still cling to protective duties and tariffs, for it is abundantly evident that no combination of circumstances, which we have the slightest reason to expect, can prevent your country from quickly becoming the richest and most powerful the world has ever seen; and knowing this, it is the more surprising that with regard to your intercourse with foreign countries, and particularly with England, your statesmen have not yet got beyond the alphabet of politics. Again, I am even more astonished that the farmers of your vast continent should not set about showing your statesmen how to get out of the alphabet of diplomacy, for the protective policy of your country is an injury to your farmers to the benefit of your artisans. If there was free trade between your country and ours your farmers would get better prices for what they have to sell and would pay lower ones for what they have to buy. Your manufacturers of all kinds have a monopoly, and your farmers are the chief victims. If your country would receive our manufactured goods as we receive yours, duty free, your farmers would get their clothing, their implements, their furniture, everything, at less money, for we should compete with your manufacturers in these things; and we should be able to pay you better prices for, and to purchase larger quantities of your wheat, your corn, your cheese, butter, beef, mutton, etc. So your farmers are robbed at both ends—in what they buy and in what they sell—in order to bolster up your manufacturing classes. If any English government followed such a policy our farmers would soon teach them a lesson they would not quickly forget. Your protective policy is out of joint with your republican principles, and the sooner you get rid of the anomaly the better it will be for your country. We cannot be eternally piping to you unless you begin to dance.

J. P. SHELTON.

Sheen, Ashbourne, England, June, 10th, 1879.

[We hear with becoming respect our English friend's lecture on the tariff question. It is an issue which is better understood in this country than he seems to think, and one which we have not space to discuss. It only occurs to us to remark that England lecturing the United States on their folly in not accepting free trade, is like the mother of wayward children instructing her neighbor on the proper way to bring up a family. England's offspring, her colonies, are, we believe for the most part, upholders of vigorous protective tariffs which are operating to the detriment of England's home industries. If this be so, let England's missionary efforts begin under her own flag.—Eds. Press.]

### Agriculture at the Stockton Asylum.

EDITORS PRESS:—Owing to the kindness of Dr. Shurtleff, Superintendent of the State Insane Asylum at Stockton, in exhibiting his live stock and gardens to your correspondent, the following is presented: One hundred and seven acres of land belong to the Asylum, all being within the city limits of Stockton. Immediately in front of and around the buildings are shade trees and ornamental plants; a large number of century plants were set out about 10 years ago, and no less than 20 have bloomed in the last four years. The remainder of the land is set apart for gardening and hay raising; all of the ordinary vegetables thrive, and are cultivated entirely by convalescent patients. The soil is rich, but for gardening requires irrigation, the water being raised by steam power. Five large stacks of hay await the hungry cattle of the coming winter, and in the cattle and hogs we find much to interest the breeder. To pasture these cattle the Asylum secures a field which adjoins its property for \$200 a year; a

field containing about 150 acres, which is well shaded rich land and furnishes a heavy yield of clover. Here the 15 fine Durham cows, one Devon cow and a thoroughbred Durham bull, roam at will and enjoy the continuous feast of plenty. The display is an unusually fine one, the stock being the product of long continued breeding and sorting. The cows furnish all the milk used among the 1,135 patients now at the Asylum, and the calves sold each year bring in a small remuneration.

The refuse from the Asylum feeds 175 pigs, which are as fine as the cattle. A long and neatly whitewashed shed with rows of styes on each side occupies the middle of the pig yard. The styes are eight feet square and connect with enclosures within the shed of about the same size. In these the sows are kept when breeding; while a little back of the shed they have access to shade trees and a pond of water. All pork raised is consumed on the place. The breeds consist of Suffolk and Berkshire, the former being known as Prince Albert Suffolk, possessing a white thin skin so apt to blister if exposed to the hot sun; and the latter, the old-fashioned Berkshire. This farming, small as it may seem, being carried out with care and order amply proves that economy is consistent with State control, although seldom associated with it.

J. H. W.

Stockton, Cal.

### Nevada Agriculture.—No. 2.

EDITORS PRESS:—The progress of Carson, the silver capital, in connection with the general progress of the great mineral State, is one very clearly marked from year to year, though not with entire uniformity. The lands in the vicinity, reclaimed by irrigation from the dry, sage brush plain, are more extended. The fields and gardens are better cultivated. Lines of trees, groves, orchards, and ornamental shade trees are increasing in size and beauty. Family residences and permanent buildings are gathering all lovely attractions around them, while within the neatness and adornments and luxuries of life, are greatly increasing. The stores, shops, manufactories, hotels, and business houses are larger, better supplied and finer in interior and external appearance; the streets are in good order, level, graded by nature, and free from mud. The two public school buildings, the three churches, the State capitol, and United States Mint, are of their kind fine structures, each in character with its design. The streets and houses are lighted by gas, and the whole city, in all parts, is well supplied with abundance of the best of water.

The scenery around is romantic, rugged and grand. A little to the west, perhaps a mile and a half, the great, varied Sierra range rises abruptly near four thousand feet into the heavens, with summits rarely if ever entirely free from snow, with sides once wooded nearly to the tops now mostly cut away for lumber and firewood in the mines. To the north and south barren spurs from the Sierras, broken and irregular, extend across to the east to connect with higher ranges, running north and south, shutting in the regions of the city as one enclosed, even, pleasant valley; one which might be made to flourish as a garden in beauty, if a large irrigating ditch could be dug for the watering of the whole. This can be done, and will be ultimately, when needed by the immense population which must dwell in America a hundred and twenty years from now. This, at the rate we have increased the last hundred years, will be over 1,600,000,000 of people. We shall soon need all the land possibly available for cultivation for our own population, without any from Asia.

Though this valley appears shut in, yet the Carson river, coming down from the south, passes along the eastern edge and cuts its zig-zag deep canyon way through the eastern ranges on to its lake of evaporation, sixty miles to the northeast. Down this river, from forests in the mountains at its head, are floated some 60,000 cords of wood yearly for use in the mines and mining towns. Yet this is not probably over one-fourth of the amount of wood and timber used in connection with all the mining in the region. The larger supply comes by the railroad, some even from California, but much of it reaching the road by long water V-flumes or chutes, bringing down the wood from the region of forests seven, or even twenty, miles away in the mountains. By this process thousands of acres of timbered lands on the eastern steep slope of the Sierras, are being yearly swept clean of all trees, left, in appearance, as barren as if they never had any growth of trees upon them. Some scientists say this will cause these slopes to be forever barren, and diminish the already very slight fall of rain through the whole country. We very much doubt this, for if so then the denuding of more than one-half the vast region of continuous forests east of the lower Mississippi, Ohio and Missouri rivers to the Atlantic ocean, and the covering of the immense prairies of Illinois, Missouri, Iowa and Wisconsin with cultivated groves of trees ought to have produced decided changes in the rainfall, proved so by reliable statistics. Certainly such denudation does affect the springs and the moisture in the soil, and also the uniform flow of the streams and rivers; yet we doubt its very sensible effect upon the average fall of rain.

#### Cnicken Soup Spring.

There is, a mile and a quarter north of Carson in the open plains, a large hot flowing spring. Its perfect analysis has not been made,



but there is a little sulphur with iron, manganese, etc., in such very moderate quantities that the fountain appears to differ but little from that of common hot water. But by merely stirring into a bowl or glass of it some common salt and pepper the color changes to accord with the taste, which is so like good palatable chicken soup, a stranger would not detect the difference. Certainly, to us, the resemblance was perfect, as we drank it, and we believe that had it been given us in the city at a restaurant for chicken soup, we should not have detected the imposition. The water is also said to be excellent for all rheumatic and kindred disorders, and is remarkably excellent for bathing, producing no lassitude like other hot springs by one remaining in it a length of time.

In the hills surrounding Carson and its beautiful valley quite a number of mining claims have been laid and partially opened, some with really encouraging prospects. Still, as yet, none of them have been made to pay the expenses of working. Copper, lead, antimony, silver, gold, iron and even coal have been found, and in time these may be worked to advantage, though not at present.

S. V. B.

## THE DAIRY.

### Dairy Cows and their Management.

I. C. Steele, of Steele Bros., long and well known as cheese dairymen, writes for the *Patron* some of his ideas and experiences with dairy cows as follows:

To secure the best results in the dairy business, cows must be selected that possess qualities suited to the branch of dairying that is to be pursued, and the locality selected. For a butter dairy the milk should be rich in oil or butter-producing qualities. The best butter cows do not, as a rule, give large quantities of milk. Cows that give large quantities are more valuable for cheese than butter. The cream rises quickly on milk adapted to butter making, and is converted into butter with comparatively little labor in churning, while butter produced from milk containing a small amount of butter material requires more labor to produce butter of an inferior quality; when milk containing a large percentage of butter, and milk containing but little are used together for butter, there is considerable loss, because the cream taken from poor milk requires more churning, and the butter globules are not all broken, but remain in the buttermilk.

For the cheese dairy, milk that contains a large percentage of cheese is desirable, and cows that give large quantities of milk will produce more cheese with less waste. For any dairy, avoid cows with long, swinging bags, for their teats get filthy and sore. A neat, compact udder with teats of medium size are most desirable.

Large cows are only suited to level land, and should never be selected to be pastured on steep hills. Small ones will thrive much better. Large cattle will decrease in size when grazed on rough land, and small cattle will increase in size when grazed on level land. These hints of nature are valuable.

Feed and water must be abundant and of good quality to secure success in the dairy business. It is beyond the power of man to get anything out of a cow that has not been put into her.

Cows must be kindly treated, their dispositions studied, and their confidence and good will secured by their milker to obtain a full flow of milk. The annual loss in most dairies from the ill-nature of milkers is great. Some of the most valuable cows never will give all their milk to one they do not like, and soon become valueless in the dairy from that cause. Unskillful milking destroys the profits of dairying. To obtain a full flow of milk the milking must be done regularly, rapidly and thoroughly. Changing milkers should be avoided as much as possible, for every cause that ruffles a cow's temper, or in any way excites her, effects the products of the dairy unfavorably. One hundred well-selected cows, with good food and water in abundance, and well managed, will produce as much butter or cheese as 150 with scant feed and had management; and the profits from the 100 will be as much greater as the number is less. We were invited, a short time since, to see a herd of young Durham cows. They were grazing on a steep hillside nearly covered with brush. The owner of the cows remarked: "I am making a little over three-quarters of a pound of butter per day to the cow. Don't you think that a pretty good yield, considering the feed?" We did think it was, and we also thought he could not afford to treat fine blooded cows in that way. We know of a two-year-old Jersey heifer that produces two and a half pounds of butter per day. If three-quarters of a pound will pay expenses two and a half pounds leaves a large margin for profits.

There is another consideration. The thorough, intelligent dairyman not only secures a larger amount of produce, but it is of a better quality and commands a better price in the market. The shiftless farmer robs the soil of its fertility, impoverishes himself and family, and fills the atmosphere with the germs of weeds, parasites and destructive insects to the injury of his neighbors.

## THE APIARY.

### Purity of the Italian Bee in California.

EDITORS PRESS:—Having seen an article in the *RURAL* on the purity of the Italian bee in this State and the remark that in cool weather they did not show three bands but two, one, and even in some cases none at all, I would state that as a breeder of the pure Italian bee I cannot let such an opinion pass by unnoticed. I have waited until now to see whether some one else would take up the matter. Mr. Editor, some seven years ago I visited my Eastern home in old Massachusetts after an absence of some 12 years, and then became interested in the Italian bee, the old folks having a swarm or two of the breed, and though I believe not what was called pure they looked fine and worked well apparently. When I returned I took considerable pains to find where I could get pure Italian queens. I was swindled badly at first, but finally I succeeded and since then have had three-banded workers almost exclusively. Sometimes when a young queen mates she might have mated a black drone or drone from a hybrid queen, and occasionally her workers might have a mixture, but as soon as I perceive that mixed stock she does no more breeding forever; and now I invite any one interested to inspect my apiary and I will take pains to show them some where you cannot see any but all three-banded. In looking at the brood of one of my imported queens I found some of them four-banded, the three bands were very distinct and the fourth band was a clear line of yellow, or nearer leather color. I have not had to kill many this season, and the most of those were from some queen cells of hives that had swarmed out or made preparations, and I overhauled before swarming. I have had swarms from the first of March to the present writing, and in the early part of the season the only notice that I had of it was when the bees were in the air. Now just imagine 21 frames of bees, Langstroth size, in the air at one time, and sometimes two or three swarms at the same time, and no help to attend them but myself, and you might think times and bees were lively; but you see I have them trained, and there is nothing mysterious about that. I clip the wings of all queens as soon as I am satisfied they are laying, and have the hives low to the ground and about five feet apart in the row and the rows about eight feet apart. Her ladyship comes out and in almost every instance gets back to the hive unaided. I take an empty hive, take out all the frames, cut out queen cells, put the frames back, put out sections and the bees begin to miss the queen and come back home, and the thing is done. In case two or more swarms come at the same time, I watch them close, pick up the queens, put them in a wire cloth cage and lay them in front of their respective hives, and when a hive has more bees than another I cover it with a sheet and the bees go where they hear the loudest calling. Sometimes they will settle on a limb or bush, but I generally have the run of them. Many a time I have just got through with one when another would just commence.

I have not made any swarms except when I had to. I tried to work for comb honey in small sections, but the weather would not be favorable more than two or three days at a time, and a section would be nearly sealed over when a cold spell would come and appear to stop the secretion of the flowers.

My hives are all full of honey and strong in bees at this date. I shall take some honey by extracting; in fact, the brood department is now too full for the accommodation of the queen. The moth has not troubled me; in fact, I have not seen a dozen worms this season.

Most of the honey gathered has been from blue sage and wild buckwheat. My bees work on the "Yerba Santa" or mountain balm, the honey from which is thick and very nice.

The honey taken in May had a nice almond flavor. Blackberries helped out very well, there being some 10 or 12 acres in my neighborhood. At this time my bees are just frantic on the bloom of what is named the hear bush or "hawberry," a bush that grows in most of the canyons and largely in the high land throughout this vicinity. So far our mountain honey has been most delicious. I do not think that as a general thing this vicinity will beat the lower country for quantity, but will venture to say that it does in quality.

I have letters from the lower country and they all represent a very poor season. I think that one trouble is in their stock of bees. As a general thing there has been too much in-and-breeding, and that will run any stock out. I don't regret the expense that I have been to to instill new blood in my stock, as this season will more than pay me in honey alone. I have increased from 47 to 62 swarms and have the combs all built out to good worker combs, and in many cases have two tiers of combs, besides sections to the hives. What old combs I had that were not perfect I trimmed out the imperfections and gave them to young queens as soon as they began laying, which built them complete to all worker comb.

Most of my queens have been renewed this season. I have had a number superseded by the bees in spite of all precautions, and have had only one swarm get away this season.

I have introduced a good many queens this

season and lost none so far. I consider it no trick with the present appliances to introduce queens without the bees realizing the change. I think from experience that the most of failures in losing queens in the introduction is on the part of the operator. As a general thing never open a hive for 10 days after introducing a queen, and the chances are more favorable. I have accidentally opened hives before that time without loss, but at first like others was anxious for my valuable queen and opened the hive (as my experience shows me) too soon, the consequence was my loss of queen. I have tried I think all ways of introducing, and they are many.

With regard to doubling up swarms, although the season is poor in most sections of the country and bees probably are robbing severely, it may be done by bringing the hives to be doubled gradually nearer to each other, say a foot or so at a time about every hour, and in case a strong swarm has to be passed the hive being moved could be reversed by degrees so as to pass in the rear and the entrances at the extreme end when they get together. In that way place the fronts alike and the hives side by side; then the next day or late the same day alternate the comb bees and all after killing one queen, in one hive, shake the balance of the bees on top of the frames and cover it as soon as possible and place a board against the entrance of the hive to obstruct the flying of the bees. When they perceive this they will take a new bearing and find the hive on returning. The bees will not be so apt to quarrel by alternating the comb as they get confused.

To feed bees to prevent robbing the best time is at dusk. They will clean all up before morning.

J. D. ENAS.

Napa, Cal.

### The Situation in the Southern Counties.

A repetition of the disastrous calamity to the apicultural interests of 1877 has returned upon us in 1879, with every prospect of equal fatality and more general in its blighting sweep. The long visit of chilly winter that lingered in the lap of flowery spring and now fans with chilly breath sunny summer, has drank up and absorbed the nectar in the thousands of flowers that deigned to lift their tiny heads and assert their rights in the face of this cool intruder. Not only has it been the case in southern California, but the world over, as far as the hum of civilization is heard. Bees are eking out a mere living—are seen searching every drooping flower in blighted nature, and, like their keepers, many of whom keenly feel the tightening grasp of grim want, and are searching for some other occupation to sustain the connecting link between soul and body until the return of a more favorable auspice. Hope for a pound of surplus honey this season is entirely gone, and bee men have hung their harps on the willows of disappointment and are wandering down the cold stream of despair. But we would say, do not give up the ship in disgust; there is still hope that the coming late feed will afford a living support for the little pets until after the rainy season shall set in, when it is hoped that a more favorable season will come to our relief. "It is an ill wind that blows no one any good;" this universal failure will consume all the honey in the market, leaving it destitute another season, when good prices will return, and what we may lose this season, we may make another. Our advice to apiarists is to double up their colonies as they grow weak, saving their best queens and preserve all empty comb by fumigating with brimstone, and hanging up so that the combs do not touch each other, in some dark and dry place—empty comb is worth its weight in gold in building up an apiary and propagating early swarms.

The season has been one of the most peculiar that has ever been known, creating a general depression in every department of industry. While the agriculturists and horticulturists may produce a meager support, the apiculturist produces nothing, and is left penniless with the wolf at his door, and for the present, will be compelled to seek some other vocation, but in the meantime he must pick his flint and try again.—*N. Levering, in Los Angeles Journal.*

POISONING GOPHERS.—A Kansas farmer gives his experience as follows: "I found that the ground was completely honey-combed by pocket gophers. I procured several small sweet potatoes and cut them into slices one-half of an inch long, then with the point of a knife I inserted in each slice a crystal of strychnine the size of a pin head. Then with these poisoned bits of sweet potatoes and spade in hand I went all over my land, and wherever I saw a fresh sign, I dug till I found its roadway, into which I thrust one of the poisoned pieces then covered up the hole again. I continued to repeat this operation at intervals of two weeks; or as often as I discovered fresh signs; and to my great relief, found that gophers soon got so scared that their damage was hardly noticed, and for the last three years I have been bothered but very little with them."

NEW SCALE.—By making a miniature of an object, such as a spider line, and examining it with a microscope, Dr. Royston Pigott has found that objects even as small as the millionth of an inch could be seen; and in a late communication to the Philosophical Society, Cambridge, took exception to the view generally prevailing among opticians, that it is useless to attempt further perfection of the microscope.

## POULTRY YARD.

### French Methods of Fattening Fowls.

From a letter in the *Live Stock Journal*, giving accounts of methods of fattening poultry in Europe, we take the following extracts:

In France two principal methods of fattening are employed, viz: with solid or semi-fluid food; the latter being now preferred, at least for finishing off with. In either system, as carried on by the best feeders, each bird is penned in a compartment narrow enough to keep it from turning round, and the bottom of which is of open bars, to allow of all offensive matter falling through. It is also necessary to keep together fowls at the same stage of fattening, and not to have fowls of different sexes near each other; for though they may only hear each other's voices, it is found to retard fattening. Under the coops it is usual to have a floor of dry earth, which is frequently raked clean.

Madame Millet Rohinet (it is remarkable how much is done by women in this business in France), states that the best food for solid cramming is buckwheat flour mixed with sweet milk into a dough. This is rolled the size of a finger, and cut into pellets two inches and a half long. Barley or oatmeal are not found so good, and my own opinion is that much of the transparent whiteness of French poultry is due rather to the use of buckwheat than any peculiarity of race. In cramming, the operator dips each pellet in water before administering it, and pushes it down with the end of the finger. At first only two or three pellets are given, but this is rapidly increased to 12 or 15. But here is an important point in all cramming of poultry. The birds must of course be in perfect health, first, or they will only get ill with the confinement. They should then be fasted some hours before any food is given at all, so as to take their first meal with a good appetite, which is kept up by the first scanty rations. After that the crop is felt at each meal. If any is left, a meal must be missed, and less given next time; for one atom too much retards the process seriously, or may make the bird "go off" altogether. Two meals per day are given in this method, 12 hours apart; and the time, again, must be exactly kept, for if either fed before or after, the fowl suffers by fretting or indigestion. It is chiefly in these apparently small details English operators fail. The process is complete in 15 to 25 days; occasionally it can be carried on for 30, but when the desired point is once reached, the fowl goes back and rapidly deteriorates, or may even die, consequently, it requires good judgment to preserve every advantage.

Semi-fluid food is mixed about as thick as very thick arrowroot. Mr. Lacque says that barley meal with the bran sifted out will answer for this, and it is mixed with equal parts of milk and water. If more milk is used, the fowls turn sick in a few days. Some breeders add a little maize meal and a portion of lard; others, again, employ a portion of rice meal. The original method of giving this food was to place a tin funnel down the bird's throat, into which the food was poured from a spoon; but large feeders now employ machines, which hold the pap in a large cylinder, and force it out through a flexible tube by the pressure of a piston. Fowls crammed with semi-liquid food are fed three times a day, or every eight hours, such food being more quickly digested. The process is also quicker than the other, few fowls requiring over 20 days. Cleanliness and quiet are of the utmost importance; but above all stands that constant watch on the state of the birds already alluded to. The fowls rarely struggle after the first two or three meals, but on the contrary, look out eagerly for their feeder. In Sussex, where fattening is carried on to perhaps its greatest perfection as regards England, the chickens are generally reared on white oats ground fine, and sold in good condition to fatters. By these latter they are mostly finished off with the same food mixed with milk into a thick gruel, and during the last weeks only, enriched with a little finely chopped mutton suet. As a rule they are only fed twice a day, and when not crammed by machine, this food is given in clean troughs. The most successful feeders, Mr. F. Crook once told me, prefer sheds, the walls of which are made of faggots or thick brushwood, which keep off the draft, but give abundance of fresh air.

It cannot be too often repeated, however, that the success of French feeders chiefly depends on constant observation and careful adjustment of the food to what the bird at its stage then will bear. A pellet or a spoonful too much at once impairs digestive power; while too little, though not so injurious, loses time. All this supposes a certain amount of "natural gift," keen observation, and long experience, and it has been perfected in France by generations of practice.

PASTE TO MAKE PAPER ADHERE TO TIN.—Soften 4 parts of glue in 15 of cold water, and then moderately heat until the solution becomes quite clear. Then add 65 parts of boiling water, and agitate. In another vessel stir up 30 parts of starch paste with water enough to form a milky liquid without lumps, and into this pour the boiling glue solution with constant stirring. Continue the boiling for a few minutes, and add, after cooling somewhat, a drop or two of carbolic acid to each gallon of paste. Keep the paste in closed vessels.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons of this department.

### Meeting of the Oregon State Grange.

From a report in the *Willamette Farmer* we take leading items of the proceedings of the Oregon State Grange, which met at Salem the last three days of May:

The sixth annual session of the Oregon State Grange was opened at 10 o'clock A. M., in due form in the fourth degree by the Worthy Master, A. R. Shipley, assisted by the following officers: D. S. K. Buick, O.; W. B. Thomas, L.; W. M. Hillery, S.; E. A. Evans, A. S., pro tem.; W. H. Gray, C.; N. W. Randall, Sec'y; A. F. Miller, G. K.; S. L. Hayes, Ceres, pro tem.; C. E. Shipley, Pomona; Jennie Miller, Flora, pro tem.; Irene Hillery, L. A. S.

The Worthy Master appointed the following committee on credentials: Thomas Smith, B. F. Fuller and Arthur Warner, who reported a quorum present. The Grange proceeded to business.

The reports of officers were quite encouraging. Under the head of good of the Order many interesting speeches were made. Judge R. P. Boise made a lengthy and earnest address to the members, impressing upon them the necessity of keeping out of debt, and recommended that this principle be constantly impressed upon the members of subordinate Granges. He said those who keep out of debt are sure to succeed, while those who go in debt are quite apt to bring ruin upon themselves and families.

Judge Randall said, among other things, that if we pay as we go we shall surely succeed, and that those who borrow are invariably going back, while the money-lender is going ahead.

Bro. Buick said let us be determined if we cannot be money-lenders we will not be borrowers.

Bro. Smith, of Baker, stated that his Grange was going on the principle of doing without everything which they cannot pay for.

Tuesday evening an experience meeting was held, which was very interesting, and showed that the Order is in a better condition than many of the members had supposed. Although the membership is not so great as formerly, yet those who remain, appreciating the benefits to be derived from the Order, are earnest and determined to go ahead.

On Wednesday morning a lengthy discussion was had, in which it was proven that the Order of Patrons of Husbandry had been the means of conferring upon its members great and lasting benefits. Many expressed themselves as having been well paid for the time and labor spent. It was also shown that the Order had been the means of greatly benefiting the farming community at large, and that while all have been benefited, none have been injured, neither does the Order desire to do injustice to any one.

The amendment to the Constitution of the National Grange, which was recommended at the late session of that body, was rejected.

The Committee on Finances made a partial report, and congratulated the Grange on the economical manner in which the business of the Order had been conducted during the past year.

A committee of three, consisting of R. Boise, S. S. Train and C. E. Moor was appointed to visit the Agricultural College at Corvallis.

On Thursday afternoon Prof. Arnold, of the Agricultural College, was introduced to the Grange, and spoke in behalf of the institution he represents. He desires the farming community to become better acquainted with the aims and purposes of the college, and stated that it is generally supposed that it is merely a literary and scientific school, whereas it is also an agricultural college. Prof. Arnold stated, and cited facts to prove that the time was coming when fertilizers would be necessary in this valley, and urged that in order that farmers may understand the composition and requirements of the soil, and many of the mysteries of nature which bear directly upon the success and prosperity of their calling, it was just as necessary for them to acquire book learning and the training of schools as it was for other classes to do so. He stated his determination to make the college a success as an agricultural school, and asked the hearty co-operation and support of the farmers. A few moments' recess was declared, that the members might have the privilege of becoming acquainted with their distinguished guest.

Resolutions were passed regarding dormant Granges.

The Worthy Master was directed to appoint district lecturers, and their duties were defined.

Thursday evening was devoted to a reunion and to conferring the fifth degree upon those of the members who had not already received it, also upon such other fourth degree members as presented themselves with proper credentials. The occasion was one of great interest and social enjoyment, but as farmers have but little time to play, work was resumed and continued to a late hour.

On Friday the committee on good of the Order recommended for discussion in the subordinate Granges the following subjects, to be discussed in the meetings of the several months as indicated:

June—The best kind of farm machinery and the best method of curing hay. July—The best

mode of harvesting grain. August—The best way to dry fruit and what to pay for machinery. Whether or not farmers are being imposed on by agents. September—School books. October—Interest. November—Fees of officers of the county and State. December—The laws providing for the attendance of witnesses in criminal courts. January—Appeals from courts. February—Laws regulating freights. March—Best kinds of grain to raise. April—Fruit and ornamental trees. May—Selling our wool and taxing dogs.

The results of these discussions are to be reported as fully as practicable each month to the Secretary of the State Grange (N. W. Randall, Oregon City), and by him to be presented to the State Grange for such action as may be necessary. So that on subjects requiring legislation the State Grange officers may have the united voice of the brotherhood, and may act intelligently and with hope of success.

A resolution offered by Bro. Dodson in relation to rate of interest, was referred by the committee on legislation to the subordinate Granges for discussion.

It was thought to be eminently proper that some time should be devoted to the discussion of household affairs, and Sister M. J. Train was called upon to speak of woman's work. She spoke particularly in regard to household conveniences, and urged that it is a woman's privilege to have everything just as convenient as possible, so that the smallest amount of time may be employed, and the least fatigue endured in doing her work. She stated that in a house furnished with conveniences a woman can do her work without help, just as easily as she could with help in an inconvenient one, and with far greater enjoyment. She described a flour chest with a mixing board which can be let down to its proper position by means of hinges. On each side are receptacles for everything necessary for the making of pastry, cake, etc. The flour is sifted into a pan by means of a crank. One wishing to bake need not move from their position until the article needed is ready for the oven. She also described a steam cooker with several compartments in which a housewife may place her meat, vegetables, fruit, pudding, etc., and entertain company, sew, read, or do anything she likes while it is cooking, only attending to the fire occasionally. The smell of an article in one compartment does not pervade those in the others, neither does it escape into the room. She said if women would spend more time in devising ways to economize labor they might greatly benefit themselves, and that almost any ingenious husband could, at little expense, do much toward lightening the labor of housekeeping.

Sister Minto spoke of the scarcity of implements in the house as compared with those outside. She said if a man wished an implement to facilitate the raising of wheat, he purchased it as a matter of course. But if his wife wished some convenience to assist her in the making of bread, he could not afford it. She thought the making of bread was of as much consequence as the raising of wheat, and that most men failed to realize the importance of indoor labor.

Sister C. E. Shipley thought it was woman's privilege to think more and work less, and that if she would do so, much more might be accomplished. She said too little importance is attached to the manner in which our houses are arranged, and that often the woman has nothing to say in regard to this subject, although it is one of the utmost importance to her; and that women have been compelled to walk hundreds of weary miles for water, which a little forethought of labor might have placed right at her hand. She thought men, as a class, failed to appreciate woman's work, and that it was time for women to think and plan for themselves. The many inconvenient houses might be remodeled at little cost if the inmates would give the matter due consideration.

Sister S. L. Hayes spoke particularly in regard to making home pleasant. She said if more importance was attached to this subject young people would not be so anxious to leave home as soon as they were old enough. She thought mothers were too careless in regard to the rooms occupied by their children, especially their boys, and that if care was taken to keep things tidy, and make boys' rooms bright with carpets, pictures, etc., it would beget a spirit of contentment.

Grange adjourned at 6 o'clock Friday evening. The session was unusually pleasant and harmonious.

### "A Good Master Devises Work."

The winter months make the true harvest for the Grange. It is the farmers' time for rest, recreation and study. The summer brings its toils and ever-to-be renewed labors—and when the night comes tired nature demands sleep. Happy is he who can close his day's work with the setting sun. Now is the time when subordinate Granges are beginning to suspend alternate meetings. In spite of all that may be said or done, many will nevertheless drag heavily along, not doing much good, and wonderfully discouraging those who do attend. But it may be well enough to look around and see what are, or may be causes of discouragement, and how they may be remedied. The first is small attendance. While of course a full house is always desirable, yet allowances must be made for absentees in busy seasons. Let each one who believes that the Grange is or may be of practical value to the farmer, and consequently to the country, make it a point to be

present, if possible, and he who is always prompt keep the lukewarm roused up to the work. Six or eight in earnest may not be very demonstrative, but they may make the meeting profitable. One of the troubles is want of promptness. Let the hour be fixed to suit the convenience of the majority, and then work up to time. Every individual Grange has its special tastes and tendencies. A catering to these may be essential, but all are interested in the growing crop. Cultivate the habit of noting particulars, changes, accidents, hindrances, growth, causes. Let a Grange for a single season exchange opinions, theories, facts, fancies, results, as to any growing crop, and have a record made for future use, amusement or instruction, and there will be created an interest in the work not before felt, and an advance step toward the thorough and scientific knowledge of the crop. Don't waste the hour in listless do-nothing-ism. The labors in the field may have taxed the strength and used up much of the reserved vital force, and there is no heart to think and argue. The wearied body wants recreation. Let your best reader spend half an hour, or more, if appreciated, reading any thoroughly interesting novel. Try it. This will not exclude more practical work, but may be made a point around which will gather an added interest.

### THE GRANGERS' BANK AND THE GRAIN CROP.

We have received copy of a circular letter addressed to the stockholders and patrons of the Grangers' Bank by A. Montpelier, cashier and manager, announcing that the Bank will advance money on grain in store this year upon the same system followed last year. Last year's operations in this line are pronounced satisfactory, and this year the money will be loaned upon the same security at the same rate of interest. Mr. Montpelier has done good service for the grain trade in compiling a table giving prices of wheat in this market during the last 15 years. This should be secured for preservation and reference. We believe the table of prices and any desired information concerning the terms of loaning money on grain can be obtained by application to the Bank.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### ALAMEDA.

DEVELOPING A STRAIN OF BARLEY.—*Reporter*, June 28: Among the many fields of barley this season, one of the finest in the Alameda valley is that of H. Frick, of Washington township. Mr. Frick regards his barley as of a variety new to this country. While in several respects it resembles the ordinary Chevalier, it has some characteristics which may entitle it to a separate rank. It stands very thick, four feet or more in height, and has a stem with very few leaves, in the latter respect resembling wheat. It is said to stand drouth much better than the ordinary barley. In the dry seasons when other grain failed for anything but hay, this gave a fair crop. Last year it was not sown until the 20th of March, but it matured, giving a good crop. Mr. Frick's account of its origin is as follows: In 1869 while his barley field appeared scarcely as well as was desired, he noted two stalks which stood higher than the rest and indicated a luxuriant growth. When the heads had ripened, he cared for them separately and the next year sowed the seed in his garden. From the first sowing he obtained a few handfuls of grain. Each year the quantity has been increased. Two years ago, from the seventh sowing, the crop amounted to ten sacks. Last year, fearing an unfavorable season, only one-half of the seed was sown, the balance being retained as a provision against the possibility of losing the crop. The five sacks produced 200. This year a portion of this was sown, the remainder still lying in the warehouse. After making hay of several acres which, from too heavy growth became lodged by the storms, Mr. Frick has 55 acres of this barley. Until this year he has refused to sell any of it for seed. He gave a small quantity last year to Caleb Healey, of the vicinity of Jarvis' Landing, and to Charles Rathke, of Pleasanton. From both parties he has received very favorable reports.

#### AMADOR.

DAMAGE TO FRUIT.—*Times*, June 28: Bees are destroying the peaches. They fairly cover the fruit as it hangs on the trees and devour it, leaving the pit without any covering. The prospect for an apple crop is not encouraging. That fruit is attacked by a fly which deposits its eggs near the bottom of the stem. When the eggs are hatched the worms eat off the stem and the apple drops. The fruit prospect is not good this season.

#### BUTTE.

HARVESTING.—*Register*, June 27: From the number of engines and separators being put in order at our blacksmith shops, we anticipate an early beginning of the threshing season. R. M. Turner has opened the fall on the Gridley land four miles south, with five beaters and a threshing outfit. Many headers among the small farmers, started up on the first of the week.

#### CONTRA COSTA.

IN FAVOR OF THE DRILL.—*Antioch Ledger*, June 21: Amos Graves has left at this office some samples of very fine wheat, of which he

has about 40 acres on summer-fallowed land. The wheat was put in with a grain drill which, Mr. Graves thinks, is a great improvement over broadcast sowing.

#### FRESNO.

FRESNO COUNTY BRANDY.—*Republican*, June 28: The first carload of brandy produced here was shipped to San Francisco last week from the well-known Eisen vineyard near this place. The shipment consisted of 2,500 gallons of choice proof grape brandy, and although one year old it had already developed a flavor equal to any French brandy.

ALMOND CULTURE.—Mr. McNeil, of the Gould ranch, informs us that the prospects for a large crop of all kinds of fruit on his place are better than he has ever seen them. It has been estimated by persons competent to judge that he will have, at least, 100 tons of peaches. He will also have large quantities of pears, plums, apricots, prunes, etc. His almond trees are also loaded with nuts. It has been asserted that the almond tree would not bear here, and Mr. McNeil had been advised to cut down his trees and substitute something else in their stead. A visit to his place would convince the most skeptical that almonds can be grown here, and can also be made to pay a handsome profit.

"MEFFORD" FRUITS.—Col. Angell, Secretary of the California Raisin and Fruit Co., is in town to perfect the arrangements for the construction of a large fruit drier on the Nevada colony three miles from town.

GOOD YIELD.—Mr. John Taylor, of the Nevada colony, raised six tons of the finest potatoes ever seen in this market off one acre of ground, and cut 33 tons of excellent wheat hay from 11 acres.

C. C. COLONY.—Mr. Chas. Inns, of Amador county, who some time since purchased two lots on Fruit avenue at the C. C. colony has made a good commencement towards improving them. Ten acres have been settled and nicely leveled and checked up. Three thousand of the choicest rooted raisin vines and 500 cuttings are set out. Two acres of alfalfa planted a few days since is coming on nicely, and as soon as the proper season arrives he will set out several acres of Hungarian prunes, plums and other choice fruits suitable for drying and canning. This fall he will erect a fine residence on one of the lots. Mr. Webster, who has charge of the improvements, is a thorough gardener and a practical man, as the result of his labors will show.

#### LAKE.

HARVEST.—*Democrat*, June 28: Haying season is about over in this vicinity. The crop was a fair one and is selling from seven to ten dollars per ton. The grain crop is about ready for the reapers—perhaps next week they will be in full blast. The crop will in every way be satisfactory to the farmers. A market and a fair price is all they require now to put them in a jolly good humor.

#### LOS ANGELES.

WHEAT.—*Herald*, June 28: The wheat crop of Los Angeles county this year is notably good. This remark holds not only with regard to the San Fernando valley but all sections of the county. The wheat at Spadra is very fine. Without doubt large areas heretofore devoted to barley will be found to be admirably adapted to wheat. A pleasant feature of the harvest this year is that all kinds of grain are of excellent quality.

HONEY.—*Evening Journal*, June 26: Many of our beekeepers who thought to make much money this season, and have humming times all through the year, will be sadly disappointed, as the crop of honey will be a failure.

#### MENDOCINO.

POINT ARENA.—*Ukiah Dispatch*, June 28: The continued high winds have had a bad effect on the grain crops, parching them as though they had been subjected to extreme heat. Rust has appeared in many places and is doing much damage, and the potato blight is hard at work with all the energy of a plague in Egypt. If we could only get a nice shower of grasshoppers, our misery would be complete.

POTATO BLIGHT.—*Petaluma Argus*, June 26: According to reliable accounts, along the coast, in the region of Point Arena, a blight has fallen upon the potato crop of that region. The vines turn black and wither away.

#### MERCED.

LIGHT HOPS.—*Argus*, June 28: We had a short interview with H. F. Buckley, of Hopeton, on Thursday last, during which he informed us that most of the crops along the Merced river bottom are good, though the hop crop—an important crop on his farm—would be light. Of fruit, a good crop will be raised, and he stated that he had one field of corn that would yield over one hundred bushels to the acre.

#### SACRAMENTO.

THE NEW GRAIN.—*Record Union*: The farmers of the upper Sacramento Valley commenced cutting their grain last week, and it is expected that next week it will be making its way to market.

#### SAN BENITO.

THE LATHROP HAY PRESS.—*Hollister Enterprise*, June 28: Some time since, as it will be remembered, there was a test trial of the Lathrop hay press in the field of J. B. Wall, who lives in the southeastern portion of town, at which time, in commenting on the same, we did not think the press would be one to be worked for profit, owing to the time required to press each bale. Since that time, the press, after a fair trial, has proven to be one of the fastest and best presses made—it making a heavier and more compact bale than other presses. Through



Mr. Ransom Lathrop we learn that in two days' work—between sun and sun—there were 210 hales taken from this press. The first day, 107 hales, making 15 tons and 125 pounds—the press being moved twice during the day. The second day, 103 hales, making 14 tons and 825 pounds. On this day there was a delay of two hours and one-quarter. The heaviest hale pressed weighed 425 pounds and the lightest—the hay was taken from the top of the stack where it was bleached to a considerable extent—weighed 255 pounds. Mr. Lathrop says that on an average 14 tons can be baled very comfortably per day, and on a test trial can hale 16½ tons.

#### SAN DIEGO.

**BARREN TREES.**—*News*, June 27: The other day, we published a little article in regard to the accidental insertion of a copper line in the limb of a tree, by which that limb was made to bear. And now we have a statement from some one that has tried the experiment, who says that if cords are tied around the limbs of barren fruit trees it will make them bear fruit. The philosophy is to tie the cords tightly on the limbs after the sap has ascended, and its descent is prevented thereby.

**FOUL BROOD.**—A thorough examination is being made by our apiarians of the bees, with the view of discovering any foul brood that may be lingering among them. We understand the examination, so far, has developed nothing of the kind, and that the bees are in fine health, and could make lots of honey if nature had afforded the necessary conditions for its extraction. A good bee man tells us that the presence of foul brood is easily ascertained, as much so as the taint in meat, simply by smell. He says he is satisfied the taint proceeds from chill in the brood.

**WHEAT.**—*Union*: Mr. Perrin, of Val de las Viejas, reports that the wheat crop in that portion of the county is remarkably fine, better than in any previous year. He brought a small branch of heads to show the quality; and we congratulate the farmers of that valley upon this showing.

#### SAN JOAQUIN.

**A TULE DESSICATOR.**—*Lodi Review*, June 28: Monday we drove down to the tule land of New Hope to witness the trial of a new machine, for breaking up tule sod, ready for the seed. The machine is Huggill's double-gear, reversible, revolving harrow, with cultivator and seed sower combined. The iron work was done by Farrington, Hyatt & Co., and the woodwork by Lessington & Co., of Stockton, who also made and fitted the steel teeth. The machine is built with two revolving drums which are 5 feet 9 inches long, 40 inches in diameter, and furnished with 460 teeth. The other drum, which is, more properly speaking, a cylinder, of same length, one foot in diameter and furnished with 116 teeth five inches long. This cylinder makes 22½ revolutions to the forward drum's one. This can be set to any desirable depth from one-fourth inch to five inches. The value of this implement will be better understood when we say that the tule land in a state of nature is a peat sod, a perfect network of roots, which require to be turned over and to lay one summer to the weather to rot before seeding it down, though sometimes by plowing, cross-plowing and dragging it can be seeded the first season. But by this machine the ground is torn up and pulverized ready for the seed at a less expense, and in a better state of cultivation. It is claimed that this is better than plowing for upland and can be used any time of the year. Quite a number of people were present to witness the trial, and seemed to be well pleased with its successful operations. At no distant day Mr. Huggill will give a public trial that all who wish may witness it.

#### SAN LUIS OBISPO.

**CROPS.**—*South Coast*, June 25: Harvesting is still progressing rapidly and from all accounts the wheat crop will produce more than an average yield. The flax, we are sorry to say, will hardly reach half a crop, owing to the excessive hot norther that visited this section some three weeks ago. Perhaps it is just as well that it is so, for we hear considerable complaint among the farmers in regard to the unreasonable and arbitrary notices sent them from parties who have made contracts with them for their flax seed. The sooner that our farmers will assert their rights, and teach middlemen and grasping corporations that they will tolerate no foolishness or impositions, and that bulldozing and resorting to all kinds of subterfuge to enable them to weede out of fair and legitimate contracts, is played out, the sooner will our people attain that which they are all working for—a reasonable compensation for their labor and a just respect in business matters.

#### SANTA BARBARA.

**GUADALUPE CROPS.**—*Telegraph*, June 28: Our farmers are busy harvesting their grain crops. The yield in the valley will be very fair—much better than was anticipated a few weeks ago.

#### SANTA CLARA.

**SNOWFLAKE WHEAT.**—*Gilroy Advocate*, June 28: A sample of Snowflake wheat has been introduced to us by Mr. J. H. Turner. He tells us that a sack of this bearded variety of wheat, 120 pounds, was brought by him from John Matthews' ranch, Bitter Water valley, last season, and sown on three acres. The yield of the three acres was 100 cents. Mr. Wayland bought a ton of this grain for seed, and now has a prospect of a heavy crop. On Turner's poor land it will yield fully 20 sacks to the acre. The thrifty looking sample shows two rows of

meshes on each side of the stem and five kernels to a mesh. There are 23 meshes in some of the heads. Besides being full headed it has an advantage over ordinary wheat of fully two weeks' earlier growth.

#### SANTA CRUZ.

**PAJARO VALLEY.**—*Watsonville Transcript*, June 27: The crops promise splendidly in this valley this year. Plenty of moisture, no rust worth mentioning and but little damage by storms. The harvesting of the grain crop has commenced, though about a week later than around San Juan.

**SOQUEL ITEMS.**—*EDITORS PRESS*: Early sown wheat well headed, plump grain and nearly ready to cut—barley and hay good, and mostly cut. Fruit—apples, pears, prunes and plums a heavy crop, and growing finely; peaches, light crop, except such as are not troubled with "curl leaf." My Briggs May are full of nice fruit, and just beginning to ripen, while the early Crawford is green and hard and scattering on the tree. Moorpark apricots are a light crop, but doing well; early golden apricots are a good crop and just beginning to ripen; early cherries nearly gone; Napoleon Bigarreau is just fully ripe; grapes are doing well and just forming fruit. The weather is cool, with fog in the morning, and clear sunshine through the day. Lots of folks are camped on the beach, and fun in the breakers is the order of the afternoon with old and young.—M. P. OWEN, Soquel, Cal., June 30th.

#### SOLANO.

**CROPS IN MONTEZUMA.**—*Republican*, June 28: We have received three samples of grain from the old Cerke place in the Montezuma hills, which promises finely. The place is owned by Mr. Jamison, and he has a fine prospect for a full crop on about 300 acres. From David Hale, who has been on an inspecting tour through the hills, we learn that the crops out there are generally good. In fact, as it has frequently been the case in the past, the Montezuma hills country will redeem the whole county. By the way, we are glad to announce that the doleful accounts of last week are in a measure dispelled, and that crops will not be near as bad as at first conjectured.

**FLAX.**—*Tribune*: Isaac Brinkerhoff has 100 acres of flax growing, and now nearly ripe, on his ranch south of Batavia. Flax has been experimented with by several farmers in this vicinity, and the general opinion is that under favorable circumstances it pays well.

#### SONOMA.

**CEREALS.**—*Santa Rosa Democrat*, June 28: The barley harvest commenced in Bennett valley on the 18th and a considerable portion was cut, the wheat will be ready for the reaper about the 1st of July. One or two farmers in the neighborhood of Windsor commenced reaping their barley on the 23d, but most of them will not reap until after the 4th of July. Wheat will not be ready for the reaper for a month longer, the late rains having kept it back. The quality of the grain is excellent, and the yield a full average one. Considerable cheat is found in most of the fields, but it is thought that by heading the grain the most of this can be got rid of.

**WOOL CLIP.**—Sheep men have just about finished shearing for this spring, and say that the clip is unusually large and fine, the late rains having kept the feed good. In Mendocino county this is especially the case, as the quality and texture never has been better nor the yield greater.

#### SUTTER.

**HARVESTING.**—*Banner*, June 26: Our ranchers are nearly all engaged in harvesting their grain, and from all parts of the county we hear good reports of the prospects. Here and there we learn of some injury by rust, but not enough to materially affect the general result.

#### STANISLAUS.

**IMPROVED CULTIVATION.**—The present season has again given to many of our farmers a practical illustration of the benefits of thorough cultivation. Believers in summer-fallowing of lands for the purpose of securing profitable yields of the smaller cereals are in our county every year increasing in numbers. Not only is summer-fallowing becoming more generally approved and practiced, but also the second and even the third plowing of the same lands is being put into practice. Practical farmers who have had the opportunity to test the matter, do not now hesitate to declare that the summer-fallowing lands, especially such a season as the present, is increased from 20% to 50% in yield, by having received a second plowing.

**THE HARVEST.**—*Modesto Herald*, June 26: Although many of our farmers commenced cutting grain last week, the harvest did not become general until this week, when the scores of headers to be seen in motion on the plains gave evidence that the work had begun in earnest. The yield in the greater portion of the county will average 10 or 12 bushels, while some other portions as low as three to five is the estimate. Summer-fallowing land, of which there is a great deal in this county this year, will yield from 18 to 23 bushels.

#### TULARE.

**NOTES.**—*Delta*, June 27: Mr. B. F. Moore commenced heading his grain this week, some of which will go 40 bushels to the acre. This grain was raised altogether by irrigation. Success to Mr. Moore for the efforts he has put forward to show what can be done on this soil with irrigation. Mr. T. W. Maples starts for Musel Slough with his threshing machine this week, where he has already enjoyed about 40 days' run.

Mr. Maples is one of the best and most experienced threshing-machine men in the State, and hears the reputation of doing excellent work. All the wheat sown on land in this vicinity and attended to by irrigation, is looking splendidly, and will undoubtedly prove remunerative to the fortunate owners.

#### YOLO.

**SHRUNKEN GRAIN.**—*Standard*, June 28: The north winds of the past two weeks has caused the grain not fully ripe to shrink considerably—some of it so much so that it will not pay to cut. That most affected is the late sown, which a few weeks ago gave promise of being better than the summer-fallow. Although there is considerable poor grain this year, there is also a large quantity of fine plump wheat, and the crop in Yolo county will likely be a good average.

**READY-MADE HOUSES.**—We cannot have dull times very long; trade will brighten up in a few months, and an increasing demand will enhance the price of everything. Now while lumber is low, and help plenty, cannot some one engage in the manufacture of ready-made houses? It seems as if a good trade might be built up, and benefits reaped therefrom. Different sizes might be prepared and yarded, so that the advertisement of "Ready-made Houses" would draw large custom. Any Californian can put up a house if he has the material prepared for him, and we must have things ready for us, without waste of material or time figuring on a probable dwelling. The pioneer in this matter might be able almost to maintain a monopoly. Different plans could be prepared by any architect or builder, suitable for modest houses at moderate prices, and then our farmer or other person desirous of improving his home could select his plan and find it practically perfected in the lumber yard awaiting transportation. From two to six rooms would be a fair number as to size. They need not be over one story. Wings and additions could also be provided, and finishing come in afterwards. With every piece marked to correspond with the plan, it would be as easy to carry away a ready-made house as a ready-made suit of clothes.

**ARTESIAN WELLS.**—William Stack, of Oakland, has lately completed an artesian well adjoining his store, on the northeast corner of Fifth and Harrison streets. The well is an eight-inch bore in the clear, and 113 feet deep. The water, of which there is an abundant supply, rises to within six feet eight inches of the surface. Mr. Stack has several tenement buildings in the vicinity of the well, and his enterprise is calculated to give an abundant supply of good water; most decidedly in favorable contrast with the mere surface supply provided by the San Francisco and Oakland water companies. The formation is as follows: Surface soil, 6 feet; hardpan, 40 feet; blue clay, 62 feet; fine water gravel, 5 feet; total, 113 feet. About four feet above the gravel, the borer passed a stratum of what were supposed to be oyster shells. We cannot commend too highly an enterprise of this kind. In a region where the water supply from subterranean sources is so abundant and so pure, the public demand, and will have, water that is drawn from sources not exposed to contamination. Public and private health requires it, and the increase of the knowledge of health requirements will override the desire for profit at the expense of health and comfort.

**FINE STOCK RANCH FOR SALE.**—Mr. D. B. Hays, real estate agent at Oroville, offers for sale in our advertising columns, a fine stock ranch in Butte county, which is certainly worth the attention of those looking for a valuable agricultural property. We know the owner of the ranch as one of the leading Short Horn breeders of the State, and are convinced that he wishes to relinquish the enterprise he has carried on for reasons centering in himself and not in the property. The desirability of the property is unquestioned.

**BEE PLANTING IN NEW ENGLAND.**—The interest in the beet-sugar industry which is springing up in New England is seen in the fact that six tons of beet seed were ordered from France by cable and received in 24 days from the date of the order. This is occasioned by the fact that part of the seed which the New Englanders expected to use was shipped to this coast by M. Gennert while they were making up their minds about it, and is now on its way toward the sugar barrel on the Alvarado ranches.

**EVEN IN ALGIERS.**—Even in this swartly clime they are enjoying the freaks of this unusual year. A meteorological phenomenon, unknown since the conquest by the French in 1830, occurred on May 4th, when a sharp frost visited a considerable district, and lightly touched the ripening corn. Meanwhile the vines on the plains and the higher hills are described as fairly griled, those alone in the intermediate grounds being spared.

**COMMISSION MERCHANT.**—Our advertising columns contain the card of H. M. Covert, as dealer in produce, etc., at 306 Davis street. Mr. Covert is widely known in various parts of the State, both by residence and by his "sack-holder" for grain separators, which has been extensively introduced. Mr. Covert is highly recommended by those who have done business with him.

### News in Brief.

**NIHILISM** in Russia is nothing. **ANARCHY** prevails in southern Epirus. **FROSTS** are doing damage in Lassen county. **WATERMELONS** are now a staple in San Diego. **MOLLIE McCARTY** won the 2½-mile race at Chicago in 4:02.

The Prince Imperial was deserted by English troops in Zululand.

**ANTI-LANDLORD** agitation in the west of Ireland is becoming serious.

The Khedive of Egypt no longer reigns. He has abdicated—gone to Naples.

In Dakota and northwestern Iowa, the grasshoppers are again ravaging.

In the Bank of France the past week specie increased 19,270,000 francs.

The potato blight is troubling the river bottoms of Washington Territory.

REDEMPTING subsidiary silver coin with standard dollars does not work well.

The northern Indians, having been whipped, are now willing to go upon their reservations.

SAN BUENAVENTURA has now two oil refineries in operation, and another one building.

A bad harvest is expected in England. Prices are increasing and American wheat in demand.

An Eastern paper writes an editorial begging the President not to veto the adjournment of Congress.

At Liverpool, 30th ult., wheat was quoted at 8s 4d@9s 2d for average California white, and 9s 1d@9s 5d for club.

BISMARCK has been openly snubbed by the Empress of Prussia for declining to recognize the divine right of kings.

CONGRESS has adjourned without making any provision for United States Marshals. How does Congress expect them to live?

NITRO-GLYCERINE works at North Adams, Mass., exploded recently—distributing two men and the adjacent buildings.

The Mayor of San Francisco refuses to sign the new tax levy because it is 17 cents more than he thinks it ought to be.

The receipts of the Sunday School picnic last Thursday, amounted to \$374.65. Net proceeds \$321.85 distributed among Relief Societies.

The time for receiving applications for space at the International exhibition at Melbourne has been extended to October 31st, 1879.

The French journals claim that the Darien canal will be absolutely neutral territory. Absolutism does not accord with American ideas.

SPAIN wants satisfaction from Santo Domingo, or will foreclose on the whole island. The Monroe doctrine is very much excited about it.

In San Francisco half dollars are quoted at 99 buying, 99½ selling; trade dollars, 98 buying, 98 selling; Mexican dollars, 93 buying, 93 selling.

It is said that since the prevalence of cyclones in Missouri, and their regular appearance, the farmers are driving posts into the ground to hang to when they come.

The corporations of San Francisco during the month of June last, disbursed in dividends the sum of \$955,666, a falling off over the same month in 1878 of \$1,245,042.

About 2,000 people attended the meetings of the Monterey Sunday School Convention June 29th. Every portion of the State except southern California is well represented.

ADVICES from Guaymas indicate that the early building of a railroad from that point to El Paso or elsewhere is unlikely, the Mexican government preferring fighting to improving.

At Oakland last Saturday, the quiet but forcibly expressed indignation of citizens, procured the withdrawal of 300 Chinamen from works on Long wharf. There was no open demonstration.

The Sutro tunnel is now an accomplished fact. Pumping commenced June 30th, and in eight hours the water in the drowned out mines was lowered 100 feet. The temperature of the water at the mouth of the tunnel was 118°.

The Catholic Church has 64 cardinals—32 Italians, 10 Frenchmen, 4 Spaniards, 4 Austrians, 3 Hungarians, 3 Englishmen, 2 Portuguese, 1 American, 1 Belgian, 1 Pole, 1 Bavarian, 1 Corsican and 1 German.

AFTER two months' debate the Italian Chamber of Deputies has approved the Ministerial Railway bill, which provides for the construction of 6,020 kilometers of railways within 21 years, at the annual expenditure of £2,400,000.

CREMATION having been pronounced a measure of "salutary progress" by the committee of the Paris Municipal Council appointed to consider the question, is about to be introduced into Pere La Chaise Cemetery. It has been decided to set up an apparatus on Siemens' principle, and a Columbarium.

A GIRL 17 years of age, at Boudon, Ontario, is said to be a perfect electric battery. Very few can shake hands with her. By joining hands she can send a sharp shock through 15 or 20 people. Her magnetic attraction is so great that she cannot let go of any article of steel she has picked up. A paper of needles will hang suspended from her finger.

THE Congregational Association, which has been in session at Seattle for a week, adjourned Saturday evening, to hold the next annual session at Fidalgo. The Association endorsed the Massachusetts Civil Damage law, and will seek like legislation in this Territory. The ministers in the Association were requested to preach at least one sermon in the year on the observance of the Sabbath.





### Two of Them.

In the farm-house porch the farmer sat,  
With his daughter having a cosy chat;  
She was his only child, and he  
Thought her as fair as a girl could be.  
A wee bit jealous, the old man grew,  
If he fancied any might come to woo;  
His one pet lamb and loving care  
He wished with nobody else to share.

"There should be two of you, child," said he—  
"There should be two to welcome me  
When I come home from the field at night;  
Two would make the old homestead bright.  
There's neighbor Gray, with his children four,  
To be glad together. Had I one more,  
A proud old father I'd be, my dear,  
With two good children two greet me here."

Down by the gates 'neath the old elm tree  
Donald waited alone; and she  
For whom he waited his love-call heard,  
And on either cheek the blushes stirred.  
"Father," she said, and knelt her down,  
And kissed the hand that was old and brown—  
"Father, there may be two if you will,  
And I—your only daughter still."

"Two to welcome you home at night;  
Two to make the old homestead bright;  
I—and somebody else." "I see,"  
Said the farmer, "and who may 'somebody' be?"  
Oh, the dimples in Bessie's cheek,  
That played with the blushes at hide-and-seek!  
Away from his gaze she turned her head,  
"One of neighbor Gray's children," she said.

"I'm" said the farmer, "make it plain;  
Is it Susan, Alice or Mary Jane?"  
Another kiss on the aged hand,  
To help the farmer to understand (?)  
"I'm" said the farmer, "yes, I see,  
It is two for yourself and one for me."  
But Bessie said, "There can be but one  
For me and my heart till life is done."  
—Harper's Weekly.

### Making a Home.

The home is both the bud and the blossom of civilization. By their homes we judge of the real character of any people. Here are the things which most surely indicate individual disposition and taste as well as national character and tendency. The home is also the most precious place, at least among all English-speaking people. In nine cases out of ten the business man plods on through all his weary complications that he may support a home. It is the vision of the home that cheers the day-laborer at his tasks; it is the center and jewel of the farmstead, without which the latter seems like a body without a soul.

Admitted that the home is the highest work of art in a civilized community, who is the artist? We hear about men making homes for themselves, but what kind of homes do they make? Go to California, nay, the women are there now; go to Arizona, to Colorado, to the Black Hills; stay! You have only to peep into the room of almost any man who takes care of himself if you wish to know what sort of homes men make. True, some of these homes are quite pleasant; but are they, the best of them, in their appointments and keeping, the highest models of the civilized home? Contrast that with the dainty appointments and keeping of the majority of the homes of most women who care and provide for themselves. Of course, in a complete home, occupied by a complete family, there should be both the masculine and the feminine elements; but whose taste is it that prevails in the furnishing and the keeping of the house? Will it, as a rule, be nicely furnished if the woman have not the taste to select and adjust? It is true the man usually provides the means for its furnishing and its sustenance, and if this is what is intended by the expression, we will so understand it; but after all it is the woman who is really the artist; she plans and molds and puts her impress upon it. True, she is often guided by his wishes in many particulars, but the home when it is made is the expression of her taste and thought far more than his. She puts herself into it, and everything therein is largely molded by her presence.

Nor is it always true that the husband furnishes the home. It is a good old Yankee fashion, not quite out of date, which set the maiden at work in the midst of her teens to make up bedding and carpets and curtains and table linen for the home of the future, perhaps even before a husband was seriously thought of as an actual existence.

The rule of influence holds the same. Perhaps a little earlier, but not more surely, did the Yankee maiden of the past, who furnished her new home throughout, impress upon it her own personality than does the maiden of to-day who marries without a bed, a blanket, or a bureau. She may have East-lake furniture and the services of professional upholsterers; she may even take possession of a house ready furnished, of which she never has heard before; but if she becomes its mistress, she will set her mark on it; the house will bear her imprint rather than that of her husband; the housekeeping will resemble that of her mother more than it does that of his mother. It gives one a curious feeling to go through the house of a sister or a niece, whom you may not have met before

since she was married, and see the impress upon all the home arrangements, reminding you of what you have seen in the homes of her mother or her grandmother in the days of your childhood. It is like tracing the family likeness of form and feature through which the souls of kindred shiue out and mold the physique.

#### Influence of Home.

But let us ask, what is the highest aim of earthly endeavor? It is the perfecting of individual character. And the home is the place where this sort of work is done, if it be done anywhere. Character-making requires a workshop, a studio, peculiarly devised and furnished. That studio is the home, and the artist is woman.

Suppose the mother, the home-maker, should have in view the proper molding of the characters of her daughters rather than tricking them out with music, embroidery, white hands, delicate figures, and (miscalled) elegant leisure. She herself would endeavor to be the model woman she wished them to copy. They would share all her labors, they would be disciplined by industry, educated by care and responsibility, strengthened by labor, made healthy by exercise, while she would share their more truly elegant and more highly appreciated leisure. Eventually they would relieve her of care, and in their time would become thoughtful, enterprising, independent women and model home-makers, and they would be a source of strength and blessing.

So, too, in the case of boys. It is a positive injury to boys to sit by and see their mother overwhelmed with work which they might help her do, and especially if that burden makes her peevish and irritable. Boys should be taught self-help far more than they are, taking care of their own rooms, cleaning and mending their own clothes, and sewing on buttons. It would be a positive advantage to all our boys if they were taught, at least, the rudiments of all sorts of housework. They would not only be prepared in many an emergency of their future lives to make themselves more comfortable, to do a turn for wife or mother at times when her very life might depend upon a little help; but their own characters would be far better developed, especially in all the tender considerations becoming to husbands and sons. Is it not desirable that men should be educated to make good husbands as well as women to make good wives?

"But all this requires work, and we are worked to death as it is." Nay, dear woman, but your work would change its character. It would lose the killing aspect of drudgery. You would see how every stitch of home-work went into the character of loved ones. The ever-recurring, much-complained-of "drudgery," even of washing dishes, would cease. Where would be the brightness, the cheeriness, the culture of the family repast without the clear glass, the clean china, the burnished cutlery? Even the suds of the wash-tub ceases to drown the delight in the spotless napery. What would our homes be without these educators of self-respect? What mother for the sake of saving dish-washing would see everyone dip his spoon or plunge his fork into one dish, or dab his knife into the once piece of butter? What careful home-maker neglects the influence of clean bedding and well-swept rooms on the habits of her children? or neglecting, does not have cause to regret whether she knows it or not? Even the effect of clean clothing is not all for the outside world. And what mother and home-maker but would find all her toil lightened and sweetened, if she but considered the direct influence of every one of these little things in forming the characters of her children? If we let the feeling of drudgery in such work cut into our lives and waste our spirits, whose fault is it? And then the cookery! How many a poor woman hates the cook-stove almost as she would an infernal machine! She feels as if it were scorching out of her life almost everything fresh and beautiful; and perhaps she is not far from right, if we take into account the blighting effects of all the indigestible dishes she prepares by its aid; but if so, the fault is her own. There is not really an article in her house which she can make more serviceable for the health and happiness of her family.

This, however, is not done by ministering to selfishness and appetite, but by making wholesome food attractive and agreeable. Proper food is the largest ingredient in the health and happiness of children, in the safe habits of youth, and in the strength and endurance of manhood. It is the very material of which they are built up. There is no better safeguard she can throw around every member of her household. Does she realize her power? Such thoughts as these ought to strengthen her hands, brighten her thoughts, lighten her toil, season her dishes, and make all her labors very precious. Many things now tiresome would be so no longer, and nothing should be indifferent. Many things might be put aside as unnecessary; much of the routine labor may be paid for; but the eye and thought and heart of the home-maker should be in it or inspire it all.

It may be that few will listen to all this now. It may be that woman will wander out of the home and seek elsewhere her hold upon the secret springs of power, since it is for these she is ever seeking, but she will come back to it ultimately. She will recognize character-making as the great object in this life and the next; and home as the place where most of it must be done, and herself as the one who can best do it; and she will settle down to her task intelligently and with great contentment.—Julia Colman, in *Phrenological Journal*.

### Grandmother's Lecture on Babies.

Grandmother gives a lecture on babies in the *Rural New Yorker* in these words: The other day, Nellie Gray came to our house to visit, and she had the cunningest little bundle in her arms; there was edging, ruffles, tucks and embroidered blankets, and such a pile of muslin and ribbons; well, if I had not heard she had a little baby, I could never have guessed what it was, except there was a continued squeaking away down in the depths, that sounded no more like a baby crying, than it did like a mouse in the wall.

"Sakes alive! Nellie, give me the baby!"

"Oh, grandmother! I shall be so glad to; and do tell me what I shall do with it; cry, cry, from one day's end to the other. Ain't there work in taking care of babies, though? but it is a darling? Just see!" and she took off a cloak, two blankets, and a veil; and smoothed out the beautiful dress that swept clear out to the floor, as the little thing lay in my lap. The baby had on a thick crocheted sacque and all you could see of the little mite, was its bare head, puckered up face, and the tips of its little red fingers.

"Oh, how warm it is!" said the young mother, as she wiped the drops off her face; "I hope baby has not got cold; it is the first time I have carried him to ride."

"Nellie Gray, sit down, and let me tell you something, you don't know no more than a calf about taking care of a baby; no wonder the little thing cries! I wonder it is alive! Just look here! the thermometer stands at 90° in the shade, and you are about melted in your muslin dress, and here is this wee baby, bundled up with as many wraps as it would need in winter, and a thick sacque, and a pinning blanket, two flannel petticoats, a cotton one and a dress; and as sure as you are alive, socks on the little feet! What on earth are you thinking of, to pile all this stuff on a two-months-old baby?"

"Why, grandmother! I supposed I must!"

"And Nellie; you have got your waists and bands so tight, that baby can hardly draw a breath. No wonder at all, that baby cries! more wonder that the baby don't die! Now, just take off all these extra fixings; one skirt and the dress, are enough, and loosen your waists, and let the little atom have one good breath and a chance to stretch itself."

Its mother did as I told her, and in a few minutes the little thing cuddled down to sleep. "Let me lay it down, Nellie, I'll show you how;" and so I laid it down on its side, a little curled up like a kitten, and there it lay and slept, two long hours, its mother going every few minutes to see if anything ailed it. "You let it alone, Nellie! Let her have her nap out, and she will be happy when she wakes up, and you will be rested too."

Baby never cried again all day; she slept two hours at a time, and her mother was as happy as could be. She kissed me when she went away, because I had taught her to take care of her little one.

It is a regular science to bring up babies, and girls should never get married till they have learned how to take care of children. Half of the babies that die, are just killed by ignorance, and half of those that live, are made sick and miserable, just because their mothers did not know how to take care of them properly. These babies are little precious creatures, and if they are rightly taken care of, are but little trouble, till they are old enough to creep about, and then the joy of seeing them active and well, pays for all the trouble they make. Some mothers are so foolish, that they will not let the little ones creep, because they soil and wear their clothes. Poor women! No wonder their children are bow-legged, and have weak backs! They have no chance to develop and strengthen their limbs and muscles. Nature knows best how to manage children, and they must have a chance to develop their powers. They do not want to be encumbered with long clothes, they want room to kick and stretch; a smart, healthy child, is far better than a puny, feeble baby, trigged out with all the finery that fashion dictates; and for mercy's sake, don't roast your babies alive in hot weather, by bundling them up so they cannot have a chance to breathe. Their blood circulates fast, and they require but little clothing, if a cool day comes, it is easy to add an extra garment.

ELEPHANTS AS LOG-ROLLERS.—A correspondent of the *Philadelphia Evening Telegraph* in British Burmah writes: "The other morning at Rangoon, Gen. Grant and party were invited to inspect a teak saw-mill, to see the wonderful intelligence of the elephants that are used to carry and pile the logs. Teak, you know, is a very heavy wood—it is one great source of revenue to Burmah—but to work for his mahout the animal will lift the end of a heavy log by its tusks, placing his trunk on it to keep it steady; then gradually working his way towards the center, finally balances the log and carries it carefully to a pile even higher than himself; or if it is wanted to saw the log, he will push it along beneath the circular saw, his trunk interposed between his foot and the log. They will do almost anything, and from their tremendous strength you can understand what they can accomplish. At a branch mill at Montmain they breed them for this purpose, but it takes 20 years before an elephant can do hard labor."

### The Charm of True Marriage.

Our advanced theories of divorce and free love, making the matrimonial relation merely a partnership to be dissolved at pleasure, whatever else may be said in their favor, strike a deadly blow at an element in it which was meant perhaps to be supreme above all others. What is the sweetest charm of all true marriage, what the greatest advantage, what the most priceless happiness, take life through, which it brings to the human heart? Not the flush and splendor of its early love; not the richer development which it brings to the character; not even the children who are gathered around its shrine. No, but the intimacy and reliability of its companionship; the fact that it gives those who enter it, each in the other and through all scenes and changes, a near and blessed stand-by. Marriage in some of its aspects is doubtless the source of an immense amount of unhappiness, crime, injustice, blight and down-dragging, one of the most perplexing institutions society has to deal with—only the blindest sentimentalist will deny that. On the other hand, however—and this is not mere sentiment but sober fact—of all the evidences of God's goodness to be found in this lower world, all the proofs that he cares for us not only with the wisdom of a Creator, but with the interest and love of a Father, there is none quite equal to his sending human beings into the arena of life, not to fight its battles, win its victories and endure its sorrows alone, but giving them, as they go forth out of their childhood's home, a relation in which each two of them are bound together with the closest of all ties, live together under the same roof, have their labors, their property, their interests, their parental affections all in common, and are moved to stand by each other, hand to hand and heart to heart, in every sorrow, misfortune, trial and stormy day that earth can bring. It is an ideal, if not always realized in full, which is tasted even now, amid all that is said about marriage miseries, more widely perhaps than any other happiness.—*Sunday Afternoon*.

### When the American Flag First Flew.

In the course of his oration at Denver, N. H., on Decoration Day, the Rev. A. H. Quint said: Between eight and nine o'clock on the morning of November 1st, 1777, the Continental ship-of-war, the *Ranger*, 18 guns, Capt. John Paul Jones commander, weighed anchor and sailed out of Portsmouth harbor. It went out on that gallant cruise on the English coast, in which it met and captured the British war vessel, the *Drake*, of superior force, both of men and guns. The *Ranger* was built in a New Hampshire harbor by a New Hampshire mechanic, and sailed from a New Hampshire port. It was manned by a crew of the *Piscataqua*, and largely by hardy mariners from this town. Ezra Green, the surgeon who ministered to the wounded in that sharp and bloody sea fight, was a citizen of Dover whom you and I remember as he walked the streets an old man in our boyhood, who sleeps in this historic ground; and its young commander of marines, killed in action, was Samuel Wallingford, of the Rollinsford part of ancient Dover. Why do I call your attention to the fact that Dover men were part of the crew of the brave Paul Jones? Because on the very day on which Jones was assigned to that vessel Congress adopted the flag of the Stars and Stripes, and history tells us that when that *Ranger* went out of Portsmouth harbor, for the first time our national flag floated upon the breeze. On the 14th of February, 1778, it received a salute from a French admiral, undoubtedly, as one of the *Ranger's* officers wrote that day, "The first salute ever pay'd the American flag." Men of our own town and of our own blood manned the vessel which bore for the first time in history the Stars and Stripes, which thenceforth went on in the career of national achievements until it became honored and feared throughout the world. And never have you or those departed been dastards when the honor of that flag demanded your service.

A TRIBUTE TO SCIENCE.—The *Detroit Free Press* has a "Lime Kiln Club," and at a late meeting the members tackled the subject of science. One of the speakers voiced the following tribute: "Science am above us, below us, an' all aroun' us, an' yit the great majority of men doan' seem to realize the fact. What builds de fish in de stove, 'cept science? What biles de taters in de kettle 'cept science? What furnishes our clothes, our homes, an' eben our graves, 'cept science? Gaze on de sun. But for science who'd know whether that shiny orb war ober in Kennedy or 90,000,000 miles in de sky on a beo line? Gaze on de moon. But for science, who among us would know its infloence on de watermelon crop? Look at de stars. Befo' the advent of science who could tell Venus from Aunt Betsy, de Norf star from the big dipper, or de dog stars from de cat stars? Science made de steam engine, de kivered cars, de wheelbarrow, de whitewash brush, an' de several other articles which have made dis nashun what it am to-day. Science frows bridges across great rivers; it brings up water from de deep well; it puts out fires; it gives us de fine-comb; it mixes de plug hat an' de paper collar; it brings us de glorius Foth of July; it makes peas and beans wid our coffee so dat we can't tell which it tastes de moas' of, an' but for science de man wid de toofache would be no-whar!"



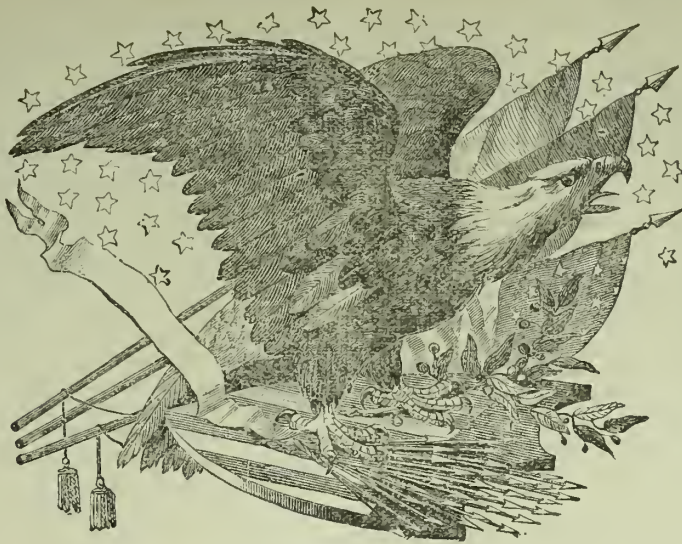
## Pernicious Newspapers.

*Sunday Afternoon*, an American magazine of great value, sharply arraigns the newspapers which are prone to minister to groveling tastes by publishing very reprehensible literature. It says: Not only do our newspapers offend by the publication of the vile details of great crimes, but also by picking up and spreading abroad little scandals, little unpleasantness in society, little bits of gossip that no sensible or honorable person wishes to know or would suffer himself to repeat. Much of the space of many weekly papers and of not a few dailies is devoted to matters of this description. The tittle-tattle of the neighborhood that is not only silly but poisonous in the extreme is gathered and served up in as appetizing a manner as possible for the entertainment of the whole community. If a woman behaves indiscreetly, the fact, more or less embellished and sufficiently disguised to whet the appetites of the gossips, is likely to appear in print the next day. If a man commits an error of which he is pretty sure to be ashamed, and concerning which he would be glad of the indulgent silence of his neighbors, there is no mercy for him; he will have a chance to read the record, a good deal magnified, in the local column. Domestic infelicities with which the public has no business at all afford material for spicy items; business complications are worse complicated by unauthorized reports concerning them; little troubles in the churches which those who have the care of their interests are doing their best to compose are fanned into grave dissensions by references to them in the newspapers. Sometimes, when the details of these small scandals are not given, there are little hints and innuendoes that serve to put all the prurient and meddling noses in the community on the scent for indecency or mischief. What excuse or justification can there be for the publication of such items as these? Who is profited by reading them? What interest of intelligence, of morality, of decency is promoted by spreading abroad these miserable details of gossip? The only reason for printing them is that many people like to read them; they make a sale for the papers. But the taste that craves them is a vicious and degraded taste, and the business of gratifying and stimulating such a taste is a bad business.

What is thought of the woman who goes from house to house in her neighborhood rehearsing bits of intelligence like these? What is said of the man who devotes his leisure to the circulation of the current rumors? If it is disreputable for a man to go about ringing his neighbors' door-bells and reciting to them such scandals by word of mouth it is more disreputable for him to print them in a widely-circulated newspaper. The story that a gentleman would not stoop to tell in good society, no gentleman ought to print in his paper. Meddling and mischief-making is just as reprehensible in a reporter as in any other man. The fact that such stuff makes his paper sell is a poor justification. And until the managers of newspapers learn to discriminate with a little more care between the news which the public has a right to hear and the news which is simply noisome or injurious scandal, the business of journalism will suffer a serious loss of respect and of influence.

## Chaff.

PERFECTLY yellegant—a baby show.  
A GIRL who puts on airs is a wind-lass.  
EXPENSIVE wives make pensive husbands.  
CLOVES won't sweeten the breath of scandal.  
FOLKS are very foolish to take a *fresh* cold.  
If you must; get 'em *cured*.  
The trouble in Canada, is the women use up the warm weather drying clothes.  
CHARACTER.—The only personal property which everybody looks after for you.  
THEY are digging in Tennessee for gold a fortune-teller says lies there. Probably the fortune-teller lies there.  
A GROCER had a pound of sugar returned with a note saying: "Too much sand for table use, and not enough for building purposes."  
AN absent-minded gentleman, on retiring at night, but his dog to bed, and kicked himself down stairs! He did not discover his mistake until he went to yelp, and the dog tried to snore.  
"HIGH-HEELED boots, moustache, and a strut," says the major, "are the plainest signboards in the world, hung out in capitals, 'chambers in the attic to let—'inquire at the tailor's."  
"SARAH," said a young man the other day, to a lady of that name, "why don't you wear earrings?" "Because I haven't had my ears pierced." "I will bore them for you, then." "I thank you, sir; you have done it enough."  
THINKING to stock his depleted larder, a Western editor advertised: "Poultry taken in exchange for advertising." The villainous compositor, seeing his opportunity to pay up a long-standing grudge, set it up: "Poetry taken," etc., and since that time the office-boy has been clearing 50 cents a day from the waste-paper man.  
A GENTLEMAN who tried to make the neighborhood of Astoria and the mouth of the Columbia river his home, has written the following report:  
Dirty days hath September,  
April, June and November;  
From January up to May  
The rain it raineth every day;  
From May again up to July,  
There's not a dry cloud in the sky;  
All the rest have thirty-one,  
Without a blessed ray of sun;  
And if any of them had two and thirty,  
They'd be just as wet and twice as dirty.



THE AMERICAN EAGLE.

Monarch of the realms aërial,  
Ranging over land and sea;  
Symbol of the great Republic,  
Who so noble and so free!  
Thine the boundless fields of ether,  
Heaven's abyss unfathom'd thine,  
Far beyond our feeble vision,  
On thy bars its sunbeams shine!  
Borne on iron-banded pinion,  
On from pole to pole you sweep;  
O'er sea islands, craggy mountains,  
O'er the hoarse resounding deep.  
Now, thy faunting plumes o'ershadow  
Northern cliff and iceberg grim;  
Now, o'er southern, soft savannahs,  
With unflinching circuits skim.  
He that feeds the tender raven  
And the sea bird of the rock,  
Tempests the inclement breezes  
To the shorn and bleating flock.  
Leads thee o'er the wastes of ocean,  
Guides o'er savage flood and wood,  
And from bounteous nature's store-house  
Feeds thy clamoring, hungry brood.

O'er the mountains of Caucasus;  
Over Apennine and Alps;  
Over Rocky Mounts, Cordilleras;  
Over the Andes' herbless scalp;  
High above these snowy summits,  
Where no living thing abides,  
He, that notes the falling sparrow,  
Feeds thee, fosters thee and guides.

Thou wingest where a tropic sky  
Bends o'er thee its celestial dome;  
Where sparkling waters greet the eye,  
And gentle breezes fan the foam;  
Where spicy breath from groves of palm,  
Laden with aromatic balm,  
Blows ever, mingled with perfume  
Of luscious fruit and honeyed bloom;  
Green shores, adorned with drooping woods;  
Gay grottoes, island solitudes;  
Savannahs, where palm-trees screen  
The Indian's hut with living green,  
Behold thy pinions as they sweep,  
Carreering in the upper deep.

—Isaac McLellan.

## Young Folks' Column.

## Bye-Lo-Land.

Baby is going to Bye-lo-land,  
Going to see the sights so grand;  
Out of the sky the wee stars peep,  
Watching to see her fast asleep.  
Swing so,  
Bye-lo!  
Over the hills to Bye-lo-land!  
O, the bright dreams in Bye-lo-land,  
All by the loving angels planned!  
Soft little lashes downward close,  
Just like the petals of a rose.  
Swing so,  
Bye-lo!  
Prettiest eyes in Bye-lo-land!  
Sweet is the way to Bye-lo-land,  
Guided by mother's gentle hand.  
Little lambs now are in the fold,  
Little birds nestle from the cold.  
Swing so,  
Bye-lo!  
Baby is safe in Bye-lo-land.

## The Boy and the Duke.

An English farmer was one day at work in the fields, when he saw a party of huntsmen riding about his farm. He had one field that he was specially anxious they should not ride over, as the crop was in a condition to be badly injured by the tramp of horses; so he dispatched a boy in his employ to this field, telling him to shut the gate, and keep watch over it, and on no account to suffer it to be opened. The boy went as he was bid, but was scarcely at his post before the huntsmen came up, peremptorily ordering the gate to be opened. This the boy declined to do, stating the orders he had received, and his determination not to disobey them. Threat and bribes were offered, alike in vain. One after another came forward as spokesman, but all with the same result; the boy remaining immovable in his determination not to open the gate. After awhile, one of noble presence advanced, and said, in commanding tones: "My boy; do you know me? I am the Duke of Wellington—one not accustomed to be disobeyed; and I command you to open that gate, that I and my friends may pass through." The boy lifted his cap and stood uncovered before the man whom all England delighted to honor, then answered firmly: "I am sure the Duke of Wellington would not wish me to disobey orders. I must keep this gate shut; no one is to pass through but with my master's express permission." Greatly pleased the sturdy old warrior lifted his own hat, and said: "I honor the man or boy who can be neither bribed nor frightened into doing wrong. With an army of such soldiers, I could conquer not only the French, but the world." And, handing the boy a glittering sovereign, the old Duke put spurs to his horse, and galloped away, while the boy ran off to his work, shouting at the top of his voice, "Hurrah! hurrah! I have done what Napoleon could not do—I've kept out the Duke of Wellington."

THEY call the U. S. Ten Dollar Certificates—"baby bonds."

## GOOD HEALTH.

## Food and Digestion.

In a lecture before the Workingmen's Lyceum, Dr. Seguin spoke as follows of food: "An ordinary meal is generally composed of five ingredients—animal or nitrogenous food, starchy or sweet food, watery vegetables, beverages and condiments. This food when digested is taken into the system by blood vessels. For persons, and especially for workingmen, in this climate, meats are the most easily digested, and at the same time are the most nourishing food. Tripe is the easiest and pork the hardest to digest. Among vegetables, rice and boiled cabbage are the extremes. Anything that is boiled in fat is extremely indigestible. Milk contains the five ingredients referred to above, and so is really 'all-sufficient.' Mothers make a great mistake in trying to induce infants under two years of age to eat starchy food, for there is no alkaline fluid in the stomach of an infant by which the starch can be changed to sugar, and so infused into the system. It has been estimated that a man working in the open air daily needs 15 ounces of meat, 18 ounces of bread,  $3\frac{1}{2}$  of butter or fat, and 51 of water. I agree with many eminent chemists who have proved that alcoholic drinks are an aid to the system in retarding the waste of tissues. So, too, for the same reason, I regard tea and coffee as nourishing. An excess of starchy food is to be carefully avoided. Men who handle lead ought to abstain from alcohol, for if too much is taken the kidneys, which throw off the poison of the lead, are likely to become diseased."

Nature has supplied an infinite variety of food to suit every taste and the gratifications of every stomach. "What is one man's meat is another man's poison," is an old and true saying. The whole of good health may be concentrated in the simple observation to "eat only what agrees with you." Volumes of information can give no better or other advice. No physician can prescribe a more efficacious remedy.

DISEASE GERMS.—C. Von Nagell, a Bavarian investigator, while he retains the idea that the smallest organisms, fungi, are the cause of all infectious diseases, holds that only these germs are dangerous and calculated to infect which enter our organs of respiration with the air we breathe. If Von Nagell's theory should prove true, and find general acceptance, it would be no longer necessary to trouble ourselves about the generation of products of decay in masses of liquid, as in sewers, canals, damp soil, river and spring waters. On the other side every means must be employed to prevent these fungi diffusing through the air as a result of the drying up of such decaying masses.

PROPERTIES OF GLYCERINE.—Glycerine should not be rubbed on the skin in an undiluted state. One of its remarkable properties is its power to absorb moisture, and hence its irritating effect on the skin. About three fluid ounces of water to one of glycerine will form a mixture which will neither attract moisture nor evaporate, the weight scarcely varying from week to week, either in one direction or the other. The mixture should be kept in a cool, moist place.

## DOMESTIC ECONOMY.

## A Practical Lecture on Cookery.

Cooking classes are now becoming quite popular in the Eastern cities. The lecturer stands amid her materials and as she talks she actually prepares the dishes which she describes, and the class take notes upon the same. In Philadelphia, Miss Dodds has a class of this kind, and at a recent lesson she reviews certain well-known dishes and gave her ways of preparing them, some of which we quote:

Irish Stew.—Material required: 2 pounds of potatoes, 1 pound of neck mutton,  $\frac{1}{2}$  pound of onions, salt, pepper and  $\frac{1}{2}$  pint of water. Cut the potatoes in pieces, boil them and throw away the water. Soak the onions in water, slice them up and put them with the potatoes in a saucepan, and cook slowly for an hour and a half, seasoning with pepper and salt.

Apple Pudding.—Ingredients used: 5 apples,  $\frac{1}{2}$  pound of flour, 2 ounces of lard, 1 ounce of sugar,  $\frac{1}{2}$  pint of cold water,  $\frac{1}{2}$  teaspoonful of baking powder, and a pinch of salt. Pare and core the apples. Mix the lard, yeast powder, and salt. Add water, knead lightly together and cut into five pieces. Fill the core hole in the apple with sugar, wrap the apples with dough, put into a lightly-floured tin, and bake for an hour and a half.

Milk Soup.—Stock required: 2 raw potatoes, 1 ounce of lard, 1 pint of milk,  $1\frac{1}{2}$  ounces of fine sage, 1 quart of cold water, pepper and salt. Cover potatoes with water, keep over until the water boils; then replace the water with a quart of fresh, adding the lard at the same time. Boil the potatoes until they are tender; pour the materials through a colander and return to a saucepan; add milk, sage and seasoning.

Maccaroni and Cheese.—Ingredients necessary:  $\frac{1}{4}$  pound of maccaroni, 3 ounces of dry cheese,  $\frac{1}{2}$  pint of milk, and a small quantity of pepper and salt. Boil the maccaroni 15 minutes in water; then replace the water with milk, and boil for half an hour longer. Spread a layer of maccaroni on a flat dish; add a layer of dry cheese; sprinkle slightly with pepper and salt. Continue alternate layers of maccaroni and cheese until the required amount is obtained. Then place in the oven and brown for from 8 to 10 minutes.

To Boil Potatoes.—The only method to boil potatoes properly, says Miss Dodds, is to boil them until half-done, then pour off all the water, cover the pot closely and permit them to steam until quite done. Just before removing them from the stove take off the lid of the pot that the steam may escape, and the potatoes will be found to be very dry and very mealy. Young potatoes should be placed in boiling water; old potatoes in cold and boiled.

To Make Puff Paste.—To make this pastry she used one-quarter of a pound of flour, same quantity of butter, the yolk of one egg, a pinch of salt, several drops of lemon juice and a gill of cold water. The yolk of the egg, salt, lemon juice and water are mixed and then worked into the flour, thus forming a stiff dough. When this has been kneaded quite firmly, roll the dough on a well-floured board until it is quite thin. It is necessary to be particular to use the exact weight of flour and butter. The butter should then be squeezed through a towel to extract the water and milk. Having been strained, it is placed in the center of the dough, which is folded carefully upon it and again rolled out as thin as possible. It is then folded in three layers and rolled, and folded for seven times; the first three times very carefully, that the butter may not run out. Having rolled and folded it the first time, it should be laid aside for a time to cool. After awhile, it is rolled again and folded again. Between the second and third and fifth and sixth rollings it should be allowed to stand in a cool place. When it is rolled for the seventh and last time, the paste should be about a half an inch in thickness. It is then cut in circular pieces about the size of a cup, in the center of these cakes a small, round indentation is made half through. These pieces are removed after the paste is cooked, which requires ten minutes.

ASPARAGUS PUDDING.—Mince a little lean ham very fine, and mix it with four well-beaten eggs, a seasoning of pepper and salt, a little flour and a piece of butter the size of a walnut; cut the green parts of the asparagus into very small pieces, not larger than a pea, and mix all well together. Then add a sufficient quantity of fresh milk to make the mixture the consistency of fresh butter, and put it into a well-buttered mold that will just hold it. Dredge a cloth with flour, tie it over the pudding, and put it into a saucepan of boiling water. When done, turn it carefully out on a dish, and pour some melted butter around it.

BEEFSTEAK A LA PARISIENNE.—Take a piece of rump steak about three-quarters of an inch thick. Trim it neatly, and beat it, sprinkle it with pepper, dip it in oil, and broil it over a clear fire. Turn it after it has been on the fire a minute or two, and keep turning it until done; eight or ten minutes will do it. Sprinkle with salt, and serve with a small quantity of finely minced parsley and a piece of butter mixed together, and placed over or under the steak. Garnish with fried potatoes.





DEWEY & CO., Publishers.  
A. T. DEWEY. W. B. EWER.  
Office, 202 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.  
Advertising Rates: 1 week, 1 month, 3 mos. 12 mos.  
Per line, .25 .80 \$2.00 \$5.00  
Half inch (1 square), \$1.00 \$3.00 7.50 24.00  
One inch, 2.00 5.00 14.00 40.00

Quack Advertising positively declined.

Our latest forms go to press Wednesday evening.

The Scientific Press Patent Agency.  
DEWEY & CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. G. H. STRONG

SAN FRANCISCO:

Saturday, July 5, 1879.

### TABLE OF CONTENTS.

EDITORIALS.—The Fourth of July; Restraining Early Buds; Mariposa or Butterfly Tulip; Absorption of Moisture by Grain, 1. The Week; In Memoriam; Tubs on their own Bottoms, 8. Earthquakes; The Chance for Wheat, 9.

ILLUSTRATIONS.—Mariposa Tulip, 1-9. Theory of Earthquake Waves Illustrated, 9.

QUERIES AND REPLIES.—Devices for Orchard Plowing; Caution Against "Fleetwood's Life of Christ," 8.

CORRESPONDENCE.—Rus in Urbe—A California Home; Present State of Agriculture in England; Agriculture at the Stockton Asylum; Nevada Agriculture.—No. 2, 2-3.

THE DAIRY.—Dairy Cows and their Management, 3. THE APIARY.—Purity of the Italian Bee in California; The Situation in the Southern Counties, 3.

POULTRY YARD.—French Methods of Fattening Fowls, 3.

PATRONS OF HUSBANDRY.—Meeting of the Oregon State Grange; A Good Master Devises Work; The Grangers' Bank and the Grain Crop, 4.

AGRICULTURAL NOTES from the various counties of California, 4-5.

NEWS IN BRIEF on page 5 and other pages.

HOME CIRCLE.—Two of Them (poetry); Making a Home; Grandmother's Lecture on Babies; Elephants as Log-Rollers; The Charm of True Marriage; When the American Flag First Flew; A Tribute to Science, G. Pernicious Newspapers; Chaff; The American Eagle (poetry), 7.

YOUNG FOLKS' COLUMN.—Bye-to-land; The Boy and the Duke, 7.

GOOD HEALTH.—Food and Digestion; Disease Germs; Properties of Glycerine, 7.

DOMESTIC ECONOMY.—A Practical Lecture on Cookery; Asparagus Pudding; Beefsteak à la Parisienne, 7.

THE STOCK YARD.—The Stock Premiums at the State Fair in 1879, 12.

### Business Announcements.

Thoroughbred Berkshires, John Rider, Sacramento, Cal. Short Horn Bulls For Sale, Robert Ashburner. Flour Mill For Sale or Rent, Jos. Wagner & Co., S. F. Stock and Grain Farm For Sale, D. B. Hays, Oroville. H. M. Covert, Commission Merchant, S. F. Dividend Notice—German Savings and Loan Society. Fencing—Chapparral Seed, W. R. Strong, Sacramento.

### The Week.

Evidence accumulates that the International Meteorological Congress left some screws loose at their recent meeting, for the weather is certainly not yet above complaint. It is probable that in the dissemination of invitations to the conference Æolus was overlooked, and is consequently prone to throw the work of the Congress into disrepute. The Frost King seems also to be in ill humor from some cause and to have joined his forces with the god of the caves. However this may be, the fact remains that the face of the globe is scarred and bruised by storms of unusual and unreasonable quality; frost has applied the pincers to an extent beyond the memory of a generation. England has grain so thin that a passer on a railway train could see a hare in the middle of a ten-acre field. France has been beaten by rain and wind, so that the very sugar beets have been driven into the ground and vines torn and mangled in the gales. Even Algiers, almost in the face of her torrid sun, has been pinched by frost at the verge of summer. In our own State, around the bay, there has been a coal burning and blanketing almost like that of winter, and in the interior the reapers, in some parts, are turning back from the fields not worth the cutting, and the threshers are sacking shrunken and shriveled grain and inversely blessing the winds which have robbed them of their full reward. And yet city people rise in their wisdom and say "farmers are chronic grumblers." Who has a better right to grumble? Who else has to leave all his treasures out of doors and subject to all the whims of an uncertain sky. Those who make the charge forget that causes which only give them temporary chills or parch their faces as they go abroad, are all at work upon the farmer's actual livelihood and may reduce him to beggary in an hour or a day. No! considering the conditions farmers as a class cannot be called grumblers. On the other hand, it is often wonderful how hope and confidence survive the shocks to which they are subjected.

### In Memoriam.

Bereavement presses heavily upon us. At her home in this city, on Sunday morning, died Hosapher N., wife of Warren B. Ewer, senior editor of our publications. She has suffered long and patiently, hoping against hope, that the malady which had fastened upon her would loosen its grasp and restore her again to her beloved ones, to her wide circle of friends—again to the life of kind thoughts and gentle deeds in which she delighted. But the God in whom she trusted willed otherwise. On Sunday morning, fatigued with pain of unusual severity with which she had battled, she fell asleep, and while her devoted husband and attendants rejoiced to think the quiet slumber would refresh her, she peacefully crossed the river. Her loss is bereavement beyond words to those of her immediate household, and in the larger circle, in which her presence was a ray of sunshine and an influence toward purity of thought and nobility of conduct, the tributes to her memory are tender and heartfelt.

Mrs. Ewer was born in 1817 in Havana, Cuba. In youth she removed to the old commonwealth of Massachusetts, and there she and her future husband began an acquaintance as playmates which ripened into mutual affection. During seven years of plighted troth they awaited their marriage, and since then 40 years of union have cemented their lives together. During their early married life she was an invalid for many years, and the sympathy quickened by this experience knit them the closer. Mr. Ewer came to California in 1849, and his wife followed him four years after. They resided in Grass Valley about 8 years, making many friends. For 17 years they have lived in San Francisco. Three children were born to them, one dying in the full vigor and promise of early manhood; another, a devoted daughter, still survives her mother. This daughter and an elder sister, both in delicate health, Mrs. Ewer leaves in charge of her bereaved companion.

The life of Mrs. Ewer was one of nobility, and her heart was full of generous impulses. In deeds of charity she was constant. Her work lay in those quiet actions in behalf of the suffering and the unfortunate, of which the world never knows, as well as in organized efforts for wider charities. She was one of the lady members of the Board of Managers of the "Sailor's Home" in this city. This project was very dear to her, and while her strength lasted she gave it generous and self-denying promotion. As a member of the Union Square Baptist Church of this city, she lived a consistent Christian life and was earnest in every good work. Frankness in words, firmness and decision in character, with unswerving devotion for the right and kindness toward all in the least deserving—these were strong characteristics of her life.

Mrs. Ewer possessed what may be truly called a sunny disposition. In her friendships she was most honest and outspoken, and one of the results of her illness, which she most deplored, was her separation from her friends. Her conversation was full of the charm of animation, and while it disclosed thoughts born of wisdom and research on the themes she preferred, it was always warmed by true womanly sympathy and genuine philanthropy. She was the life of the social gathering, the light of her home, an influence toward the elevation of all who came within the circle of her acquaintance. Thus she will be widely mourned, and the sense of loss, itself the highest tribute to the worth of one departed, will press itself upon many a mind and heart. Though a great sufferer for many months she retained her kindness of disposition amid all her sufferings, and one of her greatest trials was the burden which she placed upon those who loved her—a burden which was lightly borne because of her hold upon the hearts of those who ministered to her.

She has gone hence. During her lifetime her trust was full and her faith serene, and to such souls to die is gain. Not to her, but to those whom she has left behind are honest words of sympathy fitting. To our associate, to whom for 40 years she was a loving wife and true companion, we extend the most heartfelt assurances that we grieve with him in his bereavement, because we know how much a part of his life her presence and companionship had become. He and his daughter are bereft and alone—and yet not alone, for love and memory do not die. Thine it is to cherish a memory which will always come to them, sweeter far than fra-

grance of flowers; more precious than anything of earth can be, for their treasure is now beyond the pain and suffering of earth, in glad possession of the peace beyond.

The funeral of Mrs. Ewer took place on Tuesday afternoon, July 1st. Both at the home and at the church there were throngs of sympathetic mourning friends. Floral offerings were many. At the church there was a large cross, flower-set, encircled by a wreath of flowers. There was also an anchor of woven blooms. These were regarded by all as fitting emblems of her devotion and faith. An eloquent sermon was preached by Rev. Mr. Ross, pastor of the church and a touching tribute to the christian virtues and noble life of the deceased by Rev. Mr. Hughes, pastor of the Baptist church at the Mission. Both in the public exercises and in the tender words spoken at the home were to be found eloquent testimony to the worth of her they mourned, and assure us that she still lives in the hearts of the community.

### Tubs on their own Bottoms.

If the new Constitution succeeds in placing some of our large gold-banded tubs squarely on their own bottoms the State will be the better for it. There has always been a disposition among men to force the weak to carry the burdens of the strong, instead of the reverse, which would be the fairer proportionment. The physical power to force the weak to labor for the strong which prevailed in early times, has given place in these later days to the monetary power or the power of deceit and crafty wiles practiced in the guise of the law. The result is just as grievous as ever, and the imposition and bondage are just as depressing as were produced by the fear of the lash, the prick of the spear or the threat of bereavement and starvation.

Speaking of tubs reminds us that our great tubs of social position and wealth have continually shown a disposition to cast their weight upon other bottoms than their own. It is on record in the daily papers that one of the wealthy women of our city, the walls of whose residence rise heavenward in turrets and parapets, and whose property would outvalue 1,000 good sized farms or modest city homesteads, was assessed one million dollars by the city Assessor and she, by her counsel, appeared before the Supervisors and begged that the whole assessment be expunged. Thus she, holding so much money that it must be a burden, would forsooth erase her name, and escaping her proper contribution to ensure the safety and security of her wealth, would double the taxes upon a thousand of the humble homes which nestle at the base of her castle. Clinging tenaciously to a weight of wealth which she would be happier without, she would, as it were, snatch the crust from the poor around her; because increasing the taxes of the poor is often literally depriving them of money which they really need for food and personal comfort. Is there so much of evil in celestial minds? As fortunes rise higher must their owners lower fall in the scale of commonest humanity? History and daily experience cite so many instances of hearts crushed out by the weight of property accumulated, that we must believe that this is one of the common results of protracted grasping for pelf. As then there are no sentiments of justice and philanthropy which will lead the over-rich to shoulder their proper burdens, there must be laws able to cope with their desperate desire to elude the just requirements which the welfare of the community makes upon them. If there shall be found anything in the new Constitution which is powerful to do this service for the people, it will be a deed full of joy and justice.

But this large leaning tub to which we have alluded, is not the only one which interferes with the equitable bearing of society's burdens. The city Assessor states that there are hosts of people who have hoards of cash hidden away in the banks which he cannot reach. There are men worth tens and hundreds of thousands who do not even contribute as much to the public treasury as the poor laborers and artisans who own humble homes on the outskirts of the city. Men who loiter about the streets and public resorts, arrayed in fine raiment and faring sumptuously every day are unknown to the assessment roll, while the poor laborer, with patched garments and self-deceiving wife and hungry children, is punished for his frugality, because the assessor can easily see his lanky roof, his cow and his dozen hens scratching a scanty livelihood on the waste places. As these things come to mind how they shake one's faith in the quality of justice as embodied in modern civilization. Not yet has oppression been lifted from the lowly; not yet have the faces of the poor been raised from the grinding. Will there come a time when laws shall embody the declarations of constitutions, when each shall bear his own burdens? Will there ever

come a time when the divine principle shall rule in the common affairs of men, when the strong shall aid the weak? Progress hitherto does not promise it, in the near future at least, for physical force has only given place to cunning and subterfuge, and the weak are still oppressed.

This question of tubs on their own bottoms is one which most seriously affects our agricultural industry, and one which, as much as any other, stirred the farmers of the State to order a change in the organic law of the State by their votes at the May election. It has been general experience that a man only made himself a target for the assessor by the sacrifices he made to improve his home and its surroundings. His industry was taxed before it yielded him anything—a prospect was a good enough provocation for the assessment. Idle lands though fertile and idle men though rolling in wealth, contributed little or nothing toward the public expense, while diligent labor and its rewards was weighted down with the burdens. Is it any wonder such injustice led to discontent and resolutions for a new order of things, whether the changes proposed were wise or otherwise. It is to be sincerely hoped that anticipated benefits may be realized. If wealth be made to bear its own burdens, the lifting of the weight from those in moderate or depressed condition will give our productive and developing force a new and beneficent impulse. Let our laws but compel all men to the recognition of the simplest principles of justice in this matter of shouldering public burdens and we shall have indeed a new era of prosperity, with brightened hopes and doubled strength. Let our public cooperation be perfected until all leaning staves are plumb, and fairly on its own bottom stands every tub, whether it be of high or low degree.

## QUERIES AND REPLIES.

### Devices for Orchard Plowing.

EDITORS PRESS:—As an old reader of the RURAL PRESS, I have learned of many methods of how to rig up a plow in order to plow up close to a row of trees or vines.

In the first place, let me say I don't see any use or necessity to cramp the belly of a horse between the tugs attached to an 18-inch long whiffletree; why, I am using a whiffletree 34 inches long, and find it not a bit too long, but instead of having one hole in the center, I make two holes each about six inches away from center. When I plow between trees on level ground, and with the intention to throw the ground toward the trees, I bolt a block of wood of about two and one-half to three inches in thickness (as represented in the PRESS of May 10th, page 307), on the left side of the plowbeam, and use the whiffletree hole on the right side from the center, and vice versa. When I want to plow the ground away from the trees I put the clevis pin through the left side hole in the whiffletree, and move the guide block over to the right side of the plowbeam. In this way I accomplish the object, to plow up closer to a row of trees than a horse can walk without injuring the trees in the least.

Up to this time I have connected the whiffletree, made of a stick of hard wood, with a common clevis to the plow, and tied the tugs with a hay rope to the ends of the whiffletree; all cheap and no patent on it.

The same whiffletree I use in plowing my vineyard, planted on steep hillsides, but with a sidehill plow, called "Knapp's Half Moon Bay," always throwing the ground downhill, have a "guide block" on each side of the plowbeam, and change the clevis pins each time at the end of the furrow or row. Of course this changing is troublesome I admit, but the great object in view is, the horse can always walk in the furrow (after the first one is made), while the plow takes plenty of ground. I do a good plowing instead of a scratching, and leave a strip of ground unplowed as narrow as possible to be worked over with the hoe. Until lately, I did not know what is a horse hoe? I know it now, have now two, and challenge another year so favorable for weed growth as the present one has been.—WM. PEPPER, Saratoga, Santa Clara county, Cal.

### Caution Against "Fleetwood's Life of Christ."

EDITORS PRESS:—I found "Fleetwood's Life of Christ" advertised in the PACIFIC RURAL PRESS as "free to all who send us their address and six cents in postage stamps." On sending address and stamps I received a package of circulars, showing how I could earn the book as a premium, by getting orders for certain other books. Not wanting the agency, I found myself six cents out of pocket.—J. HALL, Riverside, Cal.

We thank our correspondent for giving us his experience, and we hope other readers will be cautioned that the advertisement does not mean what it says. We do not intend to advertise any of these clever, smart tricks of the trade, and will not knowingly do it. We desire our advertising space to be occupied with frank, honest trade notices, and when they are otherwise, we are glad to be told of it, that we and our readers may not be imposed upon farther. The advertisement to which our correspondent alludes is innocent compared with many which are accepted by the press generally, but it is too underhanded to suit our standards of truth in advertising.

ON FILE.—"Almonds" Inquirer and W. W. B.; "What Some Men Say When They Talk," H. E.; "Adobe and Stones in Wheat," G. W. T. C.



### Earthquakes.—No. 1.

The late eruption of Mount *Etna*, the present disturbed condition of *Vesuvius*, and the quite recent earth tremors perceived on our coast, afford an occasion for calling attention to the subject of earthquakes and their explanation, effects, etc.

It has been through the labors of Robert Mallet, of England, that this subject has assumed a scientific shape, and its importance, with a view to avoid the direful effects of Nature's throes, cannot be over-estimated in this utilitarian age.

The great complexity of earthquake phenomena, and their secret origin deep within the bowels of the earth, have produced during all ages so much surprise and alarm, that the human mind has been unfitted for scientific observations. Until twenty years ago the state of knowledge on this subject was much the same as it was 2,000 years ago. Yet, in the short period of twenty years, our knowledge of earthquakes is even greater than that of volcanoes.

Mallet has collected the records of 6,830 earthquakes as occurring in 3,456 years previous to 1850, but of that number 3,240 occurred in the last fifty years; not because they are becoming more numerous, but because the records are more perfect. Taking the last four years of Mallet's record, the number of earthquakes was about two a week. Alexis Perry, in a more complete record from 1843 to 1872, inclusive, mentions 17,249 or 575 per annum. It would seem probable, that as the larger number of earthquakes are not even now recorded, because they occur in mid ocean or uncivilized regions, the earth is constantly quaking in some portion of its surface.

It cannot be doubted that a close connection exists between earthquakes and volcanoes. Explosive volcanic eruptions are always preceded and accompanied by earthquakes, and earthquake shocks which have continued to trouble a particular region for a long time, suddenly cease when an outburst occurs in a neighboring volcano, showing that the latter are safety-vents for the interior forces which produce earthquakes.

According to the present well-sustained theory of the molten or plastic condition of our inner earth, and the consequent supernatant condition of the earth's crust, earthquakes are intimately connected with the bodily movements of great areas of the earth's crust, by elevation or depression, and hence it happens that earthquakes occur with great violence in regions very remote from volcanoes. It should always be born in mind that volcanoes are not the causes of earthquakes, but that a volcano may be created by an earthquake. In order to simplify the idea sought to be impressed upon the mind, we have only to imagine that the earth's crust is not a continuous mass in which there is no break, but it is a broken up and irregular crust of inorganic matter, supported by and subject to the movements of the igneous, molten matter upon which it floats. We could give many instances of regions being depressed or elevated, but we refer only to the mountain in Georgia, which is now gradually sinking. In fact, the crust of the earth is in continual movement by elevation or depression almost everywhere. Partaking on a large scale of the same motion perceived in a ship on the ocean swayed by the constant swell of the waves, this motion is the remote cause of earthquakes, while the proximate cause of the observed effects of the earthquake is the arrival of a shock or earth-jar, a sudden interference, as it were, with the oscillation of the earth's crust.

To more clearly illustrate our meaning, we are compelled to allude to some of the principles concerning waves. As to their propagation, waves are either of gravity or of elasticity; as to direction, they are either transverse or longitudinal; and as to form, may be regarded as circular or spherical.

Gravity and circular waves are always of transverse vibration; spherical waves are of longitudinal vibration, while waves of elasticity are either longitudinal or transverse. It is, however, principally of elastic longitudinal waves that we shall speak, and state as a principle that all waves propagated from a point within a medium such as sound waves, are elastic spherical waves of longitudinal oscillation. The sense in which they are used is illustrated in Fig. 1. The bar, *A, B*, represents a prism cut from a vibrating sphere in the direction of the radius, and the light and dark portions represent condensation and rarefaction. Now, on the line *a, b*, representing the natural state of the bar, draw ordinates above to represent the degrees of compression, and below to represent degrees of rarefaction; then the undulating line will correctly represent the state of the bar during the transmission of elastic longitudinal waves. The compressed portions are called crests, and the most rarefied troughs as in transverse waves, such as ocean waves. From crest to crest is the length, and the amount of oscillation of the particles back and forth in compression and rarefaction is the height of the wave. The velocity of water-waves depends wholly upon the wave-length, while the velocity of elastic or earthquake waves depends wholly upon the elasticity of the medium. Thus the harmony of a full band of music is perfect even at a great distance, because all the sounds whether loud or soft run with the same velocity, and the only difference in earth-waves is

that when the medium is not uniformly elastic, and the waves or vibrations are high, the medium is broken by the passage of the waves, elasticity is diminished, and the waves retarded.

Let us suppose a concussion or explosion of any kind to occur at a considerable depth (*x*, Fig. 2), say 20 miles beneath the earth-surface, *S, S*, a series of elastic spherical waves will be generated, expanding with great rapidity in all directions until they reach the surface at *a*. From this point of first emergence the still enlarging waves would outcrop in rapidly expanding waves, which we call the surface-waves, as shown in Fig. 2 at *a, b, c, d*, etc. This surface-wave would not be a normal wave.

breaks up the earth crust, and bodies on the surface are thrown high in the air. The shock is violent but does not extend to any great distance. It was an earthquake of this kind which destroyed Riobaniba in 1797. The shock came suddenly, like the explosion of a mine, the earth was broken up and rent asunder, and objects lying on the surface were thrown violently upward; bodies of men were hurled several hundred feet in the air, and afterward found across a river and on top of a hill. In such an earthquake the focus is not deep, and the velocity of the wave or shock is not impeded before it emerges.

The vorticose earthquake causes a whirling



MARIPOSA TULIP—See Page 1.

It would be only the outcropping or emergence of the ever-widening spherical-wave on the earth-surface. Both its velocity of transit along the surface, and the direction of its vibration in relation to the surface, will vary constantly.

It will be readily understood that the earth-waves do not cease at the surface, but continue through the lighter medium, the air which surrounds and is a part of the earth. They may, and it is probable that they do continue to the outer limit of the atmosphere until they again meet and become infinity. We know their ac-

tion of the earth, entirely different from ordinary wave-motion, the three kinds, although seemingly essentially distinct and possibly produced by different causes, only differ from each other on account of the different conditions under which the waves emerge on the surface. The causes are the same but the variations of the medium produce variable results as to visible characteristics.

The horizontally progressive may be regarded as the true type of an earthquake, and is the spreading surface wave delineated in Fig. 2, at

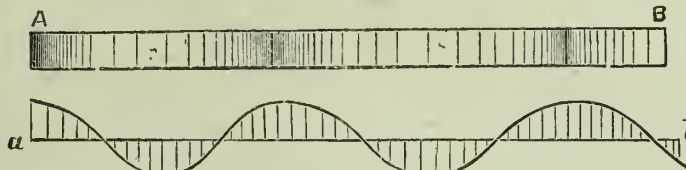


Fig. 1 Longitudinal Waves.

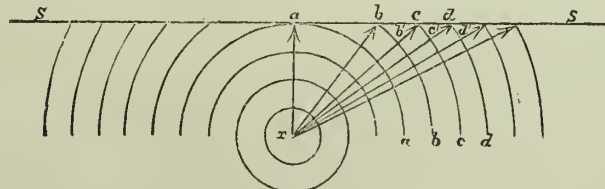


Fig. 2 Surface Waves

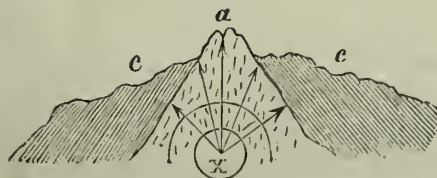


Fig. 3. Reflected Waves.



Fig. 4. Wave Outcrop.

#### THEORY OF EARTHQUAKE WAVES ILLUSTRATED.

tion up to and at the point of emergence at the earth's surface, beyond that, is debatable, experimental ground. Mallet determined experimentally the velocity of elastic earth-waves by exploding a barrel of gunpowder buried in the earth at a known distance, and noting the difference between the instant of explosion and the arrival of the earth tremor, and it was also observed in the Hell Gate explosion in New York harbor. In sand the velocity was found to be 825 feet; in slate, 1,225 feet, and in granite 1,665 feet per second or 19 miles per minute.

As to their effects, earthquakes are generally divided into three kinds, viz: the explosive, the horizontally progressive and the vorticose. In the first a violent motion directly upward

*a, b, c, d*, etc. These quakes usually run along mountain chains, which generally consist of a granite axis, flanked on each side with stratified rocks of many different kinds. When elastic waves pass from one medium to another of elasticity, a part of the waves passes through, but a part is always reflected. For every layer a reflection occurs; and hence, if there are many such layers, the waves are quickly quenched. In Fig. 3, which represents a transverse section across such a mountain, and *X* the focus of an earthquake, it is evident that only that portion of the spherical wave which emerged along the axis, *a*, would reach the surface successfully; while those portions which struck against the strata of the flanks would be

partially or wholly quenched. The mode of outcrop on the surface is shown in the map-view, Fig. 4, in which *a* is the point of emergence or spectrum, *b, c*, the granite axis, and *c, c*, the stratified flanks.

The velocity of surface waves is about 20 miles a minute, although some have been recorded as high as 30 to 35 miles per minute, and in some slight shocks occurring in New England, several years ago, the velocity as determined by telegraph, was estimated as high as 140 miles per minute. The amazing difference being caused by the fact that heavy shocks (large and high waves) break the medium, and are retarded as has been said, while slight tremors (small and low waves) are successfully transmitted without rupture, and therefore run with the natural velocity belonging to the medium, *i. e.*, the velocity of sound, which in granite is about 140 miles per minute.

This interesting subject, the illustrations for which are selected from Le Conte's "Elements of Geology," published by D. Appleton & Co., N. Y., will be continued in another article.

#### The Chance for Wheat.

The harvest is hurrying forward. With some important exceptions reports thus far received announce a good quality in the grain, and the result will doubtless be a moderate amount for export; by far too little to enable interested parties to depress the market with large figures. In most of the leading grain regions, excepting the upper San Joaquin valley, there will be respectable amounts to market, and if the price is favorable there will be prosperity in many growers' homes. The chief interest now naturally centers in the price and it cannot be denied that the outlook is quite fair. Large prices are not to be expected, because the day of large prices seems to have ended in the twilight which now clothes the industries of the world. There are indications, however, that there will be no such immense amount of grain threatening the English market from several sources, as there was last year, and as last year's surplus will be drawn upon for six weeks longer than usual, according to the latest reports of the lateness of the English harvest, there is reason to expect that the new crop will come upon a moderately clear market. There is no notable accumulation now either in England or elsewhere.

The first condition likely to affect the price of the incoming crop is the doubtful state of the English crop. The telegraphic reports state that the outlook still calls for much anxiety, and mail advices up to the first week in June are full of forebodings. The London *Farmer* says: "Following such a winter and such a spring as we have experienced, an unfavorable summer would cause a deficiency in the English crop which would leave supplies short, even though America and Russia should both have a good harvest. The average yield in this country may be put at about 12,000,000 quarters of wheat, and recent years have shown us that low prices may continue to prevail, even where the quantity actually reaped is 10,000,000 or 11,000,000 only. We have not yet learnt, however, that high prices would be avoided were the crop but 7,000,000 or 8,000,000." California growers should therefore look diligently for early tidings of local events in England, which may greatly influence the whole year's prices.

Another important point is the demand on the Continent of Europe. Last year France, it will be remembered, entered as a competitor with England for our grain, and many more cargoes than usual were consigned directly from this port to France. Whether this French demand can be relied upon another year is a question which may be debated, but there is a strong affirmative. In the first place the growing crops in France do not promise to supply the country. A dispatch received this week brings tidings of heavy storms, which have been injurious to crops. There are also indirect reasons why we may expect to hold France as a customer. These are reviewed by our London contemporary as follows: "When a country once takes to importing grain it is seldom able to break through the habit. Instances of reform in this respect are very rare, even if they are not absolutely unknown. Either foreign competition diminishes the home production, or the abundance of the commodity leads to a larger general consumption, or new branches of trade are opened up, and the imports render possible a sale of home produce more than counterbalancing in its profit the loss of money to the country entailed by the importation. France we fully expect to see a steady and a large consumer of American and Russian grain."

The wheat of the prairie States now seems to be nearly all centered in the hands of Jim Keene and his associates. The telegraph says the West has been swept clean of No. 2 Spring wheat of last year's harvest. Of this they are reported to have 4,000,000 bushels. If there is a fair prospect for high rates this amount of wheat may be counted upon to remain where it is. The situation generally is one which affords a fair outlook for wheat prices.

**INJURY TO FRENCH CROPS.**—A cable dispatch from Paris, June 29th, says: Crops in all parts of France have been injured by rains. Beet roots and vines suffered heavily.



United States and Foreign Patent Agents, publishers Mining and Scientific Press and the Pacific Rural Press, 202 Sansome St., N E, corner Pine, S. F.



## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

PAGE BROTHERS, 323 Front street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

## SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

## POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Ducks, etc. Eggs for hatching. Send for price list.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine. Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Thoroughbred Berkshire and Poland-China Swine. Light Brahma and Black Cochon Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

## BEES.

JOS. D. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## Grangers' Bank of California,

42 California Street,  
SAN FRANCISCO, CAL.

Authorized Capital - \$2,500,000,  
In 25,000 Shares of \$100 each.  
Capital Paid up in Gold Coin, \$405,000.

## OFFICERS:

PRESIDENT.....G. W. COLBY.  
MANAGER AND CASHIER,  
ALBERT MONTEPELLIER.  
SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

## Grangers' Co-operative Business Association, of Sacramento Valley.

Location: K & 10th Sts., Sacramento, Cal

Dealers in GENERAL PRODUCE, RETAIL GROCERIES, and sale of FRUITS. Desire the co-operation and trade of farmers in general. Pay the highest market rates for all produce, and sell for the smallest profit. Our orders are cash on delivery. Goods shipped; marked C. O. D.

W. H. BEVENER, Manager.

## GENERAL INSURANCE

— AND —

## Commission Agent.

## FERDINAND K. RULE,

310 Pine Street, Room 31, San Francisco.

Special attention to Fire, Marine and Life Insurance business.

Insurance placed in none but first-class Companies.

## ROOMS TO RENT.

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS  
At 1031 Market St., San Francisco.

## ANGORA ROBE AND GLOVE COMPANY,

SAN JOSE, CAL.

Incorporated 1876. Capital Stock, \$50,000. C. P. BAILEY, President and Manager. Manufacture all styles of Gloves, Robes, Hats and Whiplashes. Cash paid for Goat Skins. Send for Circular.

## Lands for Sale and to Let.

## LOMPOC

## Temperance Colony.

45,654 49-100 ACRES.

## Cheap and Desirable Homes.

TERMS OF SALE.—25% cash, and the remainder in eight equal annual installments with interest at 10% per annum, or full payment and Deed immediately.

## Rich Soil and Healthful Climate.

Located in the Western part of Santa Barbara County, California, embracing 10,000 acres of the Finest Bean Land in the State; as high as 3,700 lbs. of Beans to the acre have been raised the present year, while 3,000 lbs. to the acre is not an uncommon yield.

## DAILY MAIL

And Telegraphic Communication with all parts of the State. The Telegraph Stage Co.'s Coaches now run daily, each way, directly through the town of

## LOMPOC.

E. H. HEACOCK, President.

IRVING P. HENNING, Secretary.

November 6th, 1878.

## Farm For Sale.

Yields an Income of \$4,000 a Year.

Price, \$10,500.



My Farm and Poultry Business yield over \$4,000 a year. The place—116 acres—with orchard, vineyard and improvements, has cost me \$15,000. The good will of the business is worth fully \$6,000. I will sell the business and farm for \$10,500, half cash, or exchange for San Francisco property. It is a bargain such as is seldom offered.

M. EYRE, Napa, Cal.

Law Office in San Francisco, No. 636 Clay St., Room 25.  
I am in Napa each Saturday and Sunday; other days in San Francisco.

## A Good Farm For Sale.

The undersigned offers for sale a Farm of 480 acres of fine loamy grain land in a high state of cultivation, 400 acres being well fenced, with house, barn, outbuildings, water tank, house and windmill, orchard, vineyard and garden sufficient for family use. The water is excellent. It is situated 1 1/2 miles north of Arbutle Station, on the Northern Railway, in Colusa County.

## THE TITLE IS COMPLETE.

A Schoolhouse is adjoining this farm, and everything desirable for a

## Nice and Comfortable Home.

Can be bought for part Cash and part Credit, or payments in Installments to suit purchasers. Address  
FREDERICK SPRENGER,  
Arbutle P. O., Colusa Co., Cal.

## C. C. RODGERS,

CALIFORNIA LAND AGENCY,

Office, 276 First St., San Jose, Cal.

GENERAL LAND, REAL ESTATE, U. S. PENSION AND BOUNTY AGENT.

Will buy and sell Land Warrants; Locate and Survey Public Government Land, Pre-emption Homesteads, Soldier's and Sailor's Homesteads, Timber and Wood Lands, Desert Lands, Etc.



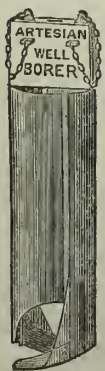
For Sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.



Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.



## ARTESIAN

AND

## SURFACE Well-Boring TOOLS.

Manufactured by the Rust Well Auger COMPANY, OF MACON, MO.

AUGERS and DRILLS from best wrought iron and steel. Shafting is 2-inch gas pipe. Couplings are round plugs fitted inside the pipe. Drills fitted for rope or pole. All tools warranted, and sold for less money than can be got elsewhere.

Send for Circular.

O. RUST, Macon, Mo

## SEND FOR THE \$1.50

## Homœopathic Medicine Case.

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address  
BOERICKE & TAFEL,  
Homœopathic Pharmacy, San Francisco.

## Seedsman.

## R. J. TRUMBULL &amp; CO.,

SUCCESSORS TO

## R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGS, GARDEN HARDWARE.

Comprising the Most Complete Stock

EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

\*"Guide to the Vegetable and Flower Garden; will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL & CO.,

419 and 421 Sansome Street, S. F.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco



B. K. BLISS & SONS,

Importers, Growers and dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address

B. K. BLISS & SONS, 34 Barclay Street, N. Y.

## EXOTIC GARDENS.

F. A. MILLER & CO., Mission St., opposite Woodward's Gardens. Send for Catalogue and Price List.

## Nurserymen.

## Blackberry and Cranberry Plants.

100,000 Plants of new varieties of BLACKBERRY Plants—the Early Cluster and Vina Seedling, Missouri Mammoth and Deering Seedling, the earliest and the most productive of all. I will give satisfactory proof that these berries have realized \$750 per acre. It paid more than double the amount as the old late varieties. Price by mail, \$2 per dozen, \$8 per hundred, and \$80 per thousand. Send for Catalogue. Cherry Cranberry plants for \$150 per acre, planted, not less than 10 acres in one order. We will sell to responsible parties, large orders on time, part cash.

H. NYLAND, Bouldin Island, San Joaquin Co., Cal.

## IMPORTANT!

We wish to open correspondence immediately with one or more enterprising parties in each township upon the Coast to

## Establish an Agency

Of our valuable publications, among which are the "Pictorial History of the World," Stanley's "Through the Dark Continent," "Chase's Improved Recipes," the Farmer's Account Book, and many others. Ministers, teachers, farmers and others will find this profitable. Ladies especially are successful. Address for full particulars,

A. L. BANCROFT & CO.,

No. 721 Market Street, San Francisco, Cal.

J. P. JONES.

J. THOMPSON.

## JONES &amp; THOMPSON.

Wholesale and Retail Dealers in

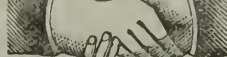
## Hay, Grain and Feed.

Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,

1535 Mission St., San Francisco.

TRADE



MARK.

## LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price, \$2 per gallon. For directions and testimonials, apply to  
FAULKNER, BELL & CO.,  
Sole Agents, 430 California Street, S. F.

## Poultry.

## OAKLAND POULTRY YARDS,

Cor. Sixteenth and Castro Streets, Oakland.

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:



Dark and Light Brahmas, Buff White and Partridge Cochins, White & Brown Leghorns, Dorkings, Polish, Hamburgs, Plymouth Rocks, Game and Sebright Bantams, Bronze Turkeys, Pekin, Aylesbury and Rouen Ducks.

SAFE ARRIVAL OF EGGS GUARANTEED.

No Inferior Fowls Sold at any Price.

Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,  
P. O. Box 1913, San Francisco, Cal.

## EVERYBODY KNOWS

That Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her.



BARLOW J. SMITH, M. D., announces to his friends and former patrons that he has resumed hygienic medical practice at the Smithsonian Medical and Phrenological Institute, 635 California street. The institute provides all forms of Electro-Medical baths and Hygienic boarding. Terms reasonable. Phreno-Physiological examinations in regard to health free. During the past 30 years Dr. Smith has developed a System of Phreno-Physiology that shows the relations that exist between the brain and body and claims that the organs of the brain show the strength of the spine, heart, lungs, stomach, bowels, liver and kidneys, also the reproductive organs, and the tendency of each and all to disease. The most powerful Electroized Magnet ever used in the treatment of nervous and chronic diseases is employed in this Health Institute. Mrs. Dr. Smith has charge of the Female Bathing Department. Phrenological examinations daily.

## HERRMANN'S HATS

ARE THE BEST!



Try one and you will Wear no other.

## Spring and Summer Styles,

— AT —

336 Kearny St., bet. Bush and Pine,

— AND —

910 Market St., above Stockton.

Send for Illustrated Spring Style Catalogue.

## ST. DAVID'S.

A FIRST-CLASS LODGING HOUSE.

CONTAINS 113 ROOMS.

715 Howard St., near Third, San Francisco.

This House is especially designed as a comfortable home for gentlemen and ladies visiting the city from the interior. No dark rooms. Gas and running water in each room. The floors are covered with body Brussels carpet, and all of the furniture is made of solid black walnut. Each bed has a spring mattress, with an additional hair top mattress, making them the most luxurious and healthy beds in the world. Ladies wishing to cook for the themselves or families, are allowed the free use of a large public kitchen and dining room, with dishes. Servants wash the dishes and keep up a constant fire from 6 A. M. to 7 P. M. Hot and cold baths, a large parlor and reading room, containing a Grand Piano—all free to guests. Price single rooms per night, 50 cts.; per week, from \$2.50 upwards.

R. HUGHES, Proprietor.

At Market Street Ferry, take Omnibus line of street cars to corner Third and Howard.

## New Dusters.

## DEARBORN DUSTERS,

Taking the place of all Feather and other Dusters. Made in six sizes, retailed from 35 Cents to \$1. The best, most durable Duster now known. Trade supplied. Address  
DEARBORN DUSTER CO.,  
No. 12 California St., San Francisco.

60 Chrono, perfumed, Snowflake & Lace cards, name on all 10c. Game Authors, 15c. Lyman & Co., Clintouville, Ct



## THE STOCK YARD.

## Live Stock Premiums at the State Fair of 1879.

The following is the list of premiums offered for live stock by the State Agricultural Society at the fair to be held in Sacramento, September 8th to 13th. Competition open to all the world.

## First Department—Live Stock

For the most meritorious exhibition in this department, the Society's gold medal.

## Horses.

In this department the same animal cannot be entered more than once, except in sweepstakes, or as a colt with its sire or dam, as a member of a family. And any sire or dam competing in a race will be allowed to enter for a premium with their families.

No animal will be allowed to compete for a premium unless free from disease or blemish which can be transmitted to posterity.

## CLASS I—THOROUGHBRED HORSES.

In this class none will be permitted to compete but such as furnish a complete pedigree—tracing the entire line of the descent to the English parent on the side of both sire and dam. The standard of authority for the pedigree of thoroughbred horses will be the English and American Stud Books.

## STALLIONS.

Best four years old and over..... \$50  
Best three years old..... 40  
Best two years old..... 30  
Best one year old..... 25  
Best colt under one year..... 15

## MARES.

Best four years old and over, with colt..... \$50  
Best four years old and over..... 40  
Best three years old..... 30  
Best two years old..... 20  
Best one year old..... 15  
Best mare colt under one year..... 10

## FAMILIES.

Best thoroughbred sire, with not less than five of his colts, all thoroughbred..... \$100  
Best thoroughbred dam, with not less than two of her colts, all thoroughbred..... 50  
Best stallion, other than thoroughbred, with not less than five of his colts, open to all..... 75  
Best dam, other than thoroughbred, with not less than two of her colts..... 50

## CLASS II—HORSES OF ALL WORK.

## STALLIONS.

Best four years old and over..... \$40  
Best three years old..... 30  
Best two years old..... 20  
Best one year old..... 15  
Best sucking colt..... 10

## MARES.

Best four years old and over, with colt..... \$40  
Best four years old and over..... 30  
Best three years old..... 20  
Best two years old..... 15  
Best one year old..... 10  
Best sucking colt..... 10

## CLASS III—DRAFT HORSES.

## STALLIONS.

Best four years old and over..... \$40  
Best three years old..... 30  
Best two years old..... 20  
Best one year old..... 15

## MARES.

Best four years old and over, with colt..... \$40  
Best four years old and over..... 30  
Best three years old..... 25  
Best two years old..... 20  
Best one year old..... 15

## CLASS IV—ROADSTERS.

All animals competing for a premium in this class must be exhibited in harness.

## STALLIONS.

Best four years old and over..... \$60  
Best three years old..... 40  
Best two years old..... 30  
Best gelding four years old and over..... 50

## MARES.

Best four years old and over..... \$50  
Best three years old..... 40  
Best two years old..... 30

## CLASS V—CARRIAGE HORSES.

Best matched span carriage horses, owned and used as such by one person, silver goblet, worth..... \$50

## CLASS VI—ROADSTER TEAMS.

Best double team roadsters, owned and used as such by one person, silver goblet, worth..... \$50

## CLASS VII—SADDLE HORSES.

Best saddle horse, mare, or gelding..... \$25  
Second best saddle horse, mare, or gelding..... 15

## CLASS VIII—SWEEPSTAKES.

Open to all. In the awards in this department blood will have the preference only when in the examination all other qualifications shall be found equal. Ten per cent. entrance on sum of first and second premiums.  
Best stallion, 1st premium, silver pitcher, worth..... \$150  
Second best stallion, 2d premium, silver pitcher, worth..... 50  
Best mare, 1st premium, silver pitcher, worth..... 150  
Second best mare, 2d premium, silver pitcher, worth..... 50

## JACKS.

Best four years old and over..... \$40  
Best three years old..... 30  
Best two years old..... 20

## JENNIES.

Best four years old and over..... \$30  
Best three years old..... 20  
Best two years old..... 15

## MULES.

Best span of mules of any age..... \$25

## Cattle.

## CLASS I—DURHAM CATTLE.

## BULLS.

Best four years old and over..... \$40  
Second best four years old and over..... 20  
Best three years old..... 40  
Second best three years old..... 20  
Best two years old..... 20  
Second best two years old..... 20  
Best one year old..... 30  
Second best one year old..... 15  
Best bull calf..... 20  
Second best bull calf..... 10

## COWS.

Best four years old and over..... \$50  
Best cow and her calf (calf under one year)..... 50  
Second best four years old and over..... 25

Best three years old..... 50  
Second best three years old..... 25  
Best two years old..... 30  
Second best two years old..... 15  
Best one year old..... 20  
Second best one year old..... 10  
Best heifer calf..... 20  
Second best heifer calf..... 10

## ALDERNEY AND JERSEY IN ONE CLASS.

## BULLS.

Best four years old and over..... \$40  
Second best four years old and over..... 20  
Best three years old..... 40  
Second best three years old..... 20  
Best two years old..... 40  
Second best two years old..... 20  
Best one year old..... 30  
Second best one year old..... 15  
Best bull calf..... 20  
Second best bull calf..... 10

## COWS.

Best cow and her calf (calf under one year)..... \$50  
Best four years old and over..... 50  
Second best four years old and over..... 25  
Best three years old..... 40  
Second best three years old..... 25  
Best two years old..... 30  
Second best two years old..... 15  
Best one year old..... 20  
Second best one year old..... 10  
Best heifer calf..... 20  
Second best heifer calf..... 10

## DEVONS, HEREFORDS, AYSRIRES, HOLSTEIN AND HOLLANDERS IN ONE CLASS.

## BULLS.

Best three years old and over..... \$40  
Second best three years old..... 20  
Best two years old..... 40  
Second best two years old..... 20  
Best one year old..... 30  
Second best one year old..... 15  
Best bull calf..... 20

## COWS.

Best cow and her calf (calf under one year)..... \$50  
Best three years old and over..... 50  
Best two years old..... 30  
Best one year old..... 20  
Best heifer calf..... 20  
Best herd of thoroughbred cattle, over two years old, to consist of one male and four females, owned by one person, silver pitcher, worth..... 100  
Second best herd, silver pitcher, worth..... 50  
Best herd of thoroughbred cattle, under two years, to consist of one male and four females, owned by one person..... 60  
Best bull and three of his calves, under one year old, silver pitcher, worth..... 60  
All thoroughbred cattle, in herds, to be included in this class.

When there is no competition, but one premium will be awarded.

## CLASS II—GRADED CATTLE.

## COWS.

Best four years old and over..... \$40  
Best three years old..... 25  
Best two years old..... 20  
Best one year old..... 15  
Best heifer calf..... 15  
Best milch cow, to be milked on the ground, four milkings, and the milk weighed..... 30

## CLASS III—SWEEPSTAKES.

(No entrance fee in this class.)  
Best bull of any age or breed, silver pitcher, worth..... \$75  
Second best, silver pitcher, worth..... 25  
Best cow of any age or breed, silver pitcher, worth..... 75  
Second best, silver pitcher, worth..... 25  
Best bull and three of his calves, under one year old, silver pitcher, worth..... 100  
Best cow of oxen..... 20  
All cattle competing for premiums must be entered by their names.

## Sheep.

No sheep will be admitted to the grounds unless free from disease.

## CLASS I—SPANISH MERINO.

Best ram two years old and over..... \$30.00  
Second best ram two years old and over..... 15.00  
Best ram one year old and under two..... 22.50  
Second best ram one year old and under two..... 7.50  
Best three ram lambs..... 22.50  
Second best three ram lambs..... 7.50  
Best pen, not less than five ewes, two years old and over..... 22.50  
Second best pen, not less than five ewes, two years old and over..... 15.00  
Best pen, not less than five ewes, one year old and under two..... 22.50  
Second best pen, not less than five ewes, one year old and under two..... 15.00  
Best pen, not less than five ewe lambs..... 22.50  
Second best pen, not less than five ewe lambs..... 15.00  
Best ram and five of his lambs..... 30.00  
Second best ram and five of his lambs..... 15.00

## CLASS II—FRENCH MERINO AND SILESIA.

## (Same premium as in Class I.)

CLASS III—COTSWOLD, LEICESTERSHIRE, LINCOLNSHIRE, SHROPSHIRE, AND A CROSS BETWEEN ANY TWO THOROUGHBREDS.

## (Same premiums as in Class I.)

## GRADES.

Cross between thoroughbreds and any other breed of sheep.

Best pen of not less than five ewes, two years old and over..... \$15.00  
Best pen of not less than five ewes, one year old and under two..... 10.00  
Best five ewe lambs..... 10.00

## SWEEPSTAKES.

Entrance fee of ten per cent. on sum of first and second premiums.  
Best ram of any age or any breed, and five of his lambs, first premium..... \$75.00  
Second best ram of any age or breed, and five of his lambs, second premium..... 37.50  
All the sheep competing for the above premiums must have been shorn the preceding spring.

## Goats.

## THOROUGHBREDS.

Best buck two years old and over..... \$35  
Second best buck two years old and over..... 20  
Best buck under two years..... 30  
Second best buck under two years..... 20  
Best pen of not less than three does, two years old and over..... 35  
Second best pen of not less than three does, two years old and over..... 20  
Best pen of not less than three does under two years..... 30  
Second best pen of not less than three does under two years..... 15

## ORAOED.

Best pen of not less than three does two years old and over..... \$20  
Best pen of not less than three does under two years..... 15

## SWEEPSTAKES.

Entrance fee of ten per cent. on sum of first and second premiums.

Best buck, first premium..... \$40  
Second best buck, second premium..... 20  
Best doe, first premium..... 20  
Second best doe, second premium..... 15  
Best pen, not less than ten kids, first premium..... 30  
Second best pen, not less than ten kids, 2d premium..... 15

Premiums will be paid in plate, if preferred.

## Swine.

The Judges will give heed to pedigree and acknowledged points and characteristics of breed.

## CLASS I—BERKSHIRE.

In this class the Judges will give attention to the points of thoroughbred Berkshire stock as laid down in the Berkshire Herd Book.

Best boar two years old and over..... \$30  
Best boar under two years old..... 20  
Best boar six months and under one year..... 15  
Best breeding sow..... 30  
Best sow six months and under one year..... 15  
Best pair of pigs under ten months..... 30

## CLASS II—ESSEX.

(Same premiums as Berkshire.)

## CLASS III—POLAND-CHINA AND CHESTER WHITE.

(Same premiums as Berkshire.)

## SWEEPSTAKES.

Ten per cent. entrance fee on sum of first and second premiums.

Best boar of any age or breed..... \$50  
Best sow of any age or breed..... 50  
Best pen of six pigs of any age or breed..... 30  
Best family, all of the same breed, consisting of one boar, two sows, and six pigs, of any age..... 50

## Poultry.

Best trio Brahmas (light or dark)..... \$5  
Best trio Cochins (buff, partridge, white or black)..... 5  
Best trio Games (any variety)..... 5  
Best trio Hamburgs (golden or silver spangles, golden or silver penciled, white or black)..... 5  
Best trio Leghorns (white, brown, dominique or black)..... 5  
Best trio Black Spanish..... 5  
Best trio Dorkings (white, silver gray or colored)..... 5  
Best trio Dominiques..... 5  
Best trio Plymouth Rocks..... 5  
Best trio Polish (black, golden, silver or white)..... 5  
Best trio French Fowls (Houdan, Crevecoeur, or La Fleche)..... 5  
Best trio Game Bantams (any variety)..... 5  
Best trio Seabright Bantams (golden or silver)..... 5  
Best trio White Bantams..... 5  
Best trio Black Bantams..... 5  
Best pair turkeys (any distinct variety)..... 10  
Best pair ducks (Rouen, Aylesbury, Pekin or Cayuga)..... 5  
Best pair geese (Toulouse, Bremen or China)..... 5  
Best display of fowls by one exhibitor..... 15

All fowls will be judged according to the American standard of excellence.

EVERY new subscriber who does not receive the paper, and every old subscriber not credited on the label, within two weeks after paying for this paper, should write personally to the publishers without delay, to secure proper credit. This is necessary to protect ourselves and subscribers against the acts and mistakes of others.

## Books on Agriculture, Etc.

The following among other books will be sent post-paid on receipt of publishers' prices, annexed:—Tobacco, its culture, manufacture and use, 500 pages, \$3.50;—The Patrons of Husbandry, 500 pages, \$3.75;—The Women of the Bible, 77 engravings, \$1;—Wells' Every Man His Own Lawyer, 612 pages, \$2.75;—American Husbandry, 2 vol., \$1.50;—Gray's Agricultural Essays, \$1;—Langstroth's Honey Bee, \$1.50;—Randall's Sheep Husbandry, \$1;—Yonatt's Sheep, \$1.25;—Agricultural Engineering, \$1.50;—New Bee-Keepers' Text Book, \$1;—Pacific Rural Handbook, \$1;—Ropp's Easy Calculator, \$1;—U. S. Land Law, 50 Cts.;—Woodward's Grapes, Etc., \$1;—Sugar from Melons, 25 Cts.;—Strawberry Culture, 50 Cts.;—Laynes' Belles Lettres, \$1;—Holt's Map of California and Nevada, to subscribers, \$1;—Back Volumes PACIFIC RURAL PRESS (bound) \$5; unbound, \$3;—Picturesque Arizona, \$2; Address DEWEY & CO., Publishers, 202 Sansome St., S. F.

THE Pacific Coast has such a varied climate it would be hopeless to expect any one to write a horticultural and floral handbook that would be exactly suitable for each particular locality. Mr. Shinn has come as nearly accomplishing this, however, as is possible within the limits of such a small volume. He has a remarkably graceful and pleasant way of presenting what, in the hands of another, would be only a dry statement of facts. There is a delicious vein of humor permeating the pages of his little volume. It crops out in the most unexpected places and in the most unexpected manner. There are few books of a practical nature which we have read with as much pleasure as this little handbook. To the amateur in horticulture, floriculture and kindred diversions it will be of especial interest and service. Mr. Shinn, who is a practical gardener, has written of what he knows, and consequently writes with authority. He tells you how to lay out an orchard or a flower garden, how and when to sow your seeds and plant your shrubs and trees and insure success. His book contains 16 essays on rural life and occupations, and a table of desirable plants for the garden, the field, the forest and the orchard. It is a book that we can heartily recommend to all persons engaged or interested in rural pursuits.—Bulletin.

The "PACIFIC RURAL HANDBOOK," written by Chas. H. Shinn for the publishers of the PACIFIC RURAL PRESS, will be sent, post-paid, in substantial cloth binding for \$1; in full leather, \$1.50; in cloth, interleaved with fine ruled paper for memoranda, \$1.50. Address

DEWEY & CO., PUBLISHERS,

No. 202 Sansome Street, San Francisco.

FRENCH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

SETTLERS and others wishing good farming lands for sure crops, are referred to Mr. Edward Frisbie, of Anderson, Shasta County, Cal., who has some 15,000 acres for sale in the Upper Sacramento valley. His advertisement appears from time to time in this paper.

How to STOP THIS PAPER.—It is not a Herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

SEND to the Great Music House of Kohler & Chase for anything in the music line. 137 and 139 Post street, S. F.

FOR information in music matters send a postal to Kohler & Chase.

LADIES! Order E. BUTTERICK & Co.'s celebrated patterns. See adv.

## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of this market on Saturday, the date which this paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, July 1st, 1879.

This Wheat market shows some signs of improvement, owing to the disastrous reports concerning the English crop, and the advancing tendency in the cable rate.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.			CLUB.		
Thursday.....	8s	6 1/2 @ 9s	3d	9s	2d @ 9s	6d
Friday.....	8s	6 1/2 @ 9s	3d	9s	2d @ 9s	6d
Saturday.....	8s	6 1/2 @ 9s	3d	9s	2d @ 9s	6d
Monday.....	8s	6 1/2 @ 9s	3d	9s	2d @ 9s	6d
Tuesday.....	8s	6 1/2 @ 9s	3d	9s	2d @ 9s	6d
Wednesday.....	8s	6 1/2 @ 9s	3d	9s	2d @ 9s	6d

To-day's cable quotations to the Produce Exchange compare with same dates in former years as follows:

	Average.			Club.		
1877.....	11s	11d @ 12s	2d	12s	3d @ 12s	8d
1878.....	10s	— @ 10d	6s	10s	4 1/2 @ 10s	8d
1879.....	8s	6d @ 9s	3d	9s	2d @ 9s	6d

## The Foreign Review.

LONDON, July 1.—The *Mark Lane Express* in a review of the British Corn trade, for the past week, says: Wheat is running to straw and coming into ear very slow. All low-lying lands have suffered grievously lately. Large tracts were submerged. Spring Corn is sickly and weak. In short, the situation is becoming serious, as should storms occur later, there is every probability of the cereal crops being irretrievably ruined. Bright sunshine and a rising barometer, to-day, seem, however, to foretell a more seasonable spell, although the improvement in consequence of the inclemency of the weather is, so far, more apparent in the provinces than in London. The appearance is now that farmers' reserves of home-grown Wheat are becoming sensibly reduced, decidedly in favor of a material advance. As yet, only a shilling per quarter advance is only occasionally obtainable. Arrivals of foreign Wheat at Liverpool and London have lately been very large. Last week's arrivals at Liverpool amounted to 92,000 quarters. Millers bought sparingly, but there was no quotable decline. Considering the consumptive requirements of the country, the demand for foreign Wheat during the last few months has fallen short of anticipations, probably in consequence of large shipments of American flour. Maize has been arriving very freely, and has fallen considerably. On the spot, mixed American has been obtainable ex-ship at 20s 6d to 20s 9d per 450 pounds. June and July shipments have been offered at 19s 6d. Barley and Oats were not much changed, but business was moderate. Arrivals at ports of call have been inadequate. There was a quiet demand for cargoes of Wheat off coast for the United Kingdom and the Continent, at steady prices. A good many cargoes of White Wheat were withdrawn. The demand for Maize was restricted, and prices declined 6d per quarter. Wheat for forward delivery, in spite of the greater disposition of sellers to meet buyers' views, has been active. Maize declined 6d.

## Eastern Grain Markets.

NEW YORK, June 28.—The general markets have been less active, yet the quantity of leading manufactures and general merchandise passing into consumption is in excess of the average at this season. Flour is quiet, steady. Wheat is firmer, steady. Pork is quiet, unchanged. Lard is steady, quiet.

CHICAGO, June 28.—The Wheat market during the past week has been fairly active, and a stronger feeling was developed at the close to-day, due almost wholly to local speculative influences. The New York market was stronger, and Liverpool was quoted firm, but the advancing tendency here was attributed mainly to a good demand from "shorts," who were anxious to cover outstanding contracts. Receipts show a steady increase, country shippers evidently wishing to take advantage of the current high figures and premium now existing over July prices. No. 2 Shipping Wheat was in good demand at \$1.07 to-day, and closed steady. July sold up to 95c, but declined and closed at 97c, bid. August closed at 91c, and September at 89c. In the Corn market there has been a fair demand, with a firm feeling and prices averaging a trifle higher. Receipts have been large and shipments moderate. Prices to-day were 36 1/2 @ 36c for gilt edge and regular, and 36 1/2 @ 36c for June. July sold at 36c, and closed at 36c. September closed at 37c.

## Eastern Wool Markets.

NEW YORK, June 28.—Wool is in steady demand. At Boston this market is less active, although transactions are still quite large. The demand for California has been better than last week; sales comprising 50,000 lbs Fall at 16c; 441,500 lbs Spring at 17 1/2 @ 35c, principally 25 @ 32c, but including a lot of very choice at 35c, the highest price ever paid for California.

BOSTON, June 28.—Wool has been in steady demand during the past week, and sales were very large; but the market was free from excitement, and prices appear settled on current rates for some weeks past. It is noticeable that notwithstanding considerable fine fleeces have been received, there has not been enough doing to make quotations. Some lots sold for future delivery, but the market is nominally 35 @ 39c for X Ohio; 39 @ 40c for XX; and 40 @ 41c for medium and No. 1. Both buyers and sellers appear indifferent about operating at present in fine Wools. There is quite an active demand for combing and delaine fleeces. Sales of Ohio, Pennsylvania and Virginia X, XX, and No. 1, 37 1/2 @ 41c; X and medium Michigan, 37 1/2 @ 39c; Wisconsin, New Hampshire and Illinois, 31 @ 41c; delaine and combing, 38 @ 44c; unwashed combing, 29c; Kentucky combing, 34c; unwashed fleeces, 22 @ 32c; Missouri, 21 @ 27c; Texas, 27 1/2 @ 30c; Georgia, 35 @ 35c; Lake, 25 @ 30c.

## New York Dried Fruit Markets.

Foreign Fruits of all descriptions are ruling very firm, but not moving very freely. Raisins, layers, \$1.35 @ 1.40; loose Muscatel, \$1.45 @ 1.50; extra do, \$1.60 @ 1.70; London layers, \$1.75 @ 1.85. Turkish Prunes are excited under cable advices that prices had advanced at Penth, and that there was no stock fit for shipment at Trieste. Sales at 4 1/2 @ 5c, firm. Currants, 3 1/2 @ 4c. Spices steady on most descriptions.

## Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon to-day as compared with the receipts of previous weeks:

ARTICLES.	WEEK. June 11.	WEEK. June 18.	WEEK. June 25.	WEEK. July 1.
Flour, quartersacks.....	34,438	50,500	31,244	95,216
Wheat, centals.....	103,352	49,615	79,849	50,729
Barley, centals.....	40,825	30,044	32,166	46,085
Beans, sacks.....	4,415	3,518	8,750	1,223
Corn, centals.....	5,471	1,680	5,200	5,524
Oats, centals.....	3,450	5,905	4,609	9,250
Potatoes, sacks.....	11,473	14,900	13,421	8,063
Onions, sacks.....	1,455	1,705	1,525	1,256
Wool, bales.....	5,319	3,990	3,608	3,036
Hops, bales.....		17		184
Hay, bales.....	1,375	1,742	1,866	1,379



at 9@10c; wholesale lots at 8@9c. Dealers report the trade for actual consumption now opening briskly.

**BARLEY**—Sales are few but prices are unchanged, and the market is steady.

**BEANS**—Our list shows slight declines in several sorts. There are now a few Limas in, which are offered at 6c per pound.

**CORN**—The trade is in small amounts, and prices are unchanged.

**DAIRY PRODUCE**—The situation is still unfavorable, and prices are held at this low ebb which has now too long prevailed.

**EGGS**—The Egg market is held down by the mass of Eastern Eggs which are brought over the rails. Fresh choice California Eggs are in limited supply, but are prevented from good values by the use of the inferior where-over inferiority can be disguised.

**FEED**—There is no change in the best of Ground Feeds. The Hay market is lifeless with a reduction of 50c forced on the choicest Wheat.

**FRUIT**—Our Fruit table shows the abundance which is now being spread before purchasers. The true Tahiti Oranges are now in and sell well up to prices for California grown.

**FRESH MEAT**—Fresh Meats are unchanged except an advance of 5c on live Hogs. The supply of all kinds of Meat is ample.

**HOPS**—A dispatch from New York, June 30th, says: Hops are held for higher prices; 16c is paid for a choice article. California is held at 9@13c. Emmet Wells' circular for the week ending June 20th, says: The market this week has been fairly active, the demand coming chiefly from brewers. Prices are without any alteration, though choice Hops show a good deal of firmness. The reports from the Hop districts indicate a very backward condition of the vine; the weather keeps unseasonably cool, thereby checking its growth; this, added to the indifference shown by growers in the care and cultivation of their grounds, render early prospects unfavorable to a large yield. The Hop news gathered thus far from our exchanges, point to a considerably smaller crop than last year.

**OATS**—Oats have experienced a severe setback during the week, and the ruling rate is reduced about 15c per cwt. We note sales: 427 sds choice Humboldt Milling at \$1.45, and 200 sds choice Oregon do, \$1.42 per cwt.

**ONIONS**—Some choice Silverskins now arriving enjoy a distinction over the Reds. Prices are somewhat mixed; thus Reds are quoted at 50c a sack to 60c per cwt. Silverskins 75c per cwt. We notice that considerable quantities are being boxed for shipping.

**POTATOES**—Potatoes are still below digging and transportation expenses, and yet still they come. Severe strokes of blight are reported from some of the largest growing regions.

**PROVISIONS**—The demand for Meat is stronger, but prices are unchanged except on Eastern Hams, which are higher and likely to still further advance, as prices at packing points are relatively higher than in this market.

**POULTRY AND GAME**—There is a slightly improved disposition, and some lots are sold a little above quotations, but the situation is not pronounced enough to warrant a change in rates this week.

**VEGETABLES**—Our list shows only a few slight changes from last week's rates.

**WHEAT**—The advance so far is confined to No. 2 Shipping Wheat, and trade is slow and uncertain. We note sales: 2,700 sds choice Milling at \$1.67½, and 60 tons choice Shipping at \$1.65 per cwt.

**WOOL**—We hear of no sales of any amount this week. Prices are retained about as before.

## FRUITS AND VEGETABLES.

[WHOLESALE.]

TUESDAY M., July 1, 1879.

FRUIT MARKET.	
Apples, bsk.....	15 @ 25
Apricots, box.....	2 @ 4
Bananas, bncb.....	2 @ 4
Blackberries, chst.....	8 @ 10
Cherries, cbst.....	8 @ 12
Cherry Plums.....	75 @ 200
Citrons, Cal.....	100 @
Cocoanuts, 100.....	10 @ 12
Currents, chst.....	5 @ 7
Figs, box.....	35 @ 100
Gooseberries.....	25 @ 100
Limes, Mex.....	8 @ 12
do, Cal.....	4 @ 10
Lemons, Cal.....	10 @ 15
Oranges, Cal.....	10 @ 15
do, small.....	4 @ 10
do, Tahiti.....	10 @ 20
Peaches, box.....	25 @ 100
do, bsk.....	75 @ 130
Pears, bx.....	75 @ 125
Pineapples, doz.....	4 @ 10
Plums, box.....	50 @ 125
Quinces.....	— @ —
Raspberries, cbst.....	5 @ 10
Strawberries, cbst.....	6 @ 10
DRIED FRUIT.	
Apples, sliced, lb.....	2 @ 6
do, quartered.....	2 @ 6
Apricots.....	15 @
Blackberries.....	12 @ 15
Oranges.....	23 @ 24
Dates.....	9 @ 10
Figs, Black.....	3 @ 4

## BAGS AND BAGGING.

[JOBBER PRICES.]

TUESDAY M., July 1, 1879.

Eng Standard Wheat, 9 @ 9½	
California Manufacture.....	
Hand Sewed, 22x36, 9 @ 9½	
24x36.....	— @ 11
22x40.....	— @ 10
24x40.....	— @ 11
Machine Sewed, 22x36, 9 @ 9½	
Flour Sacks, bales.....	8 @ 10
Quarters.....	5 @ 6

## Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, July 1, 3 P. M.

SILVER, 37½ @ 121.  
GOLD BARS, 890 @ 910. SILVER BARS, 8 @ 19 cent. discount.  
EXCHANGE on New York, 20, on London bankers, 49½ @ 49, Commercial, 50; Paris, 5 francs 30 dollar; Mexican dollars, 92 @ 95.  
LONDON Consols, 97 7-16; Bonds (4%), 104½.  
QUICKSILVER in S. F., by the dash, 3 @ 33½.

## DOMESTIC PRODUCE.

[WHOLESALE.]

TUESDAY M., July 1, 1879.

BEANS & PEAS.	
Bayo, cbl.....	10 @ 25
Butter.....	175 @ 209
Castor.....	300 @ 330
Pea.....	— @ 200
Red.....	20 @ 30
Pink.....	10 @ 30
Small White.....	20 @ 30
Lima.....	600 @ 675
Field Peas.....	125 @ 150
BROOM CORN.	
Southern.....	2 @ 24
Northern.....	3 @ 4
CHICKEN.	
California.....	6 @ 41
German.....	6 @ 41
DAIRY PRODUCE, ETC.	
Butter.....	
Cal. Fresh Roll, lb.....	15 @ 18
Fancy Brands.....	— @ 20
Pickle Roll.....	19 @ 22
Firkin, new.....	17 @ 20
Western.....	12 @ 15
New York.....	— @ 15
EGGS.	
Cheese, Cal., old, lb.....	7 @ 9
do, new.....	7 @ 10
N. Y. State.....	12 @ 15
EGGS.	
Cal. fresh, doz.....	21 @ 22
Ducks.....	— @ 20
Oregon.....	— @ 20
Eastern.....	17 @ 18
Pickled here.....	— @ —
FEED.	
Bran, ton.....	— @ 14 00
Corn Meal.....	20 @ 21 00
Hay.....	— @ 12 50
Middlings.....	— @ 18 00
Oil Cake Meal.....	32 @ 40
Straw, bale.....	40 @ 60
FLOUR.	
Extra, bbl.....	5 @ 55 00
Superfine.....	4 @ 54 00
Grabam, lb.....	25 @ 3
FRESH MEAT.	
Beef, 1st quality, lb.....	5 @ 5
Second.....	3 @ 4
Third.....	3 @ 3
Mutton.....	2 @ 3
Spring Lamb.....	4 @ 5
Pork, undressed.....	3 @ 4
Dressed.....	5 @ 5
Veal.....	5 @ 5
Milk Calves.....	5 @ 5
do choice.....	6 @ 6
GRAIN, ETC.	
Barley, feed, cbl.....	65 @ 80
Brewing.....	85 @ 95
Chevalier.....	175 @ 30
Buckwheat.....	25 @ 35
Corn, White.....	77 @ 85
Yellow.....	80 @ 85
Small Round.....	85 @ 87
Oats.....	100 @ 50
Milling.....	130 @ 50
Rye.....	80 @ 90
Wheat, No. 1.....	67½ @ 65
do, No. 2.....	60 @ 65
do, No. 3.....	35 @ 40
Choice Milling.....	— @ 72½
HIDES.	
Hides, dry.....	16 @ 16½
Wet salted.....	7½ @ 9
HONEY, ETC.	
Beeswax, lb.....	20 @ 25
Honey in comb.....	5 @ 10
do, No. 2.....	7 @ 9
Dark.....	5 @ 6
Strained.....	4½ @ 6
HOPS.	
Oregon.....	— @ —
California.....	4 @ 8
Wash. Ter.....	4 @ 8
Old Hops.....	3 @ 5
NUTS & JOBBING.	
Walnuts, Cal.....	8 @ 9
do Chile.....	6½ @ 8
Almonds, hd shd lb.....	7 @ 8
Soft shd.....	16 @ 18
Brazil.....	12½ @ 13
ONIONS.	
Pecans.....	12½ @ 14
Peanuts.....	4 @ 6
Filberts.....	15 @ 16
POTATOES.	
Alvino.....	— @ —
Union City, cbl.....	— @ —
San Leandro.....	— @ —
Stockton.....	— @ —
Sacramento River.....	— @ —
Salt Lake.....	— @ —
Oregon.....	— @ —
Red.....	60 @ 65
New Onions.....	— @ 50
White, cbl.....	— @ 75
POULTRY & GAME.	
Hens, doz.....	5 @ 7 00
Roosters.....	5 @ 8 00
Broilers.....	2 @ 4 50
Ducks, tame, doz.....	4 @ 5 00
Geese, pair.....	1 @ 25 00
Wild Gray, doz.....	— @ —
Doves.....	13 @ 14
Turkeys.....	16 @ 20
do, Dressed.....	16 @ 20
Snipe, Eng.....	— @ 1 50
do, Common.....	50 @ 75
Quail, doz.....	— @ —
Rabbits.....	— @ 50
Hare.....	1 @ 25 00
PROVISIONS.	
Cal. Bacon, H.V., lb.....	8½ @ 9½
Medium.....	9 @ 10
Light.....	10 @ 11
Lard.....	8½ @ 9
Cal. Smoked Beef.....	8 @ 9
Shoulders, Cover'd.....	6½ @ 7
Hams, Cal.....	19½ @ 10½
Dupees.....	13 @ 14
None Such.....	13 @ 14
Boys's.....	13 @ 14
Whittaker.....	12½ @ 13½
Royal.....	12½ @ 14
Reliable.....	— @ —
Clough's.....	13 @ 14
SEEDS.	
Alfalfa.....	5 @ 12
Canary.....	4½ @ 5
Clover, Red.....	15 @ 16
White.....	50 @ 55
Cotton.....	6 @ 10
Flaxseed.....	2½ @ 3
Hemp.....	8 @ 9
Italian Rye Grass.....	35 @ —
Perennial.....	10 @ 12
Mill.....	5 @ 8
Mustard, White.....	5 @ 8
Brown.....	11 @ 12
Rape.....	3 @ 8
Ky Blue Grass.....	17 @ 20
2d quality.....	16 @ 18
Sweet V Grass.....	10 @ 12
Orchard.....	20 @ 25
Red Top.....	13 @ 15
Hungarian.....	8 @ 10
Lawn.....	30 @ 50
Mesquit.....	— @ 20
Timothy.....	7 @ 8
TALLOW.	
Crude, lb.....	5 @ 5
Refined.....	7½ @ 8
WOOL, ETC.	
San Joaquin and S. Coast.....	
Burly.....	12 @ 13½
Free (dusty).....	14 @ 16
Free (choice).....	15 @ 20
Northern.....	
Free.....	22 @ 27½
Burly.....	13 @ 22
Oregon, Eastern.....	19 @ 21
do, Valley.....	21 @ 26

## GENERAL MERCHANDISE.

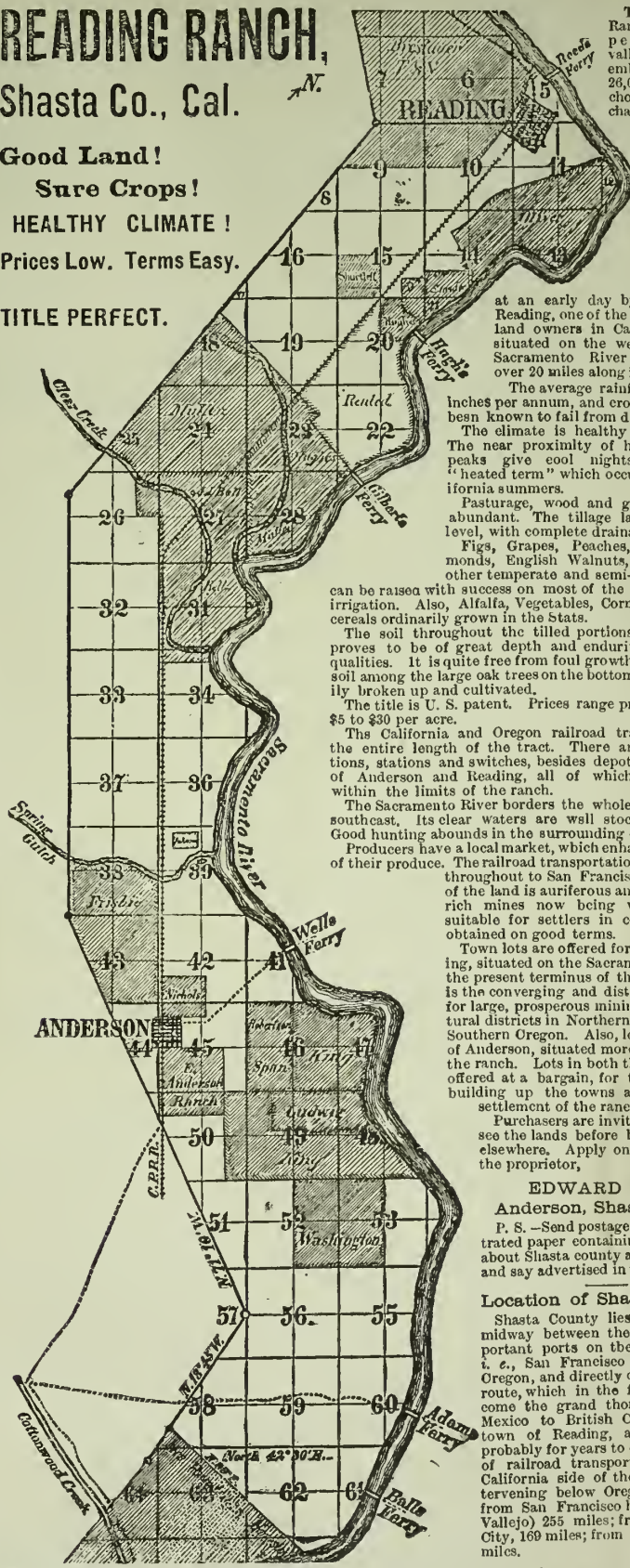
[WHOLESALE.]

TUESDAY M., July 1, 1879.

CANDLES.	
Crystal Wax.....	17 @
Eagle.....	12 @
Patent Sperm.....	30 @
CANNED GOODS.	
Assorted Pie Fruits.....	
2½ lb cans.....	2 @ 00
Table do.....	3 @ 00
Jams and Jellies.....	3 @ 50
Pickles, bf gal.....	3 @ 15
Sardines, qr box.....	1 @ 67½
Hf Boxes.....	2 @ 50
Preserved Beef.....	2 @ 50
2 lb, doz.....	4 @ 00
do Beef, 4 lb, doz.....	6 @ 50
Preserved Mutton.....	2 @ 40
2 lb, doz.....	4 @ 60
Beef Tongue.....	6 @ 50
Preserved Ham.....	2 @ 50
2 lb, doz.....	6 @ 50
Deviled Ham, 1 lb.....	5 @ 50
do.....	5 @ 50
do Ham, ½ doz.....	3 @ 00
COAL—JOBBER.	
Australian, ton.....	8 @ 00
Coos Bay.....	6 @ 50
Bellingham Bay.....	6 @ 50
Seattle.....	6 @ 50
Cumberland, doz.....	15 @ 20
Mt Diablo.....	4 @ 75
Lehigh.....	13 @ 50
Liverpool.....	7 @ 50
West Hartley.....	10 @ 50
Scotch.....	10 @ 50
Seranton.....	11 @ 50
Vancouver Id.....	7 @ 00
Charcoal, sack.....	75 @
Coke, bbl.....	60 @
COFFEE.	
Sac to Dry Cod.....	4½ @ 5½
do in cases.....	5 @ 6
Eastern Cod.....	— @ —
Salmon, bbls.....	8 @ 00
Hf bbls.....	5 @ 00
1 lb cans.....	1 @ 1 45
Pkld Cod, bbls.....	22 @ 00
Hf bbls.....	11 @ 00
Mackerel, No. 1.....	9 @ 50
Hf bbls.....	1 @ 50
In Kits.....	1 @ 50
Ex Moss.....	3 @ 25
Pkld Herring, bx.....	3 @ 30
Boston Smk'd Hg.....	70 @
LIME, ETC.	
Plaster, Golden.....	3 @ 00
Gate Mills.....	3 @ 00
Land Plaster, tn 100.....	10 @ 12 50
Lime, Sta Cruz.....	— @ —
bbl.....	1 @ 25
Cement, Rosen.....	2 @ 00
Portland.....	4 @ 00
NAILS.	
Ass'd sizes, keg 2.....	90 @ 300
OILS.	
Pacific Glue Co's.....	1 @ 00
Neatsfoot, No. 1.....	00 @ 90
Castor, No. 1.....	1 @ 10
SOAP.	
Castile, lb.....	10 @ 10½
Common brands.....	4½ @ 6
Fancy brands.....	7 @ 3
SPICES.	
Cloves, lb.....	45 @ 50
Cassia.....	22½ @ 25
Nutmegs.....	85 @ 90
Pepper, Gral.....	15 @ 17
Pimento.....	15 @ 16
Mustard, Cal.....	1 @ 50
do.....	1 @ 50
SUGAR, ETC.	
Cal. Cane, lb.....	11½ @
Powdered.....	11½ @
Fine crushed.....	11½ @
Granulated.....	11 @
Golden C.....	9½ @
Cal. Syrup, kgs.....	70 @
Hawaiian Molasses.....	26 @ 30
TEA.	
Young Hyson.....	27 @ 30
Moyune, etc.....	— @ —
Country pk'd Gun.....	— @ —
Imperial.....	50 @ 60
Hyson.....	30 @ 35
Foo-Chow C.....	35 @
Japan, 1st quality.....	40 @
2d quality.....	20 @ 25

## READING RANCH, Shasta Co., Cal.

Good Land!  
Sure Crops!  
HEALTHY CLIMATE!  
Prices Low. Terms Easy.  
TITLE PERFECT.



The Reading Ranch, in the upper Sacramento valley, originally embracing over 26,000 acres of choice grain, orchard and pasture land, is now offered for sale at low prices and on favorable terms of payment, in subdivisions to suit purchasers.

The ranch was selected at an early day by Major P. B. Reading, one of the largest pioneer land owners in California. It is situated on the west side of the Sacramento River and extends over 20 miles along its bank.

The average rainfall is about 30 inches per annum, and crops have never been known to fail from drought.

The climate is healthy and desirable. The near proximity of high mountain peaks give cool nights during the "heated term" which occurs in our California summers.

Pasture, wood and good water are abundant. The tillage land is mostly level, with complete drainage.

Figs, Grapes, Peaches, Prunes, Almonds, English Walnuts, Oranges and other temperate and semi-tropical fruits can be raised with success on most of the tract without irrigation. Also, Alfalfa, Vegetables, Corn and all other

cereals ordinarily grown in the States. The soil throughout the tract is of the best quality. It is quite free from foul growths. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

The title is U. S. patent. Prices range principally from \$5 to \$30 per acre.

This California and Oregon railroad traverses nearly the entire length of the tract. There are several sections, stations and switches, besides depots at the town of Anderson and Reading, all of which are located within the limits of the ranch.

The Sacramento River borders the whole tract on the southeast. Its clear waters are well stocked with fish. Good hunting abounds in the surrounding country.

Producers have a local market, which enhances the value of their produce. The railroad transportation route is level throughout to San Francisco. A portion

of the land is auriferous and located near rich mines now being worked. Land suitable for settlers in colonies can be obtained on good terms.

Town lots are offered for sale in Reading, situated on the Sacramento river, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

Purchasers are invited to come and see the lands before buying here or elsewhere. Apply on the ranch, to the proprietor.

EDWARD FRISBIE,

Anderson, Shasta Co., Cal.

P. S.—Send postage stamp for illustrated paper containing information about Shasta county and these lands, and say advertised in this paper.

## Location of Shasta County.

Shasta County lies not far from midway between the two most important ports on the Pacific shore, i. e., San Francisco and Portland, Oregon, and directly on the overland route, which in the future will become the grand thoroughfare from Mexico to British Columbia. The town of Reading, at present, and probably for years to come, the head of railroad transportation on the California side of the mountains intervening below Oregon, is distant from San Francisco by railroad (via Vallejo) 255 miles; from Sacramento City, 169 miles; from Marysville, 117 miles.

## LAND FOR SALE OR RENT IN SUB-DIVISIONS.

## Fine Engraving.

The Engraving Bureau belonging to the office of this journal is prepared to design and engrave all kinds of Wood Cuts for illustrating newspapers, books, catalogues, cards, circulars, advertisements, labels, badges, seals, etc., in the best style of the art. Our portraits and illustrations of machinery, buildings and landscapes, are superior. Good engravings can be made from paintings, lithographs, steel and copper plate prints, photographs, models, patent office or other drawings. We have a photographic department and the best of machinery for producing accurate and perfect work at the lowest prices. Original maps, charts, and diagrams are made by our NEW PHOTO-RELIEF Process at greatly reduced rates. By the same process copies can be cheaply and quickly produced of printed cuts, in fac simile, or they can be enlarged or reduced with equal facility.

Any hand writing in perfectly black ink on clear white paper for manuscript letters or circulars, will be accurately reproduced in metal plates suitable for common printing. Also, fac simile signatures, monograms, sheet music, etc. We excel in trade cuts and matched plates for combination color printing. With a large business, long established, and every facility for improvement, we can guarantee more than ordinary satisfaction to all of our patrons. All interested are invited to send for or call and see specimens and obtain prices.

Orders for electrotypes, stereotypes, steel and copper plates, lithographing, stamps and seal presses executed at low rates.

## Contents of Pamphlet on Public Lands of California, U. S. Land Laws, Map of California and Nevada, Etc.

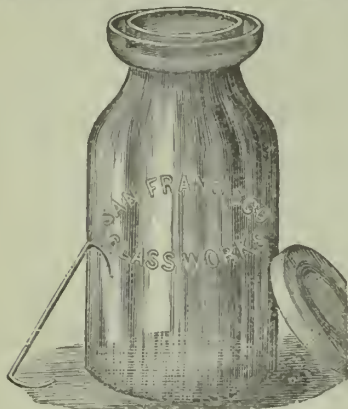
Map of California and Nevada; The Public Lands; The Land Districts; Table of Rainfall in California; Counties and Their Products; Statistics of the State at Large.

Instructions of the U. S. Land Commissioners.—Different Classes of Public Lands; How Lands may be Acquired; Fees of Land Office at Location; Agricultural College Scrip; Pre-emptions; Extending the Homestead Privilege; But One Homestead Allowed; Proof of Actual Settlement Necessary; Adjoining Farm Homesteads; Lands for Soldiers and Sailors; Lands for Indians; Fees of Land Office and Commissioners; Laws to Promote Timber Culture; Concerning Appeals; Returns of the Register and Receiver; Concerning Mining Claims; Second Pre-emption Benefit.

Abstract from the U. S. Statutes.—The Law Concerning Pre-emption; Concerning Homesteads; Amendment Act Concerning Timber;



## THE CELEBRATED GROOVE RING JAR.

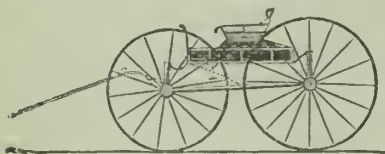


This Jar is extensively used in the Eastern States. It is the most popular, cheapest, and without doubt the simplest and most effective Fruit Jar now in use. It is by far preferable to any Patent Self-Sealing Jar, and are as cheap as the poisonous tin cans.

ASK YOUR STORE KEEPER FOR  
**THE GROOVE RING JAR.**

San Francisco and Pacific Glass Works,  
SAN FRANCISCO, CAL.

## H. J. HASKELL,



MANUFACTURER OF

**CARRIAGES,  
BUGGIES,**

— AND —

**SPRING WAGONS,**

At the Lowest Rates.

Corner of Alameda and White Streets,  
SAN JOSE, CAL.

## Anderson's Springs, LAKE COUNTY, CAL.

Nineteen miles from Calistoga, five miles from Middletown, and ten miles from the Great Geysers; between which and Anderson's Springs there is a good stage road.

**HOT SULPHUR WATER**

For Rheumatism, Paralysis, etc.; Cold Sulphur for Dyspepsia, Diseases of the Stomach and Bowels. Scenery unsurpassed. Climate mild and equable. Consumptives generally improve in health, and asthmatics are invariably relieved.

**TROUT FISHING ON THE GROUNDS.**

**Deer Hunting in the Immediate Vicinity.**  
\$2 Accommodations and Cookery good. Board from \$10 to \$12 by the week.

ANDERSON & PATRIQUIN, Prop's.

## PLEASANT SUMMER READING.

**THE NEW PENELOPE**

— AND —

**Stories of California Life.**

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. For sale by

**A. L. BANCROFT & CO.**  
PRICE, \$2 00.

**A Card to Grangers and Farmers.**  
HAY, GRAIN, HORSES and CATTLE.

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nos. 11 and 13 Buxton St., San Francisco.

50 Perfumed, Snowflake, Chromo, Motto Cards, name in gold and jet 10c. G. A. SPRING, E. Wallingford, Ct.

50 Perfumed, gilt edge & chromo Cards, elegant case, name in gold, 10c. ATLANTIC CARD CO., E. Wallingford, Ct.

## Agricultural Articles.

### The Famous "Enterprise,"

PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.

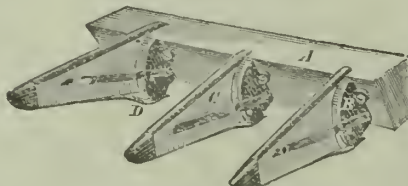


These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in lapped boxes. Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

**HORTON & KENNEDY,**  
GENERAL OFFICE AND SUPPLIES, LIVERMORE,  
ALAMEDA CO., CAL. Also, Best Feed Mills for sale.  
San Francisco Agency, LINFORTH, RICE  
& CO., 401 Market Street.

### BONNEY'S PATENT

**Adjustable Grain Lifter  
FOR HEADERS.**



GRAIN BELTS, GRAIN LIFTERS.

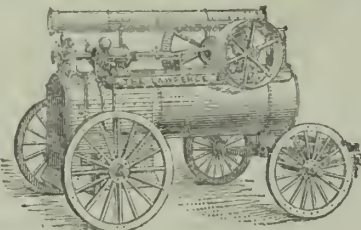
**Drapers, and Draper Sticks  
AND FINDINGS**

Of wood work for all kinds of Farming Implements furnished at short notice. Also,

**HAY RAKES**  
AT COST PRICE.

At **O. BONNEY'S,**  
No. 221 Mission Street, San Francisco, Cal.

## The LAWRENCE ENGINE.



**The Best Farm Engine in the World.**

**AUTOMATIC CUT-OFF,**  
Less Fuel, Less Water, Less Repairs than any other Portable Engine.

No Commission to Agents! Bottom Price to Purchasers! Engines for all purposes, with and without Wagons. You can save money by buying direct of us. Order early for next season's use. Send for Illustrated Catalogue and Price List.

**ARMINGTON & SIMS, Lawrence, Mass.**  
ARMINGTON & SIMS were lately with the J. C. Hoadley Co

### MATTESON & WILLIAMSON'S



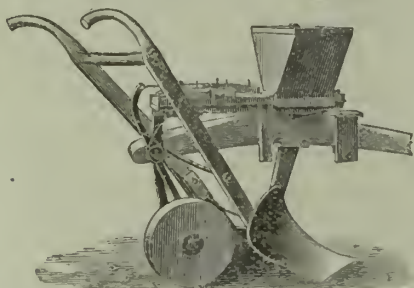
Took the Premium over all at the great plowing Match in Stockton, in 1879. This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knobs without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

**MATTESON & WILLIAMSON,**  
STOCKTON, CAL.

## UNIVERSAL FAVORITE.

### Easterday's Improved California Planter

For 1879 is now ready for the Market.



This is a No. 1 dropper for Corn, Beans, Peas, and other Seed that may be planted as the ground is plowed, and by its regularity greatly increases the yield, besides the seed and labor saved. Valuable improvements have been made within the past year, and no effort has been spared to make this Machine just what it should be. A large number of these Machines have been sold within the past two years. Our improved Machines have been constructed in the most durable manner, all wearing parts being made of iron. They are easily attached to either single or Gang Plows, and can be thrown in and out of gear conveniently without leaving the driver's seat. When only every second or third furrow is desired to be planted, the lever for the purpose need only be moved backward or forward to stop or start the Machine to operate. Distance of drop, from one to six feet, and easily regulated for amount and distance. Being attached to the Plow Beam by a bar of spring steel, they pass easily over obstructions without in the least interfering with the working of the Plow, while at the same time the Machine is caused to move firmly in the furrow. Price of the Improved Machine, \$30. All parts duplicated. Full instructions with each Machine. When ordering call for the Improved Machine. We also have on hand some of our last year's style Machines, of which the one here shown is an excellent representation, which we will sell at reduced rates. These are good Machines, and warranted to work perfect. All orders promptly attended to.

**BREWINGTON & EASTERDAY,**  
Manufacturers, Watsonville, Santa Cruz County, Cal.  
BAKER & HAMILTON, Gen'l Agents, San Francisco.  
This patent for sale by State Rights, or if desired the whole is offered on reasonable terms.

### Martin's Centennial Windmill.



Has the following positive advantages: Great power combined with great simplicity and durability; perfectly self-regulating and safe in any storm; it can be run at any speed from 20 to 60 revolutions per minute in a brisk wind, at will. It is comparatively noiseless, and runs at the above speed smoothly. It is simply and perfectly self-regulating. It is strong and cheap. On all these points it challenges comparison with any other wind engine in use. It is especially worthy the examination of those needing to use wind power. For prices and other information address

**T. E. MARTIN,**  
Inventor and patentee, San Jose, Cal., who carefully and economically manufactures every mill at Altman's Foundry and Machine Shop, near the Narrow Gauge R. R. Depot.

## HAY PRESSES.

— THE IMPROVED —

**Centennial and Eagle Hay Presses**

MANUFACTURED BY

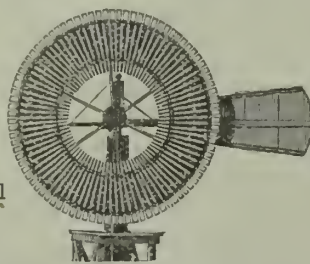
**JOHN H. GOVE.**

They are the original Gove Patent Improved Press, combining strength, durability and compactness, are made for easy working, light and moving, making them the best for Hay Pressing, for either light or heavy bales, and superior to any other for compacting Fleece, Pulled or Scoured Wool, Cotton, etc., for shipping purposes, and are operated by horse or steam power.

For any further information by circulars or orders, address JOHN H. GOVE, Eureka Grain Storage Warehouse, North Point, San Francisco, Box 1122. Or David N. Hawley, Agricultural Dealer, 201 and 203 Market St., cor. Main

\$50.

The New  
Worthington  
Windmill



Manufactured by  
**W. D. PARSON,**  
1306 San Pablo Avenue, Oakland, Cal.  
Also, maker of the "Colorado Wind Engine," Wind Grist Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern Deep Well and Artesian Lift Pump Cylinders. Circulars free.

### THE BOSS PRUNER.

Patented January 8th, 1878.

**ENTIRELY NEW!**

Works on a cog principle. Smallest size cuts one inch, and largest size two inches in diameter. Has been thoroughly tested, and given perfect satisfaction. Sold by

**GEORGE LARKIN,**  
Newcastle, Placer County, California.

### MONEY TO LOAN

AT LOWEST RATES,

ON FIRST-CLASS COUNTRY REAL ESTATE AND OTHER APPROVED SECURITIES,

**McAFEE BROS.,** Real Estate and Loan Brokers  
202 Sansome Street, - San Francisco.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. **STEVENS BROS.,** Northford, Conn.

## Stock Notices.

### BERKSHIRES.



Breeder and Importer of the "Crown Prince," "Sambo," and "Bob Lee" families of Berkshires. Also, pure Suffolk hogs and pigs. Short Horn and Jersey, or Alderney cattle. Merino and Cotswold sheep. Prices always reasonable. All animals sold are guaranteed as represented and pedigreed.

**PETER SAXE,** Russ House, San Francisco.



### SPANISH MERINO SHEEP.

Choice stock of thoroughbred Bucks and Ewes, guaranteed free from disease. Purchasers are invited to examine. About 10 minutes' walk from the Railroad terminus, adjoining State University.

**E. W. WOOLSEY,**  
Berkeley, Alameda County, Cal.

**Thoroughbred Spanish Merino Sheep  
FOR SALE.**



Wool Growers and Sheep Breeders desirous of improvement are invited to examine the *Emperor* and *Premier* flock of the State. All 1st Premiums taken at State Fair in 1878, with strong competition. No sheep superior in the world. 100 head yearling and 20 head 2-year old Rams for sale, large sized carcasses free from wrinkles. Heavy shearers, long staple of white glossy wool. A few young Ewes also for sale. All Sheep warranted free from Disease. Send for circular and price list or come and see us at once. Laurel Ranch, Hayward, Alameda County, Cal. One mile from depot on C. P. R. R. **J. H. STROBRIDGE.**

### THAD STEVENS' COLTS,

**Thoroughbred Mares,**

**TROTTER-BRED HORSES,**

**And JERSEY CATTLE.**

Some of all the above for sale. For particulars address the undersigned,

**R. P. CLEMENT,**  
San Francisco, Cal.

### ANGORAS AT THE FAIRS.

The undersigned would announce to those interested in ANGORA GOATS, and the public generally, that he will have a lot of

**Choice Angora Bucks**

On Exhibition at the State and District Fairs

This fall, namely: At the State Fair at Sacramento, the Golden Gate Fair at Oakland, the Nevada State Fair at Reno, and the Oregon State Fair at Salem.

These Bucks will be sold at fair rates.

**JOHN S. HARRIS,**  
Hollister, San Benito Co., Cal.

### JOHN ROGERS & SONS,

**GENERAL STOCK AND SALE YARD,**

Corner Market and 9th Sts., San Francisco.

HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN. Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

**W. E. CHAMBERLAIN, JR.** **THOS. A. ROBINSON.**



SEND FOR CIRCULAR

60 Elegant Perfumed Cards, Chromo, Motto, Lily, Etc., 15c. Gift with each pack. **H. M. SMITH,** Clintonville, Ct.

50 CHROMO, Gold Border, etc., 10c., no 2 alike, or 20 Cupid Cards, 10c. **J. B. HUSTED,** Nassau, N. Y.

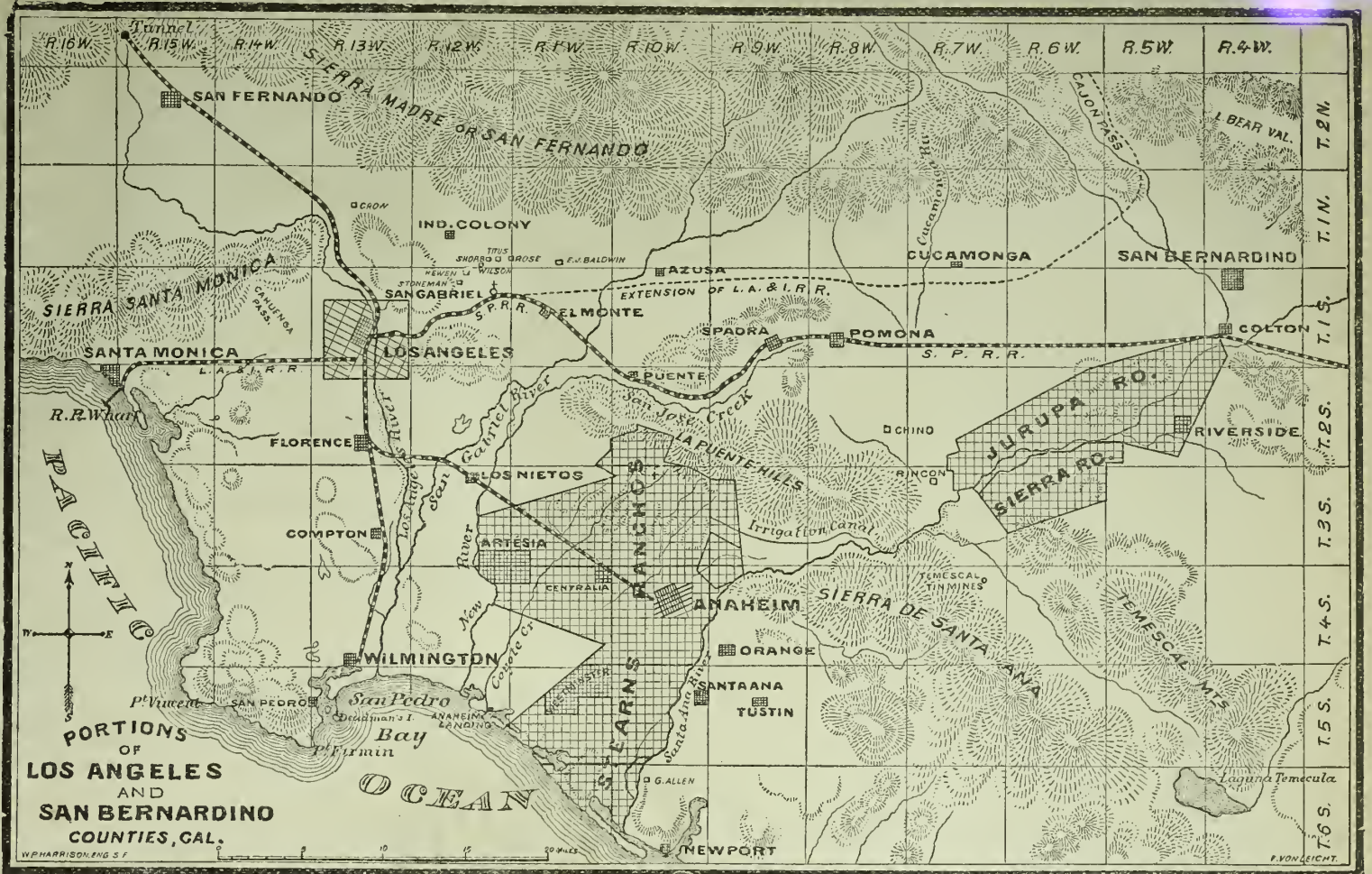


The Accompanying Map shows the

# 'Abel Stearns' RANCHOS,"

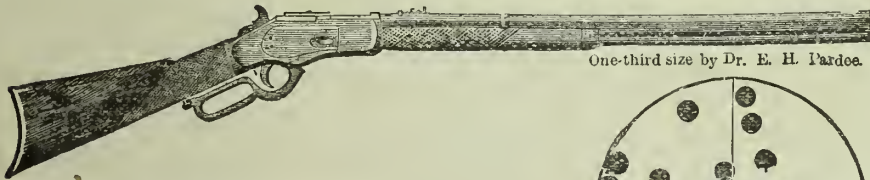
The Center of Los Angeles Valley.

Six hundred Farms already sold and improved. Within the Artesian Well Belt, and having water near the surface. For sale in sections or fractions by ALFRED ROBINSON, Trustee, 120 Sutter street, near Montgomery, San Francisco, or apply to WM. R. OLDEN, Anaheim, Cal.; or, concerning the Colony, to REV. ROBERT STRONG, Westminster, Cal. Terms, one-fifth cash; balance, 1, 2 and 3 years. Interest at 10 per cent., payable at end of each year. The larger squares represent Townships six miles square, containing 36 sections. The smaller squares within the STEARNS' RANCHOS, represent 160 acres. Roads are proposed to be laid out on every section line, forming blocks of one mile square, with roads on all sides and on many quarter section lines. SEND FOR CIRCULARS.



## Winchester Repeating Rifle,

MODEL 1873.



The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blue. Octagon barrel, plain, 24 inch—blue. Octagon barrel, set 24, 26, 28, 30 inch—blue. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blue. Octagon barrel, set 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blue, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder.

JOHN SKINKER, No. 115 Pine Street, San Francisco,  
SOLE AGENT FOR THE PACIFIC COAST.

## PACIFIC Bone-Coal and Fertilizing Material Co.

Office, No. 515 Market Street, San Francisco.

Pure Bone Meal, Superphosphate, Animal Fertilizers,  
Bone Meal for Chicken and Stock Feed.

In order to introduce our fertilizers, and to prove that we are using nothing but pure materials, and being positive that when properly used they will double the yields of most crops, and at the same time enrich the soil, we are willing to furnish small lots, of 100 pounds and upwards, at ten prices.  
For Circulars giving information concerning the use of the fertilizers on different crops, apply to or address the Company's office, 515 Market Street, San Francisco.

A. HAAS, Manager.

## BLACK POINT PACKING AND SLAUGHTER HOUSE.

MERRY, FAULL & CO., Proprietors.

### TO OWNERS OF LIVE STOCK!

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

### SQUARE DEAL and FULL MARKET PRICES

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices.

Please address our

Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.

In consequence of spurious imitations of  
**LEA AND PERRINS' SAUCE,**  
which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Cross and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

## Mission Rock Dock & Grain Warehouses,

SAN FRANCISCO, CAL.

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

Grain received and weighed in free of expense. Wheat Cleaned and Graded. Deep Water Berths for the largest ship Insurance and storage at the lowest rates. Loans effected on wheat stored in Warehouse at lowest rates. Apply to

CHAS. H. SINCLAIR, Superintendent,

Or to the California Dry Dock Co., Office, No. 318 California Street, San Francisco

### WANTED—100 FARMERS.

We will give the use of 50 acres or more of choice land, rent free, for one year, with the privilege of purchasing at a low price thereafter; crops of all kinds may be planted nine months of the year. Apply to

J. F. GREENMAN.

Room 10, No. 320 Sansome Street, San Francisco.

### Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.

ASK YOUR PLUMBER FOR

### SPIDER HOSE.

The best Rubber Hose in market. Every foot guaranteed.

H. P. GREGORY & CO.,

General Agents, San Francisco, California.

### AGENTS. READ THIS

We will pay Agents a Salary of \$100 per month and expenses, or allow a large commission, to sell our new and wonderful inventions. We mean what we say. Satisfaction free. Address SHERMAN & CO., Marshall, Mich.



**Commission Merchants.**

DAVIS &amp; SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCE.—Traders' National Bank, N. Y.; Ellwanger &amp; Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk &amp; Co., San Francisco, Cal.

BRYANT &amp; COOK,

Commission Merchants,

AND DEALERS IN

GRAIN, FLOUR, ETC.

No. 8 Davis St., near Market, San Francisco.

CHARLES NAUMAN.

FRANK NAUMAN.

C. &amp; F. NAUMAN &amp; CO.,

Wholesale Commission Merchants

AND DEALERS IN—

GRAIN, POTATOES, FRUIT, BUTTER, POULTRY, EGGS, GAME, ETC.

227 &amp; 229 Washington St., San Francisco.

Consignments Solicited.

H. M. COVERT,

Commission Merchant,

AND PURCHASING AGENT.

General Agent for the CALIFORNIA SACK HOLDER.

306 Davis St., San Francisco.

Liberal advances made on Consignments.

A. GALLI &amp; CO.,

General Commission Merchants,

AND WHOLESALE DEALERS IN

Tropical, California and Oregon Fruits, Nuts, Produce, Butter, Cheese, Poultry, Eggs, Honey, Hides, Potatoes, Grain, Wool, Etc.

516 and 518 Sansome St., San Francisco.

Cash can be drawn for immediately upon receipt of account of sales.

**SUMMER MUSIC BOOKS!**For the  
Sunday School

THE GOSPEL OF JOY!

35 Cents. Just out. Great favorite.

GOOD NEWS!

35 Cents. Well known. Always good.

SHINING RIVER!

35 Cents. Very beautiful songs.

For Sea Shore  
or Mountains.

GEMS OF ENGLISH SONG!

\$2.50. Best song collection.

CLUSTER OF GEMS!

\$2.50. Capital Piano Pieces.

GEMS OF THE DANCE!

\$2.50. Brilliant Waltzes, etc.

What Books  
to read.

Lives of Beethoven (\$2.00), Mozart (\$1.75), Schumann (\$1.75), and others; most interesting; also, Ritter's History of Music, 2 vols., each \$1.50. Musical Record (\$2.00). Good reading; once a week, all the news, and fine selection of music. Descriptive Catalogues (10 Cts.), of almost all Music Books that are published. Very valuable for reference. 1,500 books.

Any book mailed for retail price.

OLIVER DITSON &amp; CO., BOSTON.

C. H. Ditson &amp; Co., 843 Broadway, N. Y.

**HEALD'S**BUSINESS  
COLLEGE,  
24 Post Street  
Near Kearny,  
San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

**BERKSHIRE A SPECIALTY.**

My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

15th and A Streets, Sacramento City, Cal.

This paper is printed with Ink furnished by Chas. Eneu Johnson &amp; Co., 509 South 10th St., Philadelphia &amp; 59 Gold St., N. Y.



SOLE PROPRIETORS AND MANUFACTURERS

OF THE—

**Celebrated Detrick "E W" 22x36 Grain Bag.**

CALCUTTA, DUNDEE and PACIFIC JUTE HAND-SEWED BAGS always on hand. OUR No. 1, No. 2 and No. 3 SECOND-HAND GRAIN BAGS selected and graded with care.

**TWINES.**

3, 4 and 5-ply for Grain Bags, 6 and 8-ply for Potato Gunnies, 3-ply EXTRA FINE for Flour Bags, made expressly for our trade and QUALITY GUARANTEED.

FLOUR BAGS Printed to Order WITHOUT EXTRA CHARGE. POTATO GUNNIES, Wool, Bean, Oat and Salt and Seamless Cotton Bags.

**Tents, Awnings and Hydraulic Hose.**

ORDERS PROMPTLY FILLED AT LOWEST MARKET RATES.

119, 121 and 123 Clay St., and 118 and 120 Commercial St., San Francisco.

**PIANOS**

FOR EVERYBODY!

WE WILL SELL THE

CELEBRATED

**FISCHER PIANO**

At Prices that Nobody can beat!

**THE "FISCHER"**

Is one of the leading Pianos, and has been before the Public For Forty Years.

We Sell no Bogus Instruments.

SEND FOR CATALOGUE AND TERMS TO

**KOHLER & CHASE,**

Post Street, near Dupont,

SAN FRANCISCO.

**FOR SALE.**

700 Acres, The Finest Stock and Grain Farm in Northern California.

Price, \$25,000, including Farming implements. The whole under fence.

The Stock upon this farm, all thoroughbred and graded, embracing some of the finest in the State, will be sold at private sale. Among the stock is some that has been awarded different premiums at State and County Fairs.

This is one of the finest opportunities for a man of means in the State. For full particulars apply to

D. B. HAYS,

Real Estate Agent, Oroville, Cal.

**Flour Mill for Sale or Rent.**

A good water power flour mill, with two runs of 4-foot wheat stones, one middling and one feed stone, all in good order, situate in southern California, with a good wheat crop near the mill, can be bought cheap, or a part interest can be purchased by a good, reliable mill man, or the property can be leased; mill is running, and has a good reputation. Want of experience, and other business, induces the owners to offer a good trade. Apply to JOS. WAGNER &amp; CO., 105 and 107 Mission street, S. F.

**Patents**

OBTAINED IN U. S. AND FOREIGN COUNTRIES; trademarks, labels and copyrights registered through DEWEY &amp; CO.'S MINING AND SCIENTIFIC PRESS Patent Agency, San Francisco. Send for free circular.

**FOR SALE.**

Three Young Short Horn Bulls,

Ready for use. Selected from the old established herd of W. L. Overhiser, and got by that beautiful Gwynne bull, "Minstrel Duke," whose sire, "Kirklevington Duke, 2d," and dam, "Oxford Minstrel, 2d," I bought in England and now own. Pedigrees guaranteed.

ROBERT ASHBURNER,

Baden Station, San Mateo County, Cal.

**DIVIDEND NOTICE.**

The German Savings and Loan Society.

For the half year ending this date, the Board of Directors of the GERMAN SAVINGS AND LOAN SOCIETY has declared a Dividend on Term Deposits at the rate of seven and one-fifth (7 1/5) per cent. per annum, and on Ordinary Deposits at the rate of six (6) per cent. per annum, free from Federal Taxes, and payable on and after the 15th day of July, 1879. By order.

OEO. LETTE, Secretary.

San Francisco, June 30th, 1879.

**Engraving**

Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the MINING AND SCIENTIFIC PRESS, San Francisco, at favorable rates. Send stamp for our circular and samples.

**Baling  
Fencing  
Telegraph  
Telephone  
Galvanized****WIRE****Barbed Fence Wire.**

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the  
Trademark.

A. S. HALLIDIE

Wire Mills.

Office, No. 6 California St.

SAN FRANCISCO.

**WIRE ROPE and CORDAGE**

Of every kind on hand or Made to Order.

**NEW IMPORTATION  
FROM FRANCE.**

CONSISTING OF

**40 Head of Horses,**

Will arrive about Sept. 1st, 1879.

**M. W. DUNHAM'S**

OAKLAWN STUD OF

**PERCHERON-NORMAN  
HORSES.**

WINNER OF THE

Grand Prizes in Europe and America, Awarded Grand Medals by the French Government, and also Grand Medal, Diploma and Special Report at the CENTENNIAL EXHIBITION, 1876.

The largest and most Complete Establishment of the kind in America.

My Catalogue, with history of the breed, sent free.

M. W. DUNHAM,

Wayne, DuPage County, Illinois.

**CHEAPER YET!****Tension Sewing Machines!**

A large number of nearly new genuine SINGER, WHEELER &amp; WILSON, HOWE, WEEB, WILSON, GROVER &amp; BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

NO TENSION MACHINE.

**Wilcox & Gibbs' S. M. Co.,**

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.

M. COOKE.

R. J. COOKE

**PIONEER BOX FACTORY,**

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order, AND IN SHOOKS.

Communications Promptly Attended to.

COOKE &amp; SONS, Successors to COOKE &amp; GREGORY.

**California Inventors**

Should consult DEWEY &amp; CO., AMERICAN AND FOREIGN PATENT SOLICITORS. Established in 1860. Their long experience as journalists and large practice as patent attorneys enables them to offer Pacific Coast inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS, No. 202 Sansome St., San Francisco.

**FENCING—CHAPPARAL SEED.**

Parties wishing to experiment in the cultivation of Chapparal as an economical and valuable substitute for fencing, can obtain the seed in 50 Cts. and \$1 packages, at W. R. STRONG'S, Sacramento. Sent by mail.



# PACIFIC RURAL PRESS

Volume XVIII.]

SAN FRANCISCO, SATURDAY, JULY 12, 1879.

Number 2.

## The Influence of Early Rains.

The farmers of south Australia were at last accounts engaged in figuring the influence of early rains upon crops. Their seasons are of course the complement of ours, and while we are in the depths of winter storms and rank growth of grain they are looking for the early rains and calculating the effect of their absence upon the season's work. Thus they have before them from January to May the problems which visit us from October to December. This year the early rains have been withheld, and to repress evil anticipations our contemporary, the *Adelaide Observer*, prepares a table to show that they have had the best average crops in those years which lacked the early rains. The table is as follows:

Years.	Averages.		Rainfall.	
	Bush.	Lbs.	April.	Four months.
1858-59.....	11	11	1.710	6.120
1859-60.....	9	38	0.900	2.430
1860-61.....	13	4	4.693	7.033
1861-62.....	10	59	2.005	3.974
1862-63.....	12	0	1.317	2.719
1863-64.....	14	0	0.585	2.200
1864-65.....	11	0	1.187	3.387
1865-66.....	8	44	0.675	1.905
1866-67.....	14	20	0.250	2.475
1867-68.....	4	40	1.898	3.582
1868-69.....	9	42	2.027	4.644
1869-70.....	5	45	0.992	3.621
1870-71.....	11	30	0.510	3.793
1871-72.....	5	44	0.741	5.008
1872-73.....	11	30	0.561	3.525
1873-74.....	7	52	3.271	5.590
1874-75.....	11	45	1.034	2.328
1875-76.....	11	57	2.334	5.201
1876-77.....	5	24	1.819	3.065
1877-78.....	7	46	1.660	8.763
1878-79.....	7	9	2.855	8.208
Gen'l average, 9 bush. 48 lbs.			1.571	4.265

From this table it is deduced that in 11 instances the yield was in excess of the average of the 21 years. In 7 of these instances the rainfall in April was exceptionally low, that is to say, lower than the general average for the whole period, and in 8 of them the rainfall during the first 4 months of the year was also below the general average. Putting the matter in another shape, it will be noticed that during 11 years out of the 21 the rainfall during April was below average, and in 7 of these years the wheat crop was above average. Similarly it will be found upon examination that in 8 out of the 13 years in which the rainfall for the 4 months was below average, the yield was above average, while in 3 other instances it was nearly up to the average. Our exchange says that the first 4 months of the present year threaten to have the distinction of being the driest since 1858-9, the rainfall for 3 out of the 4 being only 1.817 in.

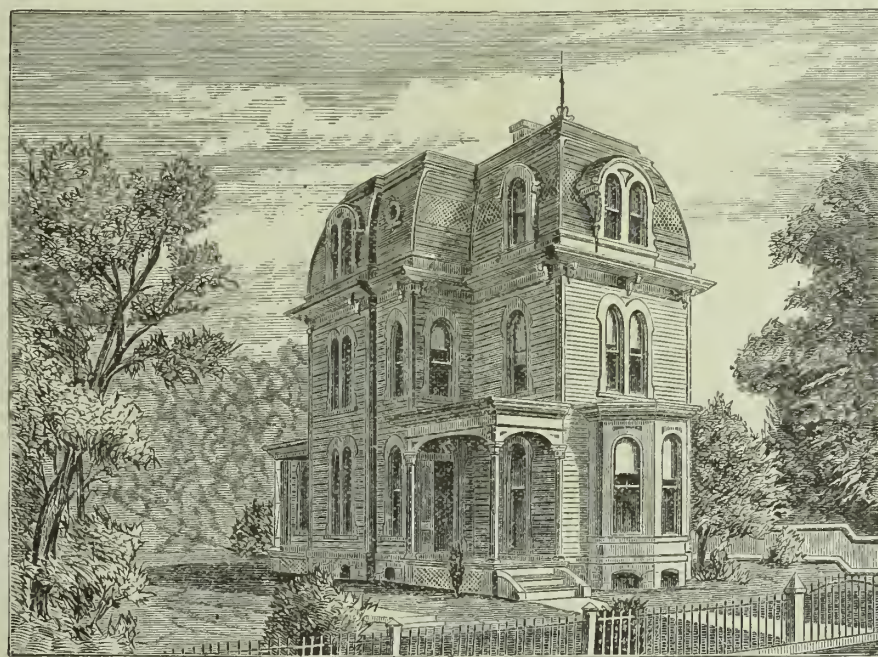
We do not know that crop statistics can be had to make a similar comparison of the yields of grain per acre in years when our early rains were small, but there is a general opinion born of experience and observation which favors the absence of heavy rains very early, followed as they are apt to be by a long drouth before the regular winter down-pours begin. At all events we have learned that the absence of rain during the 4 months following harvest is not an augury of a dry season, and this is just what the figures prove to be the case in Australia if we correctly understand them.

Now that the *Observer* has given us a table of rainfall for certain months during a period of years, will it not give us a complete table for each month of as long a series of years as possible? This would be very valuable to make a comparison with our own for the same period, to ascertain if there be any sequence in them.

**SHEEP DURING DROUTH.**—Flock owners in some parts of Australia are losing heavily by the protracted drouth which prevails. We read in an exchange that at Burrumbeep men are kept constantly at work lopping the she-oaks, which is eagerly devoured by the sheep. As soon as they hear the ax at work a stampede takes place from all around, and the flock congregating round the trees, awaits the fall of the branches. The Merinos seem capable of withstanding the severity of the season much better than the large-framed sheep, which are falling off so rapidly in some directions as to keep one man employed at skinning the carcasses.

**IN THE UNIVERSITY TEST GROUNDS.**—We spent an hour the other day in looking through a part of the experimental grounds of the State University at Berkeley, in company with Mr. Dwinelle, lecturer on practical agriculture. We found that many foreign plants, which promise to be of value in this State were being grown, and that accurate notes were being taken of their progress which will be embodied in Prof. Hilgard's report this fall. Several varieties of the cereals were being grown with reference to establishing their correct nomenclature. A number of plants of native and imported clovers, each grown with and without irrigation, will furnish material for comparative judgments. There is also quite a group of sorghum canes being grown for the same purpose. The Cuzco corn forwarded by a correspondent of the Ru-

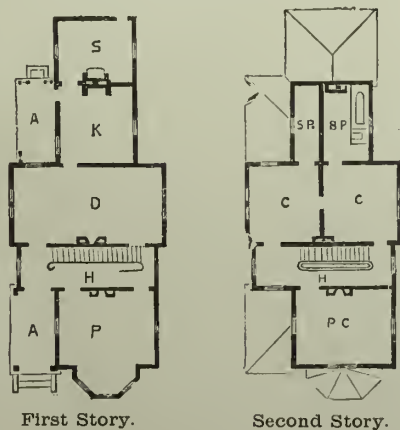
**JAPAN PERSIMMON IN CALIFORNIA.**—Prof. Meehan of the *Gardeners' Monthly* has held a long and eventful career as a horticulturist, and doubtless he has found many reports to try his patience, and yet he should not let go his hold upon the anchor of faith in the general truth and honesty of his fellow men. In a recent comment upon the Japan persimmon we understand him to express a doubt whether the fruit has ever been grown on the soil of the United States. This is in the face of the items concerning the fruit picked from California trees, which our own eyes have seen and our own hands handled, which have been printed in the *PRESS*. The fact is that fruit has been produced here from imported trees for several years. There were at least half a dozen growers in different



DESIGN FOR VILLAGE RESIDENCE WITH A FRENCH ROOF.

**RAL** in Chile, is growing vigorously and shows a heavy stalk, and a complete freedom from suckers. A part of the garden is already occupied with medicinal plants, and the propagating houses are bringing forward hosts of new growths which will be ready for fall planting out. Although this is the first year of the garden it shows some valuable accomplishment already, and is in readiness to go forward rapidly another season. It will prove very valuable both for the general facts ascertained from the

parts of the State who picked it last year and for one or more years preceding. We name three who come first to mind: Col. Hollister, of Santa Barbara; H. G. Ellsworth, of Mission San Jose, and Mr. Rixford, of Sonoma. Others there were last year and the fruit now hangs green upon trees here and there in nearly all sections of the State. Prof. Meehan may be wise in opposing the tree at the East, and if we believe all he says about that, he should believe us and other California writers who have commented upon the specimens grown in this State.



experiments, and as an adjunct to the means for practical instruction furnished by the institution.

**THE Jeannette Bennett's** Polar steamer left on her voyage Tuesday, July 8th, escorted to the ocean by the yacht fleet and numerous tugs—receiving from the fort a salute. She will float on the Japanese and Polar currents from Behring's strait to Davis strait.

## A Village Residence.

In the architectural designs which we have presented during the last year we have made variety the standard of judgment in selection, because of the variety of tastes and necessities which must prevail in a wide circle of readers. We have given cottages of most simple design and small cost and mansions of considerable pretension and expense. At this time we strike a mean between the two and give a drawing of a residence of moderate cost and one well adapted to erection in some of the many thriving villages of our State.

The design is by J. H. Hobbs & Sons, of Philadelphia, and, as may be seen by the picture, it is well contrived to catch sunlight, a quality which Californians most highly prize. It is intended to be built of frame, covered with diagonal sheathing boards and weather-boarded. If one desires an extra warm house it will be well to cover the sheathing with tarred building paper before putting on the exterior boarding, but both this and the diagonal sheathing may be omitted if it is desired to cheapen the construction as much as possible. Our equable climate makes this thinner covering admissible, although the more perfect enclosure is desirable nevertheless. The French roof is designed to be covered with ornamental slates, but shingles carefully painted could be substituted, and would be better if the frame is to be weakened by omitting the double boarding.

By reference to the ground plans and measurements below it will be seen that the rooms are of good size and well arranged for beauty of interior. The following are the sizes and locations of the rooms:

First story: A, porch; P, parlor, 12 by 15 feet; D, dining-room, 12 by 22 feet 8 inches; K, kitchen 12 by 12 feet; S, scullery, 10 by 12 feet.

Second story: P C, principal chamber, 12 by 15 feet; H, hall; C C, chambers, 11 feet 4 inches by 12 feet; B R, bath-room, 7 feet 6 inches by 12 feet; S R, store-room, 4 by 12 feet.

The third story, within the French roof, can be finished into neat chambers, and we presume the architect intends to locate there the closets which he has omitted on the chief chamber floor. The "store-room," on the second floor, will, however, serve for closet purposes, and it is large enough to give the good wife room for all her stored treasures.

**SHIPPING MELONS BY THE CARLOAD.**—Most of the watermelons coming to this market make the trip upon the river steamers, and those by rail arrive, so far as we have noticed, in cases. It seems that they are shipped from Florida to the Eastern cities in bulk by the carload. The *Florida Dispatch* thinks that there is no advantage to be gained by putting decks in the cars, so as to load the melons in tiers, as the risk of their breaking down is greater than any benefit which could be realized. The *Dispatch* advises shippers to cover the bottom of the car a few inches deep with any soft, elastic matter that will not pack too densely or become hard. Upon this you can store the melons three deep, and carry with safety to the most distant markets. It continues: "The most perfect bed we ever saw upon which melons were packed and transported from south Georgia to Chicago without the loss of a melon, was wheat bran."

**THE CENTENNIAL HARVESTER.**—We met Mr. C. J. Cressey, of Merced county, the other day and learned from him that the Centennial harvester, which is the name applied to the combined header and thresher which came into prominence in the San Joaquin valley last year, is being worked actively this season. A number of the machines are now running. Mr. Cressey is running one with four men and 20 mules, harvesting from 35 to 40 acres per day. Among the first new grain to reach the city this year was a carload of clean Propo harvested by Mr. Cressey with the "Centennial," and sold at \$1.65. The sample we saw was plump, large and beautiful grain.

**THE REVOLVING GRAIN CAR.**—Some time ago we alluded to the design of an Eastern inventor who proposed to transport Western grain to the East in revolving cars—cylinders that rolled along the track as they were pulled by the locomotive. We now learn from the *Prairie Farmer* that preliminary tests of these cars have proved satisfactory. One came into Chicago full of corn. Major Fitch, the state inspector of elevators, says: "The grain is in perfect order and is improved if anything by being transported by the new system. This car was not loaded quite full, lacking probably 10 or 15 bushels. I regard the car as an undoubted success." We are informed that among the points demonstrated by the trip were the following: The rate of speed required for permanently holding the grain to the shell by the centrifugal force, thus forming a solid cylindrical mass, preventing all attrition of the grain, was found to be about four miles per hour. Second, the perfect circulation of the air through the grain while in transit; also the effect of having the cylinders only partially filled, which was found to be in no way detrimental to the grain or car.

Up to the present time \$10,523,574 has been expended in the construction of the Brooklyn bridge.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—EDS.

### The Beet-Sugar Industry.

EDITORS PRESS:—According to the statistics furnished by the Government, the total product of all mines in the whole United States of precious metal, both gold and silver, during the year 1878, has been, in round figures, \$82,000,000. The total sum of money paid to foreign nations for the one single article, "sugar," according to the same source of information, has been the almost identical sum of \$82,000,000; we have therefore shipped every ounce of gold and silver which every mine in the United States has yielded, in payment for our supply of sugar. If the United States had produced the sugar she consumes at home instead of buying it abroad, and on the other hand had not produced one single dollar's worth of gold or silver from her mines, she would be financially in exactly the same condition she is in at present (leaving the influence this would have on our agriculture out of the question). If traces of gold or silver are discovered in the direst wilderness, which cannot be reached without exposure to the greatest hardships or even risk of life, thousands of adventurous men stand ready to rush there, and millions of dollars will flow in that direction in the hope of producing the "almighty dollar," in order to be shipped like all the rest to foreign countries in payment for one single commodity which could be produced at home, and which, if this was done, would retain our money at home, giving employment to innumerable idle hands and employing millions of dollars of idle capital. It requires a vivid imagination to point out the influence it would have on our national prosperity if our mines continued to produce the precious metals, and we discontinued to ship it out of the country.

The quantity of sugar consumed annually in the United States is, according to statistics, 1,800,000,000 pounds. One acre of well cultivated land produces on an average 1,800 pounds; it would therefore require exactly 1,000,000 acres of land devoted to the production of sugar beets to produce an equal amount of value as all our mines produce in both gold and silver.

It is much to be regretted that statistics which furnish us readily with abstract figures, furnish us no comparative figures. If we could ascertain the number of men engaged directly and indirectly in gold and silver mining, the number of actual miners, mechanics and laborers from the machine factory which furnishes mining machinery through all the long and often crooked windings, till the bullion reaches the Mint, from which it emerges in the shape of dollars; if we could find out the immense amounts of investment the insatiable vampire, "mine," has swallowed without yielding any return, the most sceptic mind would be convinced that one-tenth part of capital invested and one-half of labor annually spent in mining would yield double the return in coin, if applied to the sugar production, than what the whole does in gold and silver mining. With other words, a day's labor and a dollar permanently invested in sugar production will give larger returns (and most infinitely surer and safer) than a like amount of labor and money invested in mining precious metal.

This being an indisputable fact, is it not surprising to see thousands of men from every direction and thousands of miles distant rush to a barren wilderness because there are some "indications" that some of the hills there, black or white, contain traces of gold? Nearly everybody will hear of these "indications" to make him discontented with his own lot in life, but very few will ever see anything of these hoped-for riches except the misery brought to the many. The question involuntarily rises to one's lips, why is it that thousands of men rush after a phantom in the distance, while there are nearly everywhere some of the million of acres of gold-producing land, each of which can be made to yield annually from \$200 to \$250? Why risk fortunes or let other fortunes lay idle when they could be invested with good returns, and safer and surer than in anything else?

In comparing the two industries, the sugar production and the mining, both of which are of exactly the same importance to the nation, because each involves the exact even sum of \$82,000,000 per annum, we will find they are as different as two things possibly can be. The sugar industry being an agricultural business is most conservative in its character, sound calculation and indomitable energy and application only can lead to final success. Mining, on the other hand, is a speculative business, luck or chance decide the success or failure; the miner "hopes" continually for some big thing to turn up. When his courage is nearly exhausted, a single bar of the precious metal, which he produced, will revive it to a most wonderful degree, though he may have to expend the value of many such bars of bullion to produce the second.

The sugar industry does not admit of luck or chance, as it is based entirely upon science and sound calculation. A man or a company can and ought to satisfy themselves that every requisite is at their disposal before they enter into the sugar industry, if every factor necessary is at their disposal, success is sure, if on the other hand one or more of these factors are wanting, failure will certainly be the result. The conditions and requisites necessary for suc-

cess are but few, but these are imperative, and if wanting, all the hope for some good luck will not avail any.

How many of the conditions to make the sugar industry one of the most profitable business do we find combined here in California? But before I enumerate them let me state that, in speaking of the sugar industry as such, I only mean the production of sugar from beets, as this is the only sugar industry of the future. Last year the greatest part of all the sugar produced in the world has been produced from the sugar beet. Fifty years ago sugar from beets was almost unknown except as a subject of science, and 50 years hence cane sugar will be unknown except as a subject of curiosity. With the last vestiges of slavery the cane-sugar industry will have received its death blow, as slavery disappears from Cuba and Brazil so will the production of cane sugar disappear. Chinese coolieism may galvanize it to life again for a very short space of time, as we see it in Peru and Cuba, but the fact is indisputable that in future we have to produce our own sugar or look to Europe for the supply of the same.

According to the repeated analyses made in the Agricultural College of the University of California by Prof. Eug. W. Hilgard, sugar beets grown on most all the cultivated fields in the different parts of California are as rich in saccharine matter as they are in Europe, in some few isolated cases where the soil needs better cultivation than it receives so far, a few years proper cultivation will produce a superior beet. Where the soil is too clayey, or, as commonly expressed, too adobe, tile-draining, sub-soiling and the application of coarse manure will not only make this kind of soil first-class for sugar beets but also greatly improve it for alternate wheat and barley crops. As the climate of California is the best imaginable for growing the sugar beets and the soil well adapted, the supply of raw material for manufacturing sugar may be considered immense.

But under any circumstances, parties who intend to engage in this industry can ascertain, beyond the shadow of a doubt, if the special locality where they propose to locate their works will produce good rich beets without improving the soil previously.

An ordinary size beet-sugar factory will require 20 tons of coal per day, and a large one double the quantity. It will also require from three to five cubic feet of good water per minute during the whole day, which ought to be borne in mind in selecting a site for the sugar works. A fair sized beet-sugar factory, as they are constructed in Europe, will produce from \$2,000 to \$3,000 worth of sugar per day, or about \$500,000 worth of sugar in a season, which requires to do it a large amount of very perfect machinery, and anyone attempting the work with insufficient or imperfect machinery, because they have not the capital to procure the other, will do better to save what little capital he has instead of courting certain failure. The sugar business cannot be touched without large sums of money. This refers to buying and selling or to refining. Why, then, should we expect the manufacture or production of the same to be different? And last, though not least, to secure success in the sugar industry requires experienced and competent men to conduct the manufacturing part of the work. The time when a pick and shovel were the principal tools for gold mining is past long ago, and so is the time when a kettle and skimmer were the same in sugar making.

The closest scrutiny will find that we have in California everything requisite for this important industry combined. We have the best of soil and climate to produce the raw material; of fuel, both coal and wood we have abundance; and of water, very often in many places superabundance. Should we lack the capital, when the Pacific slope produces nearly all the gold and silver the United States annually ships to foreign countries?

A few more weeks and the question will be put to the test again: Can the beet-sugar industry in California be made as profitable an undertaking as mining? And if, as the prospect now is, it will yield a sure profit of 4% or 5% a month, as it does in many cases in Europe, the problem is practically solved. In this case this important industry will be given the attention it so fully deserves, while it by no means follows that mining should be on that account neglected.

ERNEST TH. GENNETT.

Alvarado, July 4th, 1879.

### Measuring Grain from the Thresher.

EDITORS PRESS:—We are in a grain dispute up this way just now, we small farmers of the hill-locked valleys, who in the old-fashioned home way have built granaries and our good old-fashioned barns, that will hold a heap. We now find as the change has come o'er the spirit of our dreams, that the mountains with their valleys and their hills are turning out the golden stream of wheat instead of yellow dust, we must raise more wheat and less of the mixed crops of hay and barley. Our granaries are filled to overflowing with sacks, in stacks left on the field, and we too must seek the world for a market and money instead of the mountains. We are putting the sackholder to our machine spouts and self-feeders to the snouts of the separators, all to lessen the cost of threshing. Now comes in our difficulty. Mr. J. says he can afford to pay for a good measurer at the spout (\$100 to \$150 for the run) out of what he would lose in settling by putting the grain in bins and com-

puting its solid capacity after being tramped upon in shoveling back and leveled down. Mr. D. says there is not so much loss as that, and maintains that there is a warehouse rule to make allowance for packing down. I have examined all the books of reference at hand; none of them hits the point. "Wells' Business Guide" gives a rule under the head of measuring grain and corn in the bin, but it's a cheat, and ought to be smutted out, as it does not apply to wheat at all, but to corn. But in my "Old Thomson's" I find a slip from the old *Rural Californian* "To Measure Grain in the Bin." Multiply length, breadth and depth together; then eight-tenths of the cubic feet is the number of bushels in the bin. To find eight-tenths of the cubic feet multiply by eight and cut off one decimal from the right, and you have it. This rule gives the true result, but does not count for packing and treading. Please let us know how much to allow for this.

GALLUP.

Freestone Ranch, La Grange, Cal.

[Will some reader help our correspondent with a rule for the computation he desires to make?—EDS. PRESS.]

## POULTRY YARD.

### Poultry Diseases and Their Treatment.

EDITORS PRESS:—Will you please give me some information how to remedy gapes in chickens two and three months old. I had 50 different ages and sizes, but they are dropping away daily. I try to make them eat, stuff them with food, and pierce their crops with a needle to prevent the gathering of air, but they seem to drop off after all.

What is best to prevent sore eyes and partial blindness in chickens, with which they are troubled with also here.—CHARLES COLQUHOUN, Livermore, Alameda Co., Cal.

EDITORS PRESS:—Complying with your request, I will reply to these questions. Gapes are caused by small worms in the windpipe. There is a large louse or tick which fastens upon the heads of young chicks; they are especially numerous in hot weather. My idea is that the eggs from which the gape worm is hatched is deposited by the parasitic progenitor of the worm upon these ticks or lice, and when the lice approach the nostril, the egg is inhaled and lodges in the windpipe, becoming attached to the mucous membrane and there hatching.

This is but a theory; but this I know as a fact: That unless this large louse be present on the chick it will never be afflicted with the gapes. I have demonstrated that fact by repeated experiments.

The way to get rid of this louse, as described in my pamphlet on Domestic Poultry, is as follows: Anoint the head of each chick with the following ointment well mixed: Mercurial ointment,  $\frac{1}{2}$  oz.; crude petroleum,  $\frac{1}{2}$  oz.; fine sulphur, 1 oz.; carbolic powder, 1 oz.; lard, 2 oz. Coal tar may be used instead of crude petroleum where the latter cannot be obtained. This prevents the advent of large head lice which cause the chicks to droop and die; they are also, when thus treated, never subject to gapes. To cure those already afflicted, first anoint with the ointment sparingly, or it will kill the chick. Then take a shovel of live coals and pour on it a few drops of carbolic acid; hold the chick in the fumes until the worms are killed, but be careful not to hold it until the chick itself is suffocated. The worms being killed, the chick will cough them up.

Chicks afflicted with these lice are also weakened and liable to colds, "swell-head," sore eyes and roup, and other diseases.

### Sore Eyes, Etc.

EDITORS PRESS:—A subscriber would like to know what is the matter with his young chickens. They come from under the hens' wings, some of them, with the eye-lids stuck together, so that it is necessary to pull them apart so the chicken can see. The eye-lids do not swell much, and the swelling does not extend from the eye. Please prescribe treatment in *RURAL PRESS*.—W. A. TRACY, Westminster, Cal.

This trouble is the same as that mentioned by your Livermore correspondent, and both inquiries may be answered as follows:

A simple remedy for cold or running at the nose, with wheezing, is to confine the birds in a small house or large box, and fumigate with sulphur. Place a few live coals on a shovel and set it in the box with a dozen fowls; throw on a teaspoonful of flowers of sulphur, let the box remain closed for five to ten minutes. Repeat night and morning for a few days. A neglected cold soon degenerates into roup, and very often the fowl is not noticed until a lump appears on the side of its head, or an offensive discharge accumulates at the nostrils. Place the fowls in a warm, dry place, give a good dose of castor oil, feed soft, stimulating food. Wash the head and throat with Labarraque's solution diluted with three times its bulk of water. The following recipe for Labarraque's solution, equally as good as that purchased in a drug store, may be made very cheaply: Dissolve one-half pound common washing soda in a pint of warm water, also one-quarter pound chloride of lime in three pints, mixing gradually until smooth; let stand a few hours; unite the two mixtures, shake, let stand until clear, and then pour the supernatant fluid into a bottle, cork tightly and keep out of the heat and sun. A half gallon need cost thus but 15 cents. A rosy fowl should be at once separated from the flock, as the matter which is coughed out or oozes from the nostril will cause the spread of the disease.

Young and half-grown fowls if crowded, especially in summer, take cold at night. Those on the inside, where they are huddled together, become too warm, and then make their way to

the outer edge of the flock, and there become chilled. Chicks hatched late and not well hovered by the hen during the nights which are so warm at nightfall, but cold towards morning, also catch cold, as do those where too many are given to one hen. The cold becomes chronic, the chicken assumes a pinched look, it is stunted, pines away and often dies. The mucus may be pressed from the nostril with the finger. Chicks so diseased should be removed at once; placed in a warm, dry place, fed stimulating food, and well housed at night. Those not yet attacked may be saved by removing the cause of the disease. It is contagious: that is, those roosting with others so afflicted, and breathing the same confined air, soon become sick also.

Napa, Cal.

M. EYRE, JR.

## ARBORICULTURE.

### The California Black Walnut.

Our contributor, W. C. L. Drew, of El Dorado, writes to the *Rural New Yorker* concerning the characteristics of our native black walnut. As there are many California readers who do not know this indigenous growth, for it is not yet introduced in many localities, we shall reproduce Mr. Drew's description:

I have seen few trees which, for ornamental purposes, are more worthy of culture than the California black walnut, *Juglans nigra Californica*. Trees of this kind were found growing only in one locality in the foothills of the Sierra Nevada, but from there they have been introduced into nearly all sections of the State. The tree is a slow grower, and has to be from eight to ten years old before producing fruit, but after it has once borne fruit, it will never fail to set a yearly crop. The tree grows from 20 to 40 feet high, is strong, hardy and well branched. The foliage is of a rich, dark green, and quite different from that of the English or Eastern walnut; it is unequally pinnate, compound, from 10 to 14 inches long, the leaflets, of which there are 15 to 35 on a leaf, are lanceolate in shape, about three-quarters to one inch across at their broadest portion and from two to three and a half inches in length; the foliage is very densely set on the tree, much more so than in the English walnut.

The nut is from three-quarters to one and a quarter inch in diameter, being inclosed in a thick husk, which dries on the nut and has to be removed with the aid of a knife or other instrument. The shell is rather hard, requiring the use of a hammer to break it. The meat of the nut is rich and pleasant to the taste, and is not only relished by children, but the "old folks," too, go after it. The tree is much harder than the English walnut, growing and producing fruit in sections where the latter will not even grow. As a shade tree, it is much handsomer than the other walnut varieties and far ahead of locust, willow, or such trees. The tree holds its foliage until after frost, and unlike other trees throughout the summer, the ground under it is always clean, never littered with leaves or other refuse. The nuts should be planted as soon as ripe, without removing the husk, when they will germinate in from five to eight months. The first two seasons in very cold climates, I would advise a slight protection in winter. The nuts are ripe in September and October. In our grounds we have six bearing trees, which are the admiration of all who see them. When known in the East this tree cannot be otherwise than popular.

### The Seedling or Bud Question in Florida.

A correspondent of the *Florida Agriculturist* writes as follows: I see an article in your last week's issue, copied from a correspondent of the *PACIFIC RURAL PRESS*, in which the writer makes some erroneous assertions in regard to budding the orange into sour orange and lemon stock. He says:

"In regard to this point at issue the wild orange and lemon trees that abound in Florida have been liberally grafted, in three years beginning to yield fruit, but experience shows that after 8 or 10 years fruitage the orange begins to run back to the parent stock, a sour or bitter-sweet, and the lemon, rough, thick skins and corky meat. A great many such groves are for sale, and as the fruit is sure to degenerate," he advises those contemplating settling there to "refuse to buy such groves at any price."

You, yourself, Mr. Editor, know this to be an error. He says: "Experience shows, after 8 or 10 years the fruit degenerates." Whose experience? A gentleman at my side suggests that I refer you to the famous Gwynn grove where the trees have been in successful bearing for 30 years, and where is there finer fruit today? Go ask Captain Starke where he gets his best fruit and which brings him from one to one and a half cents more than his neighbors. Go ask any one who has a grove, and the universal verdict is in favor of the budded stock. Where do we get our fine peaches or apples, or any fine fruit except by budding? Do you suppose for a moment that you could go into any Northern State and sell a seedling pear at any price? Go through any of our large nurseries of the North and every one, without exception, make budding a specialty.

Commenting upon this letter the editor of the *Agriculturist* remarks: Most of our best groves in this State are budded trees, and all the celebrated groves are so. The Hart, Gwynn, Dummett, Starke, Bishop, Harris and a number of others, and the fruit of these groves stand at the market, in fact we have no large grove of seedling oranges in full bearing, to compete with them.



NEW DYE. — Sulphoamidazobenzolic and sulphoamidoazotoluolic acids have been made permanent canary and orange yellow dyes by the conjugation of the sulpho-acids with amidoazobenzol and amidoazotoluol, the excess of acid neutralized by dissolution in alkali and concentrated. The colors are dyed in a slightly acid bath.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

## The Patron's Pledge.

After the supplementary declaration of purposes was adopted at the last meeting of the National Grange, a pledge of devotion to the principles enunciated, and the co-operation of all good men and women invited, was also adopted, which reads as follows:

"In accordance with the above objects of our organization, and the methods by which they are to be obtained, we pledge our unyielding devotion to the work marked out. We believe the principles enunciated in our declaration are in full accord with the highest welfare of our country, and that they deserve support, especially by all farmers. The history of agriculture on this continent shows that no organization in its behalf has ever been attempted without direct effort on the part of those who prey upon its products to neutralize the work, and the lessons of the past, establish the conviction that our only hope is in the full and cordial co-operation of farmers, wherever located, to insure that success which is within their grasp.

"We appeal, therefore, to good men and women, whose interests are our own, to join their efforts with ours, confident that with their support we shall not wait long for the consummation of our hopes. We appeal to the agricultural journals of the land, asking their great influence in aid of the above objects as a potent means for the attainment of a great object. To these forces and to the intelligence of our people, we present the purposes which animate many thousands of farmers in every State of our Union, and reverently trust in the direction of the wise Providence by whose decree we were made tillers of the soil, that our efforts may be rewarded by the full accomplishment of the measures which justice demands in the relief of an oppressed industry and the higher enlightenment of its votaries."

The foregoing is the declared sentiment of the National Grange, the highest authority known in our organization who have adopted it with great unanimity in annual session with 28 State Granges represented, pledging unyielding devotion to the work marked out in the declared purposes of our Order, believing the same to be in full accord with the welfare and best interest of the whole country, and deserving of the hearty support of every good man and woman, and especially of every farmer. That our declared purposes are right and just, and in perfect harmony with the true principles of a free government, and in the interest of all classes, no man can deny, and every farmer desiring the best welfare of himself, his family and the people, is in duty bound in justice to himself and his interest to admit this fact.—H. Eshbaugh, W. M., Missouri State Grange.

## What is Being Done.

In a late paper it was asserted that the predominant purpose of the Grange had undergone a change. That is, that which once seemed to be made of the first importance, has either dropped out entirely or is made subordinate to higher objects. The principles which underlie the work remain the same. The aims and purposes which the Order seeks to accomplish continue unchanged, but the modes of reaching them differ. The importance and value of a social intercourse among the farmers is better appreciated, and there is a tendency to make the Grange meeting, even in its routine of business, still more social. Its pecuniary advantages were at one time considered the leading object, and engaged in many Granges almost the entire time of the members. There were undoubtedly good reasons for this. Hard times pressed sore, and the farmer, like everybody else, only, as he thought, more so, felt the pressure, and sought to buy in the cheapest market. The principle, "buy for cash in quantity and keep out of debt," has lifted the discouraged farmer out of his embarrassments, and while still keeping his eye on the main chance, sees a larger success in another direction. Whatever the cause, the prices of machinery and commodities have "come down."

Store-keeping has no particular attraction for the farmer, and is making way for a distribution at the Grange Hall of such supplies as may be wanted. The outlay is not large, the profits reasonable, and the expense nothing.

But another thought is gaining ground—that large crops raised at a minimum expense concern the agriculturist more than big prices. The co-operation and education of the Grange can solve this better than anything else, and while the organization, from its very nature, is progressive, we believe this, until it shall be attained, will directly or indirectly be made a conspicuous feature.—Grange Bulletin.

THE MARTINEZ GRANGE WAREHOUSE.—The Gazette says: The Railroad company has arranged with the Grangers' Business Association to put in a switch and lay a track up along the creek side of the Association's ground, so that grain for transportation to Oakland or San Francisco can be loaded directly on the cars.

## PRICES OF WHEAT IN THE SAN FRANCISCO MARKET

FOR 15 YEARS—JUNE, 1861, TO JUNE, 1879.

The following table, compiled with much care by A. MONTPELLIER, Manager of the Grangers' Bank, shows the fluctuation of prices in the S. F. Wheat Market, according to the monthly average quotations for good Shipping Wheat:

MONTHS.	1864—65	1865—66	1866—67	1867—68	1868—69	1869—70	1870—71	1871—72	1872—73	1873—74	1874—75	1875—76	1876—77	1877—78	1878—79
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
June.	Highest 3 05	4 75	1 65	1 90	2 05	1 80	1 97½	2 50	1 95	1 87½	1 85	1 72½	1 65	2 45	1 75
	Lowest 2 60	1 90	1 47½	1 67½	1 90	1 55	1 65	2 25	1 60	1 70	1 65	1 65	1 52½	2 12½	1 62½
	Average 2 82½	3 32½	1 56½	1 78½	1 97½	1 67½	1 81½	2 37½	1 77½	1 78½	1 75	1 68½	1 58½	2 28½	1 68½
July.	Highest 3 52½	1 90	1 55	1 82½	2 02½	1 82½	1 97½	2 35	1 65	1 92½	1 70	2 15	1 52½	2 37½	1 70
	Lowest 3 15	1 70	1 47½	1 70	1 80	1 67½	1 80	2 22½	1 52½	1 70	1 60	1 72½	1 45	2 15	1 62½
	Average 3 34½	1 80	1 51½	1 76½	1 91½	1 75	1 88½	2 28½	1 58½	1 81½	1 65	1 93½	1 48½	2 26½	1 66½
Aug.	Highest 3 55	1 85	1 50	2 00	2 05	1 80	1 90	2 12½	1 62½	2 30	1 65	2 32½	1 52½	2 30	1 75
	Lowest 2 55	1 70	1 42½	1 82½	1 82½	1 65	1 77½	2 30	1 50	1 92½	1 52½	2 15	1 45	2 15	1 65
	Average 2 90	1 77½	1 46½	1 91½	1 93½	1 72½	1 83½	2 36½	1 56½	2 11½	1 58½	2 23½	1 48½	2 22½	1 70
Sept.	Highest 3 85	2 00	1 55	2 40	2 00	1 77½	1 92½	2 67½	1 62½	2 32½	1 55	2 15	1 55	2 36½	1 77½
	Lowest 3 50	1 85	1 35	2 05	1 85	1 62½	1 85	2 40	1 55	2 20	1 50	2 00	1 50	2 25	1 67½
	Average 3 67½	1 92½	1 45	2 22½	1 92½	1 70	1 87½	2 53½	1 58½	2 26½	1 52½	2 07½	1 52½	2 31½	1 72½
Oct.	Highest 4 37½	2 12½	1 87½	2 52½	2 02½	1 75	2 10	2 80	1 72½	2 35	1 60	2 05	1 70	2 40	1 75
	Lowest 3 85	2 00	1 55	2 37½	1 90	1 60	1 92½	2 67½	1 62½	2 27½	1 52½	2 00	1 57½	2 25	1 67½
	Average 4 11½	2 06½	1 71½	2 45	1 96½	1 67½	2 01½	2 73½	1 67½	2 31½	1 56½	2 02½	1 63½	2 32½	1 71½
Nov.	Highest 4 37½	2 15	1 95	2 52½	1 95	1 65	2 20	2 82½	1 77½	2 30	1 57½	2 00	2 00	2 37½	1 75
	Lowest 3 50	2 00	1 72½	2 47½	1 80	1 60	2 02½	2 70	1 65	2 22½	1 50	1 87½	1 75	2 22½	1 65
	Average 3 93½	2 07½	1 83½	2 50	1 87½	1 62½	2 11½	2 76½	1 71½	2 26½	1 53½	1 93½	0 87½	2 30	1 70
Dec.	Highest 4 25	2 25	1 95	2 75	2 10	1 70	2 32½	2 75	1 97	2 32½	1 57½	1 97½	2 25	2 42½	1 75
	Lowest 3 50	2 15	1 82½	2 47½	1 97½	1 62½	2 10	2 60	1 80	2 22½	1 52½	1 90	2 02½	2 30	1 65
	Average 3 87½	2 20	1 88½	2 61½	2 03½	1 66½	2 21½	2 67½	1 88½	2 27½	1 55	1 93½	2 13½	2 36½	1 70
Jan.	Highest 4 75	2 20	1 85	2 75	2 12½	1 75	2 42½	2 05	1 92½	1 65	1 95	2 10	2 12½	2 35	1 72½
	Lowest 4 25	2 10	1 72½	2 70	1 97½	1 70	2 32½	2 45	1 90	2 00	1 65	1 90	2 10	2 10	1 65
	Average 4 50	2 25	1 78½	2 82½	2 05	1 72½	2 33½	2 33½	1 97	2 06½	1 60	1 93½	2 17½	2 22½	1 68½
Feb.	Highest 5 00	2 40	1 82½	2 95	1 97½	1 75	2 42½	2 30	1 92½	1 10	1 65	1 95	2 10	2 12½	1 72½
	Lowest 4 75	2 20	1 67½	2 82½	1 75	1 65	2 30	2 00	1 80	1 92½	1 55	1 85	1 97½	1 95	1 62½
	Average 4 87½	2 30	1 75	2 88½	1 86½	1 70	2 36½	2 15	1 86½	2 01½	1 60	1 90	2 03½	2 03½	1 67½
Mar.	Highest 5 00	2 20	1 87½	3 05	1 75	1 72½	2 52½	2 10	1 87½	2 00	1 70	1 97½	2 15	2 00	1 70
	Lowest 5 00	1 95	1 70	2 85	1 67½	1 62½	2 37½	1 92½	1 77½	1 90	1 57½	1 87½	2 05	1 90	1 60
	Average 5 00	2 07½	1 78½	2 80	1 71½	1 67½	2 45	2 01½	1 82½	1 95	1 63½	1 92½	2 10	1 95	1 65
April.	Highest 5 00	1 95	2 15	2 72½	1 67½	1 75	3 00	1 97½	1 87½	1 95	1 75	1 92½	2 50	2 05	1 65
	Lowest 4 77½	1 70	2 00	2 15	1 57½	1 62½	2 55	1 87½	1 80	1 85	1 67½	1 82½	2 15	1 90	1 57½
	Average 4 82½	1 82½	2 07½	2 43½	1 68½	1 77½	2 92½	1 83½	1 90	1 71½	1 87½	2 32½	2 17½	1 97½	1 61½
May.	Highest 4 75	1 75	2 05	2 20	1 60	1 77½	3 10	1 97½	1 90	1 95	1 77½	1 77½	3 00	2 00	1 67½
	Lowest 4 62½	1 62½	1 87½	2 07½	1 55	1 65	2 52½	1 90	1 85	1 80	1 70	1 67½	2 45	1 82½	1 57½
	Average 4 68½	1 68½	1 96½	2 13½	1 57½	1 71½	2 81½	1 93½	1 87½	1 87½	1 73½	1 72½	2 72½	1 91½	1 62½

## VISITING THE WAREHOUSES OF THE WESTERN

SACRAMENTO VALLEY.—The banks and business houses being closed on the 4th and 5th of July, A. Montpellier, Manager of the Grangers' Bank, availed himself of the opportunity to visit the wheat-growing district on the Yaca Valley R. R. to Winters and Madison; thence along Putah creek to Davisville in Yolo county; thence, on the North Pacific R. R., to Willows and Colusa City; returning through Solano county to Vallejo; thence to Benicia, crossing to Martinez; thence to Pacheco, Concord, and San Ramon valley in Contra Costa county; thence to San Francisco. Mr. Montpellier's object was to see for himself the location, condition and tonnage capacity of each grain warehouse, and to confer with the owners and keepers about loans to the farmers on their grain stored at home. Over 20 warehouses, representing a storage capacity of some 100,000 tons, have been visited in four counties, and Mr. Montpellier expresses his opinion that about half a million of dollars will be disbursed to farmers by the Grangers' Bank this year, a result highly gratifying, and due principally to the energy of the officers of the bank. In this connection we would call attention to the official statement of the Bank to the Bank Commissioners, which appears in our advertising columns this week.

THE Grange contemplates three things concerning the farmer: The making of money, the acquisition of knowledge, and the building up of character—or which may be expressed in three words—labor, culture, fidelity. The true Grange keeps these constantly in view, and works to promote them. Differences of opinion may exist as to the best mode of attaining the ends aimed at; but to insure success it will not do to ignore any of them. Each must have its due attention, because each has its bearing upon the farmer's life, and he only can be called a successful man, who has given due attention to all. The Grange is a blessing only in the good which it dispenses.

WHEAT PRICES.—The table of wheat prices which we give on this page, is reduced from the large sheet issued by the Bank. For the use of the table we are indebted to the *California Patron*.

IN MEMORIAM.—Sonoma County Pomona Grange has adopted resolutions expressive of honor to the memory of Bro. John L. Mock, Treasurer-elect of the Grange.

ODD FELLOWS' LIBRARY ASSOCIATION.—We are pleased to note the increase of the above library. It appears from the 24th annual report for 1878-9 that 1,665 volumes have been purchased during the past year, and 90 volumes donated. The reading room is well supplied not only with Pacific coast journals, but with all the leading American, English and German newspapers and periodicals. The total number of volumes in the library is 33,500. The circulation for the year was 107,512 volumes, an excess of last year by 3,502 volumes. From the statistics it appears that 86,427 novels were drawn out to 356 theological and 2,814 scientific works, a result which appears in the published statistics of every library. The cabinet connected with the library contains many valuable and interesting articles. George A. Carnes is the librarian, and to him we are indebted for a copy of the neat report.

## Harvest Field Disaster.

About 3 o'clock Tuesday afternoon the boiler of L. R. Anway's steam thrasher, at work near Rio Vista, Solano county, exploded, injuring the fireman, Andrew Larson, so severely that he died within half an hour afterward. As the fireman was in the act of putting straw into the furnace the inside flue collapsed, blowing out the fire-box, the door of which struck him with great force. His clothing was saturated with hot water and steam and his face was somewhat scalded. Mr. Anway, who was standing beside the engine, within two feet of the fireman, says that the steam gauge indicated a pressure of only 85 pounds.

On Wednesday the Coroner's inquest was held, and after hearing the testimony of impartial experts who had examined the boiler subsequent to the explosion, rendered a verdict wherein they found that the explosion was the result of a defective boiler. The engineer testified that there was plenty of water in the boiler at the time of the explosion, and, so far as can be ascertained, no blame is attached to him. Indeed, there was nothing in the evidence sufficient to inculpate anyone. The boiler, it appears, has served in its present capacity since 1873, prior to which time it had been in use on a dredger for a number of years.

CALIFORNIA GRAPES IN INDIANA.—We read in the report of the Indiana State Board of Agriculture, which we have just received from the Secretary, Alex. Heron, that the thanks of the Board were lately voted to Mr. J. C. Weinberger, of St. Helena, Napa county, Cal., for the display of grapes he made at the Indiana State fair last fall. It is a good thing to make these displays at the Eastern fairs where our producers find it convenient to do so. The displays need not be made in the same spirit and with the same State glorification which has inspired such exhibits heretofore. Such things are well enough, but it is more important now that we should show our fine fruit products so as to attract the attention of Eastern consumers to the quality we have for preserving, etc. It is but a step from California grapes to California raisins, so the excellence of one will foreshadow the desirability of the other. Mr. Weinberger did well to make a display at the Indiana State fair and we congratulate him upon the recognition he secured.

LOMPOC COLONY.—Reports from Lompoc temperance colony in Santa Barbara county speak of the continued success of the colony enterprise, and of the prosperity of residents. The character of the community which has gathered under the auspices of the colony association proves the wisdom of the system which was adopted and the list of produce exports show rapid agricultural growth. It may be seen by the advertisement of the company that land is still accessible, and the claims of the locality should certainly be ascertained by those in search of new homes.

THE SACKETT SCHOOL.—Prof. D. P. Sackett, who will open the Sackett school in Oakland, July 15th, is well known and highly recommended as an educator. The school will be for boys and young men, and is both a boarding and day school. Prof. Sackett's prospectus, of which we have received a copy, shows that the school will extend many advantages to students.

## AGRICULTURAL NOTES.

## CALIFORNIA.

## AMADOR.

INJURIES TO WHEAT.—*Times*, July 5: The late rains we had this season have injured the wheat crop, but we hope not to a serious extent. On some of the bottom lands, the wheat is down badly and the damp is producing rust. We hear also of indications of rust where the grain is not laid. A deterioration of 30% would be a moderate estimate of the injury caused to wheat by the late rains.

## CONTRA COSTA.

ALMOND PROFIT.—*Autioch Ledger*, July 5: It is said of late that there is too much uncertainty, too many off years in almond bearing for profit in orchards of that kind in this State. That may be so in some localities; but we hope and believe that ours will prove an exception. This week we drove out to Mr. Wm. Darby's place, six miles south of town, and through his beautiful almond orchard now heavily laden with the paper shell nuts. About 800 trees are in bearing with the third successive crop. The oldest portion of the orchard is but six years growth, the other much younger. The first year they bore, they gave him \$50 profit; the second, \$200; this, the third, he thinks they will yield \$700 or \$800, and we should think that he is not mistaken. Mr. Darby has full confidence in the profit of the enterprise, and is making considerable addition to his young trees. His cultivation of the orchard land is pleasant and profitable to look upon, deep plowed, well harrowed and smoothly rolled until it is as handsome as a well kept door yard, while as mellow as an ash-bank; not a green weed saps the moisture needed by the trees, not an atom goes off by evaporation that can be retained by a well mulched cultivation.

## EL DORADO.

A PLACE WHERE POTATOES ARE WORTH SOMETHING.—*Republican*, July 3: Our mountain farmers realize more for their products than do the valley farmers, with the chances of a good average crop greatly in favor of the former, and yet our mountain farmers are complaining of low prices. While in the Southern counties potatoes are selling at 25 to 50 cents per 100 pounds, our farmers are getting from \$1.50 to \$2, with nearly every product in the same proportion.

## FRESNO.

EGYPTIAN CORN.—*Fresno Republican*, July 5: Although our first experience in raising Egyptian corn may not have come up to our hopes or anticipations, enough has been demonstrated to place it in the front rank of our cereals. For a farmer with but a limited amount of land, in our opinion no grain can equal it. Planted on moist ground, with scarcely any cultivation it will return a yield of 25 bushels or upward per acre, and if well cultivated, and on good land there is no trouble in getting 60 bushels and upward per acre. The grain for poultry, horses or swine is more valuable pound for pound than any grain we know of. The white variety makes excellent bread when ground, and many people use the whole grains in place of rice, and prefer it to the best Carolina. Mr. Harbaugh, of the Central Colony informs us that last fall he fed large quantities of the stalks and partly matured heads to his horses and cattle and that they did well on it. There is still time enough for people on irrigated lands to plant, and for home consumption, no grain is so convenient or valuable.

## KERN.

IMMIGRATION PROJECTS.—*Courier Californian*, July 5: In this county great change has been made in the ownership of the territory adjacent to the town, and it is presumed such a liberal policy will be adopted by the new proprietors as will greatly aid in advancing every laudable interest. The plans of immigration adopted by Messrs. Haggis & Carr are the most comprehensive ever undertaken in the State, and if they attempt the fulfillment of them as is proposed, this year, the change in Kern county will not be exceeded anywhere. Numerous letters come to this office and to Mr. C. Brower, of inquiry about the valley, and hundreds are ready to come as soon as the way is made clear. We are promised full details of the plan of settlement to be entered into by the large land proprietors, and the men who have the matter in hand do not know how to do half way work with it.

## LASSEN.

THE COLD SEASON.—*Susanville Advocate*, June 20: Last Saturday there was a fearful gale of wind blowing all day, causing the air to be filled with clouds of dust. Sunday there was considerable wind, and as the sun went down the weather became quite cold, so much so that in many places there was severe frost. We hear that along Susan river, potatoes and other vegetables were frozen. Whether grain is injured or not remains to be seen.

HAYING.—The ranchers in this valley are now very busy cutting hay, and complain that the crop will average very light.

## LAKE.

CROPS.—*Lower Lake Bulletin*, July 5: The crops in this vicinity have never yielded such large returns to the farmers as they are doing this year. Hay is yielding, on an average, about a ton and a half to the acre, while grain is turning out from 45 bushels up, to the acre. Lake will be the banner agricultural county this year, in proportion to its acreage.



## LOS ANGELES.

**FRUIT FOR ARIZONA.**—*Journal*, July 1: Apples, pears, peaches, and a full line of small fruits are now in market in an abundance. We are told that an average of two tons per day are now being shipped from this city, the most of which goes to Arizona.

**GRAPES.**—*Downey City Outlook*, July 5: The vineyards of Los Angeles county are loaded with grapes this season beyond any former year remembered. Prices will be good, and the grape growers will be the most successful farmers in the State. Many new vineyards will be planted next winter, and henceforth the business of grape growing become the leading horticultural pursuit in southern California.

**WHITE AUSTRALIAN WHEAT.**—We have before us a fine specimen of wheat, of the White Australian variety, grown on the farm of J. S. Elliot near New river. The stalks are some four and one-half feet, the grains are well developed, free from rust, no irrigation has been used, and the early sown fields were pastured.

**ALFALFA GROWTH.**—*Express*, July 5: General Shields has sent to this office a package of specimens of alfalfa stalks grown on his ranch, near Florence. One sample measures 67 inches in length; one, 105; and two, 106 inches. This exhibit and the letter published in another column were provoked by a paragraph appearing in a recent number of the *Express*, describing a new grass introduced in Eastern dairy districts from Java. This grass measures eight feet in length. It will be seen by the above that the alfalfa samples now in this office measures from one to ten inches more than eight feet.

## MERCED.

**PROPO WHEAT.**—*Argus*, July 5: M. D. Atwater, informed us on the 24 inst., that he commenced on that morning to harvest a field of 2,700 acres of wheat. Mr. A. has for some years past planted largely of the variety of wheat known as Propo, and this year has the most of his land seeded in it. He claims for the Propo several advantages over any variety ever introduced into this valley, among which are—it matures early, yields largely, stands drought well, and brings the highest price in the market. In the dry seasons of the past few years, he has been one of the few who have succeeded in making a crop.

## MONTEREY.

**THE SALINAS VALLEY.**—*Democrat*, June 28: Within the fog belt in our valley harvest opens favorably; compared with last year, the yield is much better, some farmers saying, indeed, that it is as good as in almost any previous season. The year being a comparatively dry one, this shows, of course, the beneficial effects of the fogs, but it is true, nevertheless, that they but partially supply the place of irrigation. In this connection, Paris Kilburn makes a very interesting report of the results of irrigation in the Orestimba country from the Miller canal. Where the water has been applied—and but once—luxuriant fields of alfalfa and grain are the result, farmers saying that the increased yield, over that of seasons of good rains, more than pays the cost of the water and its application. Irrigation will cause the great San Joaquin valley to become as famous for production as the delta of the Nile, and must, through its example, establish the like enterprises in coast valleys, such as ours.

## NAPA.

**A STOOL OF OATS.**—*Register*, July 5: To-day R. R. Hampton, who farms on what was once a portion of Hartson's adobe ranch, brought into this office a sample of oats raised by him this season. The variety was the white cultivated wild oat, and the stalks numbered upwards of 130—the growth of one seed, each stalk well headed and about four feet high! This shows plainly what a thorough cultivation of our prolific soil will do.

## SAN BENITO.

**HARVESTING.**—*Enterprise*, July 4: Harvesting has commenced in earnest. Most of the barley has been cut and stacked and the clippers are cutting wheat. We learn from several of the farmers that there will be a very good crop of grain harvested this season, and in some parts of the valley the crop is equal to any of former years. This is somewhat encouraging. To have a failure of crops this season, would have ruined farmers in many instances, as several of them are involved to such an extent that nothing but a bountiful harvest will bring both ends together.

## SAN BERNARDINO.

**THE HONEY FAILURES.**—*Index*, July 3: Bee men, both in this county and in San Diego, are complaining severely of the shortage in the honey product. Wonder what the busy little insects have been about? Many of our beekeepers say they will have none at all to sell. A gentleman from San Diego predicts that less than one ton will be shipped from that county this season against hundreds of tons last year. This is certainly a fearful falling off, and must tend largely to increase the scarcity of money.

**BANANAS.**—The banana is fruiting in T. V. Keeler's garden in our city. We learn that several have fruited before in this county, and no doubt some day they will be among our valuable productions.

## SAN DIEGO.

**THE BEES.**—*Valle de los Viejas Cor. News*, July 4: Although we have had but eight inches of rain during the season, crops are perhaps above the average, but water is extremely scarce for the time of year, but no serious failure in that line is anticipated. Bees are actually starving, and unless there is some depar-

ture from the regular rule of nature, there will be scarcely any saved through without feeding. **FOES OF THE ORCHARDIST.**—*Spring Valley Cor. News*: "Eternal vigilance is the price of liberty," said Jefferson, and I may say with truth that eternal vigilance is the price of all we try to raise. The first crop of figs (brevas) has been trying to become ripe enough to eat for some two or three weeks, but the linnets will not permit anything of the kind. They began on the figs before the fruit was grown, and only by poisoning 300 or 400 have we been able to eat some half ripe ones. There was an unusually large supply of the brevas, and they are generally larger than the after crops. Mr. Burbeck, for the same reason, has not been able to have any apricots, and has had to make use of partly ripe ones, generally began on by the birds, or go without. My vineyard is alive with doves, linnets and quail, all of which, to say nothing of the worst enemy of all, the bee, are just holding on for the early grape. I can kill the birds with poison, as I do every year, and thus save some fruit, but for "little busy bee" something else must be resorted to, and I have a recipe which I shall try on in due time.

## SAN MATEO.

**STACKING GRAIN.**—*Times*, July 5: Farmers are husily engaged in cutting and reaping and putting their grain into the stacks. Prices being very low for grain, a large number of farmers are stacking theirs. This grain is stacked without being bound, some believing it will thresh as well, and, of course, at lower expense than if bound.

## SANTA BARBARA.

**LOS ALAMOS.**—*Press*, July 5: Dr. Shaw, who has just returned from the Los Alamos Rancho, brought with him some fine specimens of wheat and barley from that section. The wheat, which was of the Proper and Sonora varieties, was well filled out, the heads being long, and the berry round and plump. The Chevalier barley looks remarkably well and will yield from 24 to 30 bushels to the acre. The whole section is doing splendidly and the crops will be large and of good quality. The fire, week before last, burnt over some 2,700 acres and destroyed a large amount of feed, but will prove a benefit in the end by clearing up the brush and fallen trees which covered the ground, and it is thought the grass next year will show the effect by a richer growth.

## SONOMA.

**MYSTERIOUS SHEEP DISEASE.**—*Russian River Flag*, July 3: Michael Young, of Alexander valley, gives us the following particulars, and requests us to ask for information or a remedy: About the 1st of May he and his neighbors, Hall & Critchfield, dipped their sheep, aggregating 2,000, in a solution of tobacco, sulphur and lime, into which had been thrown three boxes of concentrated lye. Since that time out of 900 belonging to Young Bros. & Cagwin, 150 have died, giving no signs of sickness up to the moment of dropping, an autopsy showing only the lights and liver diseased. Those of Messrs. Hall & Critchfield are now going likewise. The dipping was supposed to be done so that none of the liquid entered the system, and pastures have since been changed several times. Opinions through the *RURAL PRESS* or *Flag* are solicited, as the mortality continues. [Will some reader give us information covering such a case and describe any remedy which can be employed? We should suppose that any poisoning resulting from the dip would have manifested itself much sooner.—EDS. PRESS.]

**CALIFORNIA AS A WINE COUNTRY.**—*Enterprise*, July 3: One day this week we had the pleasure of a visit to J. G. Berner's winery, in north Healdsburg. He says that in his opinion, based upon knowledge and close observation, California is even a more desirable place for the manufacture of wine than France. In the latter country the summers are generally too short to permit of a proper ripening of the grape; generally it is not more than one season in ten that a really good vintage is secured. Here, where the climatic conditions are so favorable to the culture of the grape, every facility is offered that can tend to success. Mr. Berner is hopeful that wine-making will eventually be the most prominent industry of this coast, particularly in those sections where table or foothill land most abounds. He says this quality of land is the very best for grape-growing, and considers that a good vineyard on such soil will, eventually, be more profitable than a like number of acres on the bottom, where cereals are produced. In regard to his choice of grapes, he says foreign varieties are preferable—that they make better wine and command a better price by one-fourth or even one-third than will the Mission grape. Mr. Berner recommends first of all the Zinfandel, and next to that the Malvoisie—both good bearers, and excellently adapted to wine-making.

## STANISLAUS.

**THE HARVEST.**—*Herald*, July 3: The harvest is now in full blast—heading and threshing being prosecuted vigorously in all directions. The yield, as far as ascertained from the threshers, is in excess of the estimate. Crops estimated to yield seven or eight bushels upon being threshed turned out 10 and 12 bushels. Summer-fallow crops estimated to yield 18 or 20 bushels have yielded as high as 25 and 30. As is usually the case, the actual yield, when come to threshing, is larger than the estimate.

## TUOLUMNE.

**EDITORS PRESS:**—Summer is fairly inaugurated. Harvest is progressing; fruit is ripening, and pleasure seekers are at the seaside. But

the husbandman seldom finds leisure for recreation, or even improvement, except to improve his farm. Everything and every other man is heading towards Bodie. The return tide will soon set in, and then charity on a large scale sets in, if the future pan out as the past. It is a freak of nature to follow excitements, whether it be a "camp meeting" or a Fraser river. The excitement about Bodie is producing quite an extra activity in this county. The "Mono road" is being utilized for the conveyance of supplies. Fruit is one of the staples sent, relieving us of our extra supply. A party from Hill's Ferry, on the San Joaquin, brought into Sonora two wagons loaded with hacon and hams, and was obliged to carry them back for lack of market, nine cents being the price by wholesale for bacon, retailing for 12 cents. It seems as if a market could be found for home-made articles, when so much of the same are brought from Chicago. Home produce should receive attention in the first place. Apples are under a cloud—of codling moths. I fear for this season's crop. Pears are an extra crop; peaches, moderate. A very full crop of any variety seems to ensure a short one for the following season. Figs seem to thrive in this region better than any other fruit. The warm belt of the foothills seems especially adapted to their propagation. Our first crop is now ready for market, but no market within any reasonable distance. The fruit is particularly large and fine, but first crops will not dry so as to keep, or be of any use, except it may be for pickles. Figs made into a sweet pickle are delicious.—JOHN TAYLOR.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

**BORING IMPLEMENT.**—William Heyn, S. F. Dated May 27th. This invention relates to certain improvements in implements for boring; and it consists in a novel construction of a circular cutter, the lower or boring end of which is in shape and form like that of the usual double twisted augers, having a dovetailed or other suitably formed slot, locking or centering device across its diameter, and also two grooves running at right angles from the above-mentioned slot towards a gimlet-pointed screw in the lower or boring end through which the shavings are being discharged towards the operator while boring. In combination with this the inventor employs either a plain and smooth or a partly twisted stem or shank, having a beveled or other suitably formed projection or locking device, which fits those of the circular cutter in such a manner as to unite the two principal and vital parts into one solid whole, thus forming a veritable borer.

**DIRECT-ACTING HORSE POWER.**—L. Herbert and Wm. V. Heury, Hicksville, Sacramento Co., Cal. The improvement consists in mounting on a horizontal bar moving in anti-friction devices between suitable guides, two pulleys which alternately pass in and out of depressions or corrugations formed on the periphery of a horizontal driving wheel, as the wheel is rotated. A rectilinear motion being thus imparted to the driving bar, and power being directly transmitted to a knee lever operating the pitman of a pump or similar device, without the intervention of any gearing.

**EASTERN NURSERYMEN AND THE TREE PEDDLERS.**—At the nurserymen's association meeting lately held at Cleveland, Ohio, the subject of abuses by fraudulent tree peddlers was discussed. The conclusions and recommendations arrived at were in brief as follows. Agents could not be dispensed with because they must be relied upon to bring the stock to the attention of tree planters. Though the nurserymen deplore the tendency to exaggerate and misrepresent, on the part of unscrupulous dealers, yet they assert with confidence that there are many honorable and entirely reliable dealers who are worthy of confidence, and should have the encouragement of all nurserymen and tree planters. It was decided that nurserymen should as far as possible control the grading and labeling of trees when packed upon their own grounds and use all other available means to do justice to the purchaser and planter. The society recommended all nurserymen to authorize by proper certificate and letter their regular agents or dealers found worthy, and use all proper endeavors to expose dishonest and disreputable swindlers.

**BUHACH.**—We notice that Mr. Milco of Stockton is again before the public in our advertising columns with his "Buhach" of California grown insect powder. We have found this insecticide very effective. When we placed the first loaf of bread upon the pantry shelves in our new house, the possession of it was immediately contested by thousands of ants. Having a little package of Buhach we dusted it about the pantry and the ants disappeared immediately. Since then we have kept them completely at bay by an occasional dusting of Buhach. We also found a rose bush beset with aphides. The yellow dust cleared it in a few minutes. These are facts of personal experience.

## News in Brief.

**PORT-AU-PRINCE, Hayti**, is in flames and all business suspended.

The potato bug is doing much damage in upper St. John, N. B.

The strength of the Egyptian army has been fixed at 12,000 men.

CALIFORNIA and Consolidated Virginia pass dividends this month.

MUTINIES and revolts prevail in Mexico, and a reign of terror exists.

A RAILROAD is about to be constructed across the Australian continent.

THERE are 7,000 more colored residents than whites in Charleston, S. C.

MANY persons in England have been poisoned by licking postage stamps.

THE Chinese have taken Kashgar. Now let somebody take the Chinese.

THERE are 300,000 seamen employed on the rivers and lakes of the West.

SZEGEDIN, Hungary, cannot be rebuilt this year, owing to the high water.

TWO HUNDRED and FIFTY emigrants from Iceland are en route to Minnesota.

NOT one of the Imperial Napoleons has died in France, or upon French soil.

YELLOW FEVER is raging in epidemic form in nearly all the South Atlantic islands.

IN Texas there are 30,000 white children over eight years of age who cannot read.

SIGNOR CAIROLI has been intrusted with the task of forming a new Italian Cabinet.

ON June 22d a monument to Boccaccio is to be unveiled at his birthplace, Certaldo.

SILVER in London, 51½; consols, 98 1/16@98½; 5% U. S. bonds, 106; 4s, 104½; 4½s, 108½.

THE devastations committed by grasshoppers in southern Siberia is said to be appalling.

A MAN cannot fight well when down, but a cucumber does its best fighting when down.

A NASHVILLE man has just received from England four dogs which cost him \$1,000 each.

The sum of \$31,000 was presented to Mr. Spurgeon on his completion of a pastorate of 25 years.

AT Liverpool wheat is quoted at 8s 6d@9s 4d for average California white, and 9s 2d@9s 8d for club.

A CHINAMAN's queue shall not be cut off, but a white man's hair shall be. The U. S. Court says so.

A SINGING canary in a cage is the most recent novelty offered as a premium by a religious newspaper.

SAN LUIS PARK, Colorado will be the toll gate of the confluent lines of way travel of the unified nations.

LAST Monday was the 32d anniversary of the raising of the Bear flag, and the first election of officers in San Francisco.

IN the museum in the Ordnance Bureau at Washington are the pistol and the bullet with which Booth shot Lincoln.

THE first car wheels manufactured in this State, south of San Francisco, have just been turned out by a Los Angeles house.

LIEUT. CAREY who was with the Prince Imperial on his ill-fated trip, is to be court-martialed for not stopping the Zulus.

THE population of Guaymas is 7,000, and of Hermosillo, 12,000. The distance from Guaymas to the boundary line is 250 miles.

SIX THOUSAND Chinamen are at work on the Texas Pacific railroad. Gov. J. C. Brown declared that none should work on that road.

IN San Francisco half dollars are quoted at 99 buying, 99½ selling; trade dollars, 98 buying, 98 selling; Mexican dollars, 93 buying, 93 selling.

GLASS, the product of silica and an alkali, was known prior to 3,000 B. C.; made in Alexandria, and cut, colored and gilded 300 years B. C.

IN New York Government bonds are quoted at 101½ for 4s of 1907; 103½ for 5s of 1881; 106½ for 4½s; sterling, \$4.86½@4.88½; silver bars, 113½; silver coin, ½@1 discount.

THE stomach daily produces about nine pounds of gastric juice for the digestion of the food; its capacity is about five pints.—*Ec.* [Nine pounds ought to be enough without any other food.]

THE cause of the unity and uniformity of our population and of our exalted and permanent civilization is due to the fact that North America is concave in its structure, while other continents are convex.

THE new steel bridge over the Missouri river, at Glasgow, Mo., is the finest bridge of the kind in the world. It is nearly 500 feet long, and every strand is warranted to bend double before it will break.

ALTALA BAY, at the junction of the river Culican and the Gulf of California, is to be the terminus of a railroad instead of Guaymas. The harbor is well protected and the water 60 feet deep at low tide.

THE grinding and finishing of the object glass for the great telescope for which the Russian government has appropriated 250,000 roubles, will probably be intrusted to Alvin Clark & Sons, of Cambridge, Mass.

**ADJUSTABLE CHAIR.**—Our advertising columns contain an announcement of one of the most important mechanical contributions to the comfort of mankind which the inventor has produced. It is called the "Wilson adjustable chair," and is most highly commended by those who have used it in the many ways to which it is adapted. Those who desire such a protean comfort in their homes should send for the illustrated circular, from which many hints of its usefulness and value can be obtained.





### One by One.

One by one the sands are flowing,  
One by one the moments fall;  
Some are coming, some are going—  
Do not strive to grasp them all.

One by one thy duties wait thee,  
Let thy whole strength go to each;  
Let no future dreams await thee;  
Learn thou first what these can teach.

One by one bright gifts from Heaven,  
Joys are sent thee here below;  
Take them readily when given,  
Ready, too, to let them go.

One by one thy griefs shall meet thee—  
Do not fear an armed band.  
One will fade as others greet thee,  
Shadows passing through the land.

Do not laugh at life's long sorrow,  
See how small each moment's pain;  
God will help thee for to-morrow;  
Every day begin again.

Every hour that flees so slowly  
Has its task to do or bear;  
Luminous the crown, and holy,  
If thou set each gem with care.

Do not linger with regretting,  
Or for passion's hours despond;  
Nor, the daily toil forgetting,  
Look too eagerly beyond.

Hours are golden links, God's token  
Reaching heaven; but one by one  
Take them, lest the chain be broken,  
Ere thy pilgrimage be done!

—Dickens.

### What Some Men Say When They Talk.

[Written for the RURAL PRESS by HOWLETT ELDRIDGE.]

#### A Reply to Rhodra Dendron.

"How do you do? I enjoy extremely late nights at the 'Heart's Content' saloon. I couldn't begin to tell you all the games, winnings and high old times we have there. Tom Slocum lost \$34 at draw poker; Joe Hard run a high-handed bluff and hauled in a pot of \$23 on a pair of dences; blast his check, I held a pair of queens myself. Sam Keen got away with \$11 at enchre; I only lost \$7.50, though.

"Sed Schooner took on such — Take a cigar, No. one, Royal Havanas; dirt cheap, too; only \$15 a box. As I was saying, Tom took on such a cargo of Conkling sling, Maderia pure and old Tom, that we had to pilot him home. He no sooner got into the house than he began to sling things at the old Tom cat. Missing him, he smashed his new meerschamm all to smithereens. That made him so mad that he slapped the twins and threw the lamp at his wife.

"I only took a few glasses of ale-nog straight, but that ain't what ails me this morning and makes me so far from 'straight,' for after I got to bed I could not get a wink of sleep. The baby had the croup, and Ora squawked with the earache, till I ached all over. The old woman said it was brought on by the child running barefooted on the damp ground, but a fellow can't afford to buy shoes these doggoned hard times. After I had dragged myself out of bed this morning, the old gal almost drove me to something desperate, by lecturing me some thing about no meat, no wood, etc. I didn't pay much attention, for what did I want of meat, I wasn't hungry! As for wood, I felt so much like wood that I could scarcely move; and what on earth she wanted of fire I could not imagine, for I was already burning with thirst and anger at being."

"O, yes; I know what it is to be hectored and lectured all the time. Why, I have had snakes in my boots, bludstagers and the blues. A few days ago I lost heavily in stocks; last night I bucked against the 'tiger' and was swamped to the tune of \$300; and this very morning I was threatened with a snit if I did not pay Sharp & Flint the few hundred dollars I borrowed a few years ago. The old skinlints would rob a fellow if he was not mighty sharp. Why I haven't—take some line-cut Jackson's Best. Away up price, too—known a happy day since the honeymoon. I tell my wife that it is a shame for her to be so unsympathetic. She don't know what I do endure, and"

"No, of course not, how should they know? Women never have our trials. Besides, they are selfish, unfeeling things, anyway. It is a blessing they do not know all we know and say, if they did there would be no living with them at all. As it is they know enough, and they pretend to be quite disgusted with what they call our filthy habits. And no wonder some men are so filthy and conceited as to disgust a chicken rooster.

"What would—thanks, I will take a 'chaw' of old Navy for a change—the world come to if they knew all our ways of getting pleasure. They are not quite fools if they are women. They are so apt at comparing; and comparisons are odious. Time you have lived as long as I have, you'll not have as good an opinion of

them. Truth is they are a conceited, heartless, rattle-headed crowd of vile consumers, caring for nothing but dress! dress! Doing nothing but eternally scolding and criticizing, and telling us what is best for us. The very idea of their presuming to counsel us is unbearable to every man who has a mind of his own. Got a match?"

"Have you heard Ray lecture? I would not go across the street much less pay 50 cents these hard times. What good is it going to do any one to hear him spout about the 'Charms of home, domestic felicity and family harmony.' All bosh, I will assure you."

"Yes, a deal of it; but, by the way, he tells some truth when he says that if men would have pleasant homes they must help make them so. If husbands spend all their leisure time in bar-rooms and at the clubs, away from the love and confidence of wife, away from the sanctity of daughter and cheer of innocent childhood, they must expect the tender plant of love to be chilled and frozen by criminal neglect. Such talk sounds very nice, but I don't go much on him either. Is not that a noble animal of Browns, I would give a"

"You bet she is a clipper. What a pity she caught cold in the last storm, for Brown says she is not fit to be at the races next week. Sin, too! for I was going to put up heavy on her. What will you take? I'll take whisky straight. I don't often do that, but I feel so stupid and nervous like. Here is too"

"Were you down to the shooting match? There was some terrible fine scratching done there. That Bangs is a capital shot, if he is kind to his wife. But I had put in some fine shots with my hundred and fifty dollar new patent Creedmoor, and was five scores ahead of him, when I had the infernal luck to get my eye powder burnt and after that I could not shoot worth a"

"That was too bad, I would like to have seen you come out ahead old boy. There goes that temperance lecturer. Well I suppose teetotalism will do for the weak-minded that cannot stop when they get enough, but as for me I know (hic) when to quit. He is badly fooled if he thinks of getting any of the 'boys' to take up with his foolishness. He ought to be out at work, rather than sponging his living off his betters, turning respectable men against a (hic) harmless toddy, and ruining the government by killing the revenue. Take another snort, pard. This is the genuine truck. Have a jolly good time when you can is my motto. What if a fellow does have a headache or the blues after a while, why just brace up again and be as happy as a gumdrop."

"Hey, so! ole chum; you're a solid old crone. A little stimulus is necessary, especially when one has to work so hard to keep up appearances and make a half decent living, which would be the easiest thing out if a chap could get into some fat office. Were you at the last mass meeting? It was laughable, wasn't it? Now that old Popper has got nominated I expect they will pop him right into the legislature, and he don't know half as much about politics as my wife's poodle. The bigger fool a man is the more likely he is to get shoved right into position, and"

"That is so, by jingo! Jemima! I wish I was as near a blockhead, could drink as much bad liquor, and was as consummate a coward as old Wiggle, I might stand some chance of running for sheriff."

"Yes, indeed, you would get elected, sure. Well, I must be going. I suppose you will be down to the club to-morrow night? We are going to make up a purse for the boss shooter at the next round. The lucky winner will look handsome in a champion gold belt. And if our old War Horse don't run for a third term I will disfranchise myself and not vote for anybody. Well, so long; drop around again."

Solus: "Catch me buying gold belts these dull times. Why, it is all I can do to keep myself in three-cent cigars. As for Grant, I have had enough of him and bad whisky, and if he does run I'll take my party over to the Democratic side. I do hope the old woman has got a steaming, tempting supper ready, for I feel awful gone like. It would be very tough on me now if I had to cook my own supper; it would, that's a fact." Exit.

GIVE THE GIRL A ROOM OF HER OWN.—A mother writes to one of our exchanges as follows: There are many reasons why a young girl should have a room of her own. She will learn to keep it in order, to arrange it tastefully, and take pride in collecting within it her little treasures. Then, too, we are apt to think that no season of life except our own present one contains any real trials; but they are scattered all along. The infant cries for its lost rattle, the child grieves over her broken doll, the school girl has her pet sorrows that everybody laughs at, and farther on come the love troubles which are certainly heart breaking. Through them all it is a comfort to have the privacy of one's own room, where, secure from intrusion, we can fight our mental battles or seek our needed quiet. Mothers, give your daughters a room to keep, to decorate, and to cry in.

A NEW YORK woman says with much truth: "Were it not for the self-sacrificing women of the land who marry and support so many men, the number of tramps would be largely increased."

THE novelty in spring bonnets is of soft chip or Tuscan straw, with a large brim of the same dimensions all around: this brim the milliners indent to suit the face of the wearer.

### Our New Neighbors at Ponkapog.

When I saw the little house building an eighth of a mile beyond my own, on the old Bay road, I wondered who were to be the tenants. The modest structure was set well back from the road, among the trees, as if the inmates were to care nothing whatever for a view of the stylish equipages which swept by during the summer season. For my part I like to see the passing, in town or country; but each has his own taste. The proprietor, who seemed to be also the architect of the new house, superintended the various details of the work with an assiduity that gave me a high opinion of his intelligence and executive ability, and I congratulated myself on the prospect of having some very agreeable neighbors.

It was quite early in the spring, if I remember, when they moved into the cottage—a newly married couple, evidently; the wife very young, pretty, and with the air of a lady; the husband somewhat older, but still in the first flush of manhood. It was understood in the village that they came from Baltimore; but no one knew them personally, and they brought no letters of introduction. (For obvious reasons I refrain from mentioning names.) It was clear that for the present, at least, their own company was entirely sufficient for them. They made no advancements toward the acquaintance of any of the families in the neighborhood, and consequently were left to themselves; that apparently was what they desired, and why they came to Ponkapog. For, after its black bass, wild duck and teal, solitude is the chief staple of Ponkapog. Perhaps its perfect rural loveliness should be included.

Lying high up under the wings of the Blue hills, and in the odorous breath of pine and cedars, it chances to be the most enchanting bit of genuine country, within 50 miles of Boston; which, moreover, can be reached in half an hour's ride by railway. But the railway station (heaven be praised) is two miles distant; and the seclusion is without a flaw. Ponkapog has one mail a day; two mails a day would render the place uninhabitable.

The village—it looks like a compact village at a distance, but unravels and disappears the moment you drive into it—has quite a large floating population. I do not allude to the perch and pickerel. Along the old Bay road, a highway even in colonial days, there are a number of attractive cottages straggling off toward Milton which are occupied for the summer by people from the city. These birds of passage are a distinct class from the permanent inhabitants, and the two seldom closely assimilate unless there has been some previous connection.

It seemed as if our new neighbors were to come under the head of permanent inhabitants; they had built their own house, and had the air of intending to live in it all the year round.

"Are you going to call on them?" I asked my wife one morning.

"When they call on us," she replied lightly. "But it is our place to call first, they being strangers."

This was said as seriously as the circumstances demanded; but my wife turned it off with a laugh, and I said no more, always trusting to her intuitions in these matters.

She was right. She would not have been received, and a cool "not at home" would have been a bitter social pill to us, if we had gone out of our way to be courteous.

I saw a great deal of our neighbors, nevertheless. Their cottage was between us and the postoffice, where he was never to be met with by chance—and I caught frequent glimpses of the two working in the garden. Floriculture did not appear so much an object as exercise. Possibly it was neither; maybe they were engaged in digging for specimens for those arrow-heads and flint hatchets which are continually coming to the surface hereabouts. There is scarcely an acre in which the plowshare has not turned up some primitive stone weapon or domestic utensil, disdainfully left to us by the red men who once held this domain—an ancient tribe called the Punkypoags, a forlorn descendant of which, one Polly Crowl, figures in the annual blue book, down to the close of the Southern war, as a State pensioner. I quote from the local historiographer.

Whether they were developing a kitchen garden, or emulating Prof. Schliemann at Mycenae, the new-comers were evidently persons of refined musical taste; the lady had a voice of remarkable sweetness, although of no great compass, and I used often to linger of a morning by the high gate and listen to her executing an operatic air, conjecturally at some window up stairs, for the house was not visible from the public road. The husband, somewhere about the grounds, would occasionally respond with two or three bars. It was all quite an ideal, Arcadian business. They seemed very happy together, these two persons who asked no odds whatever of the community in which they had settled themselves.

There was a queerness, a sort of mystery, about this couple, which I admit piqued my curiosity, though, as a rule, I have no morbid interest in the affairs of my neighbors. They behaved like a pair of lovers who had run off and got married elastically. I willingly acquitted them, the one and the other of having no legal right to do so; for, to change a word in two lines of the poet,

"It is joy to think the best  
Way of human kind."

Admitting the hypothesis of elopement, there

was no mystery in there neither sending nor receiving letters? But where did they get their groceries? I do not mean the money to pay for them—that is an enigma apart—but the groceries themselves. No express wagon, no butcher's cart, no vehicle of any description was ever observed to stop at their domicile. Yet they did not order family stores at the sole establishment in the village—an inexhaustible little shop which (I advertise gratis) can turn out anything in the way of groceries, from a handsaw to a pocket-handkerchief. I confess that I allowed this unimportant detail of their house-keeping to occupy more of my speculation than was creditable to me.

In several respects our neighbors reminded me of those inexplicable persons we sometimes come across in great cities, though seldom or never in suburban places, where the field may be supposed too restricted for their operations—persons who have no perceptible means of subsistence, and manage to live royally on nothing a year. They hold no government bonds, they possess no real estate (our neighbors did own their house), they toil not, neither do they spin; yet they reap all the numerous soft advantages that usually result from honest toil and skillful spinning. How do they do it? But this is a digression, and I am quite of the opinion of the old lady in "David Copperfield" who says "Let us have no incanderings!"

Though my wife had declined to risk a ceremonious call on our neighbors as a family, I saw no reason why I should not speak to the husband as an individual, when I happened to encounter him by the wayside. I made several approaches to do so, when it occurred to my penetration that my neighbor had the air of trying to avoid me. I resolved to put the suspicion to the test, and one forenoon, when he was sauntering along on the opposite side of the road, in the vicinity of Fisher's saw-mill, I deliberately crossed over to address him. The brusque manner in which he hurried away was not to be misunderstood. Of course I was not going to force myself upon him.

It was at this time that I began to form uncharitable suppositions touching our neighbors, and would have been as well pleased if some of my choicest fruit trees had not overhung their wall. I determined to keep my eyes open later in the season, when the fruit should be ripe to pluck. In some folks, a sense of the delicate shades of difference between *meum et tuum* does not seem to be very strongly developed in the moon of cherries, to use the old Indian phrase.

I was sufficiently magnanimous not to impart any of these sinister impressions to the families with whom we were on visiting terms; for I despise a gossip. I would say nothing against the persons up the road until I had something definite to say. My interest in them was—well, not exactly extinguished, but burning low. I met the gentleman at intervals, and passed him without recognition; at rarer intervals I saw the lady.

After a while I not only missed my occasional glimpse of her pretty, slim figure, always draped in some soft black stuff, with a bit of scarlet at the throat, but I inferred that she did not go about the house singing in her light-hearted manner, as formerly. What had happened? Had the honeymoon suffered eclipse already? Was she ill? I fancied she was ill, and that I detected a certain anxiety in her husband, who spent the mornings digging solitarily in the garden, and seemed to have relinquished those long jaunts to the brow of the Blue hill, where there is a superb view combined with several venerable rattlesnakes with 12 rattles.

As the days went by it became certain the lady was confined to the house, seriously ill, possibly a confirmed invalid. Whether she was attended by a physician from Canton or Milton, I am unable to say; but neither the gig with the large white allopathic horse, nor the gig with the homœopathic sorrel mare, was ever seen hitched at the gate during the day. If a physician had charge of the case, he visited his patient only at night. All this moved my sympathy, and I reproached myself with having hard thoughts of my neighbors. Trouble had come to them early. I would have liked to offer them such small, friendly services as lay in my power; but the memory of the repulse I had sustained rankled in me. So I hesitated.

One morning my two boys burst into the library with their eyes sparkling.

"You know the old elm down the road?" cried one.

"Yes."

"The elm with the hang-bird's nest?" shrieked the other.

"Well, we both just climbed up, and there's three young ones in it."

Then I smiled to think that our new neighbors had got such a promising little family.—T. B. Aldrich, in *Atlantic*.

PROPOSED NATIONAL EDUCATION FOR FEMALES.—A Washington report says that the Senate of the United States has adopted the following resolutions: *Resolved*, That the Committee on Education and Labor is instructed to inquire whether it is practicable and beneficial to aid in the establishment and endowment of schools of science and techniques in the several States and Territories, and in the District of Columbia, for the education of females in appropriate branches of science, and the useful arts, upon a plan similar in its principles to that upon which the agricultural and mechanical colleges have been aided by the United States, and that said committee have leave to report by bill or otherwise.



## A Mother's Lesson for Girls.

One who signs herself "A Mother," and whose writings are full of maternal wisdom and solicitude, writes to the New York *Tribune* as follows:

Looking with a mother's interest upon the habits of young people, and their relations together, in this day; and looking also upon the personal experience of more than 50 years, I am profoundly convinced that idleness in women has as much (if not more) to do with the deep-rooted evil that is undermining our social and national virtue so rapidly and terribly as any other influence. The girls of this generation are idle, even where families are in but moderate circumstances, and suffering must come in somewhere from expenses entailed by necessary work that is not done by the daughters. Household work is considered degrading—even the light offices for her own room, which every true woman ought to feel unwilling should be done by any hands but her own, and by which every young girl should make that place a sanctuary, where her dignity and purity are to be recognized and guarded by each appointment and arrangement within it; and sewing is handed over to the machine-workers as something quite out of the question to be done.

If no more should be said respecting these points, it is pitiful to consider how they are missing their own happiness in this state of things. No girl is fitted for her future duties and responsibilities as wife and mother who cannot do these things, and do them thoroughly well; and her future is not provided for unless her present is a steady and organized foundation for it, and that cannot be unless the mothers train the daughters from babyhood for the work that is sure to come to their womanhood. When this is done the happiness comes in. Mothers and daughters have a life together; a bond of employment and interest that is in constant operation. Over their household matters, and especially over the work of their needles, they have a companionship that grows with their lives and brings them into a close intimacy, of which, alas, the mothers and daughters of this day know very little. They are really strangers to each other. The steady training which the character of the mother ought to be to the daughter is not known, because they have no work together. The needle is a part of woman's dower. I will not dwell upon "the benefits of the sewing machine." God means that women should use their needles, and there is not the slightest need of injury from its use, excepting in cases which correspond with any other necessity for overwork. It is a great subject, and not easily opened up in as brief space as is allowable here; but I believe—as I believe in God and his appointments for us—that if the girls of this generation would take up a daily duty of work, no matter what their position or their means, the world would be happier for it. Mothers would have their society and their affection, as they sorely miss it now; fathers would have many a dark hour of discouragement over heavy bills lightened; brothers would have a companionship of whose charm, as well as benefit, very few have knowledge now; and young men in other relations would have a view of womanhood that is almost entirely lost in the present day. Women are never more brilliant or fascinating (and they have a God-given right to be brilliant and fascinating) than when their hands are occupied. Awkwardness and embarrassment disappear; and—perfectly at her ease—a charming woman becomes mistress of the position, and, happy herself, makes all around her happy.

## Chaff.

If a man have a great many debts, are they very much to his credit?

A BOY of 12, dining at his uncle's, made such a good dinner that his auntie observed, "Johnny, you appear to eat well." "Yes," replied the urchin, "I've been practicing eating all my life."

A NOTICE in a Western newspaper ends as follows: "The captain swam ashore. So did the chambermaid; she was insured for \$15,000, and loaded with iron."

PHOTOGRAPHER—"You look sober; smile a little." He smiles, and the photographer says, "Not so much, sir; my instrument is too small to encompass the opening."

IN Stanstead, Canada, a man sold 10-cent packages "warranted sure death to potato bugs; no risk of poisoning animals as with Paris green." The packages were not to be opened until time to use them. One victim having three, opened one and found two square blocks of wood, on one of which was written: "Place the bug on this block and press firmly with the other."

PLEASANT ALTERNATIVE.—Stranger: "Here! You! We can't pass your ox!" Rustic: "Can't ye? Let 'un pass yew, then." Stranger: "No impudence, sir. The pass isn't wide enough for both." Rustic: "Bain't it? Well, I leaves it to he. Mebbe he'll toss ye for it!"—*Funny Folks.*

TENNYSON's early poem, "The Lover's Tale," just published, contains about 1,100 lines. A pretty long tale to pour into her ear, and he must have gone to see her at least three nights a week for a year. When he left, at 2 A. M. Monday, he would tie a string around her finger so she would remember where he left off, and whisper in her ear, as he kissed her good-night, "To be continued on Tuesday evening."

## Young Folks' Column.

## Our Puzzle Box.

To give our young friends a chance to sharpen their wits and exercise their ingenuity in discovering hidden meanings and in solving knotty problems, we have opened a "puzzle box" in this issue. It is expected that young readers who have taste for studies which will at the same time amuse and instruct will carefully work out the themes proffered, and write down their answers and keep them. We expect in two weeks to give the answers to the "puzzles" in this issue, and then each one can see whether his or her answers are the correct ones:

## Numerical Enigma.

I am composed of twelve letters.  
My 6, 2, 3, 1, is a net.  
My 4, 8, 7, 12, is a steep rock.  
My 11, 10, 9, 5, is an African river.  
My whole was an English heroine.

H. J. L.

## Problem.

A gentleman owns a rectangular field, of which last season he sowed one-fourth to wheat and planted one-eleventh to corn. The remainder of the field, 310 rods in area remained in grass. What are the dimensions of the field, the proportion of the length to the breadth being as 11 to 10?

UNCLE CLAUDE.

## Charade.

In morning bright,  
At dawn of light,  
My first the lark is doing;  
And gentle dove,  
On wings of love,  
When to his mate he's cooling.

My second grim—  
We welcome him—  
From "fader-land" he's coming;  
With "sauer-kraut,"  
And "ginger stout,"  
As "On the Rhine" he's humming.

My whole's a sprite—  
In stormy night  
The seaman's dread and fear—  
A shadowy form,  
Midst wind and storm,  
Foretelling shipwrecks drear.

C—.

## Transpositions.

1. Transpose a political division of territory into accustomed.
2. Transpose an expression of countenance into measures of distance.
3. Transpose companions into a great motive force.
4. Transpose a companion into doleful; again, and form food.
5. Transpose constructed into a lady.
6. Transpose an adhesive substance into narrow ribbons.

UNCLE CLAUDE.

## Word Square.

1. A place where goods are bought and sold.
2. In this policeman oft wax bold.
3. A term oft used on battle plain.
4. To eat my fourth a boy is slain.

JUNIOR.

HOW A LITTLE GIRL SAVED HER BROTHER.—A paper from way down in Georgia says that Mr. H. F. Gaulding has a little daughter 11 years old to whose nerve and courage he is indebted for the life of his three-year-old boy. The circumstances were briefly these: The boy was playing by the cistern in Mr. Gaulding's yard. There was a plank off, and through this aperture the little fellow fell. He caught a plank, however, in falling, and held for some time before he was discovered. But his hold weakened, and with a splash he fell into the cistern. His sister saw and appreciated the situation. Most girls would have screamed and run off in quest of help. Not so with this little girl. The screams and struggles for life of her baby brother, gave her the strength and courage of a man. She saw a ladder, and with all her might, she dragged it to and placed it into the cistern, and then went down into the water, reached out, and caught her brother just in time to save him from a watery grave. By this time help arrived, and both were landed safely from their perilous position. All honor to this little heroine!

AN AFFECTIONATE GOOSE.—The visitor to the Halifax Public Gardens during the summer must have noticed the eccentric conduct of one of the wild geese which frequent the pond in the northern gardens. Whenever a certain old gentleman, whose name we do not know, approaches the pond and calls "Bobby," the goose will leave the pond and sit beside him, and when he leaves to go home, will follow close at his feet like a dog to the gate, and sometimes into the street, when it has to be forcibly put back, to its manifest disgust, for it goes off to its native element twisting its tail with indignation, and giving vent to sundry discordant squeaks. The old gentleman says he has never fed it, or petted it in any way, which makes it more remarkable; but we were told that about two or three years ago a man used to come there and feed this goose regularly, so we are inclined to think that the goose takes the man for his old friend who used to bring him nice things. Anyway it is an interesting question.

BRIGHT little girl: "The robbers can't steal my mamma's diamond earrings, 'cause papa's hid them." Visitor: "Where has he hid them?" Little girl: "Why, I heard him tell mamma he had put them up the spout, and he guessed they would stay there."

"JOHNNIE, what is a noun?" "Name of a person, place or thing." "Very good, Johnnie, give an example." "Hand-organ grinder." "And why is 'hand-organ grinder' a noun?" "Because he's a person plays a thing."

## GOOD HEALTH.

## On Diphtheria.

Dr. E. M. Snow says, in his last report as Register of the city of Providence:

In connection with this subject I think it my duty to ask the attention of the people of Providence, and especially of parents, to the following statements:

1. No case of diphtheria occurs without an adequate cause. This is self-evident.
2. The cause of nearly all cases of the disease exists in the houses or premises, or within a few feet of the houses where the cases occur.
3. The cause of nearly all cases that occur in the city is breathing impure air from privy vaults or sink drains, or cesspools; or drinking impure water.

## Origin of Diphtheria.

Diphtheria is believed to have originated in Egypt more than 2,000 years ago. It prevailed in Egypt and Asia Minor, to which it extended, during the first 500 years, and hence was early called an Egyptian or Syriac disease. Having invaded Europe, the disease appeared in Rome, A. D. 330, and being highly contagious, in its 1,500 years transit on the continent of Europe, it affected mainly rural districts and garrisoned towns. It extended to Holland, in which it was epidemic in 1337; to Paris in 1576, and again appeared there in 1771. It prevailed more extensively in France in 1818 and 1835, and in England, the United States and Canada from 1856 to 1860, and more or less since.—*Hospital Gazette.*

## Drug Taking Mania.

Women are rather more given to drug taking than men, though both are bad enough in this respect. Here is what one of our most eminent physicians has to say on this subject:

"Dr. Holmes has said that it would be well for the world if most medicines were thrown into the sea; that it might be bad for the fishes, but it would be better for mankind. For this unasked and impertinent suggestion he has received a good deal of orthodox censure, which I am here now to share with him, for I am of the same opinion as Dr. Holmes, and this opinion has long been a part of my Christian faith. That the major part of the world does not agree with us is plain. Indeed most people seem to think that the chief end of man is to take medicine. Babies take it in their mother's milk; children cry for it; men and women unceasingly ask for it. Shrewd men have taken advantage of this instinct, and in most civilized nations it is to-day one of the chief articles of manufacture and commerce. It is one of those things which is never permitted to be out of sight; but is thrust upon you in the nursery, in the streets, upon the lamp posts and upon the curbstones, along the highways, from the rocks which border the rivers; the medicine chest follows you at sea, as if the sea itself, a vast gallipot of nauseants, were not enough. One might naturally suppose that the supply would at length exceed the demand! but it does not. Everywhere the people are stretching out their arms and begging for medicine, blessing him who gives and cursing him who withholds. They believe, in their simplicity, that if medicines do no good, they can at least do no harm. They imagine, also, that there is a medicine which may be regarded as a specific for every human malady, and that these are known to science, and that therefore we have the means of curing all diseases; but the people imagine a vain thing. Whatever medicine is capable when properly administered, of doing good, the same medicine is equally capable, when improperly administered, of doing harm; and drugs often substitute a malady more serious than that which they were intended to cure. The Irishman said his physician stuffed him so with medicine that he was sick a long time after he got well.—*Dr. Frank Hamilton.*

BRAIN WORK AND SKULL GROWTH.—The London *Medical Record* sums up as follows the results of some very interesting measurements of heads by two French physicians, Messrs. Lacassagne and Cliquet: Having the patients, doctors, attendants, and officers of the Val de Grace at their disposal, they measured the heads of 190 doctors of medicine, 133 soldiers who had received an elementary instruction, 90 soldiers who could neither read nor write, and 91 soldiers who were prisoners. The instrument used was the same which hatters employ in measuring the heads of their customers; it is called the conforator, and gives a very correct idea of the proportions and dimensions of the heads in question. The results were in favor of the doctors; the frontal diameter was also much more considerable than that of the soldiers, etc. Nor are both halves of the head symmetrically developed; in students, the left frontal region is more developed than the right; in illiterate individuals, the right occipital region is larger than the left. The authors have derived the following conclusions from their experiments: 1. The heads of students who have worked much with their brains are much more developed than those of illiterate individuals, or such as have allowed their brains to remain inactive. 2. In students the frontal region is more developed than the occipital region, or, if there should be any difference in favor of the latter, it is very small; while in illiterate people the latter region is the largest.

## DOMESTIC ECONOMY.

## Miss Dodd's Recipes.

The following are recipes given by Miss Dodd in her Philadelphia lecture, to which allusion was made last week:

Fish Cakes.—The recipe given for fish cakes included one pound of potatoes, one pound of codfish—boiled, pepper and salt, two eggs, one teaspoonful of cream, one-half ounce of butter, and a few tablespoonfuls of bread crumbs. After breaking the boiled fish into small pieces, grate the potatoes while hot upon it through a sieve; add one-half ounce of butter, the yolk of the eggs, the cream, and mix all well together; when seasoned with pepper and salt, divide the mass into small flat cakes on a well-floured board; beat the whites of the eggs, and, having coated each of the cakes with it, roll them into the bread crumbs; fry in hot fat or lard for two minutes. As soon as the cakes are done place them on a piece of paper that the superfluous grease may be absorbed from them.

Dressed Boiled Fish.—Her mode of dressing any boiled fish was demonstrated with halibut. To one pound of fish she used two ounces of butter, two ounces of flour, one ounce of grated cheese, one-half pint of milk and one gill of cream. The butter and flour are placed over the fire and mixed while the butter melts. Milk is then mixed and stirred until it boils. At the boiling point add the cream, pepper and salt and cook two minutes. The bones and skin having been removed from the fish, it is cut into small pieces and then mixed into the sauce, which should remain only long enough over the fire to heat the fish. Place the whole on a flat dish, sprinkle over grated cheese or bread crumbs, add pepper and brown quickly in the oven. To boil halibut properly, she said it should be placed in boiling water, to which a tablespoonful of vinegar has been added. It should cook only twenty minutes, unless the fish is of unusual size.

Fillet of Beef and Dutch Sauce.—The beef should be cut in slices about an inch in thickness. It is then placed in the broiler, which should be lightly greased, and then subjected to the action of the fire for seven minutes, turning it but once in that time. The Dutch sauce was prepared with half a tablespoonful of cream, half a tablespoonful of water, the yolks of two eggs, a little pepper and salt, one ounce of butter, and the juice of half a lemon. The water and egg yolks are beaten well together, and the lemon juice, cream and butter, with salt and pepper, are then introduced, and the whole is whisked over a slow fire until it thickens. This, however, must not be allowed to come to a boil. When finished, pour hot over the fillets of beef and serve.

CLEANING CARPETS.—A housewife writes to the *Inter-Ocean* as follows: By far the hardest work in housekeeping consists in taking up, cleaning, and putting down Brussels carpets. I think that by following my method of sweeping a carpet the evil day may be postponed three years, if not longer. About once a month I take a pail two-thirds full of warmish water, put in it a tablespoon of ammonia, take a large cotton rag, and without wringing it quite dry, go over the carpets thoroughly, not rubbing them, but taking up every particle of dust. The advantages of this method are:

1. No dust is raised.
2. The furniture need not be moved.
3. It kills moths.
4. You can get spots off your base-boards at the same time.
5. If one room is taken per day, it really is easier than sweeping.
6. It keeps the carpets bright and fresh. In the center of the room I occasionally use a carpet sweeper.

RASPBERRY VINEGAR.—The following recipe for making this delicious syrup for summer-drinking is the best I have ever tasted, says a writer in the *Germantown Telegraph*: Put a pound of very fine ripe raspberries in a bowl, bruise them well, and pour upon them a quart of the best white wine vinegar; next day strain the liquor on a pound of fresh ripe raspberries, bruise them also, and the following day do the same, but do not squeeze the fruit or it will make it ferment, only drain the liquor as dry as you can from it. The last time pass it through a canvas bag previously wet with the vinegar to prevent waste. Put the juice into a stone jar, with a pound of sugar to every pint of juice; stir it and when melted put the pan into a jar of water; let it simmer and then skim it; when cold bottle it. It will be fine and thick when cold, and the most excellent syrup for making a wholesome drink.

BLACKING STOVES.—If those who black their own stoves will grease them before blacking, they will find it prevents them from rusting. Add a pinch of brown sugar to the blacking just before applying. This causes it to stick and it polishes much easier and with half the rubbing.

ASPARAGUS OMELETTE.—Boil with a little salt, and until about half cooked, eight or ten stalks of asparagus, and cut to eatable part in small pieces; beat the eggs and mix the asparagus with them; add a little milk while beating the eggs.





DEWEY &amp; CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 202 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES: 1 week. 1 month. 3 mos. 12 mos.  
Per line..... .25 .30 \$2.00 \$5.00  
Half inch (1 square). \$1.00 \$3.00 7.50 24.00  
One inch..... .2.00 5.00 14.00 40.00

The Scientific Press Patent Agency.

DEWEY &amp; CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG.

SAN FRANCISCO:

Saturday, July 12, 1879.

## TABLE OF CONTENTS.

**EDITORIALS.**—The Influence of Early Rains; In the University Test Grounds; Japan Persimmon in California; The Revolving Grain Car; A Village Residence; Shipping Melons by the Car-load, 17. Notices of Recent Patents, 21. The Week; The Wisdom of Letting Go; Darien Canal; The State Fair; The Round of Work, 24. The Bennett Polar Expedition, 25.

**ILLUSTRATIONS.**—Design for a Village Residence with French Roof, 17. Capt. Howgate's Map of the Arctic Regions, 25.

**QUERIES AND REPLIES.**—Picking, Drying and Gathering Almonds; Adobe and Stones in Wheat; Pajaro Valley Strawberries; Seedling Apricots; Gooseberries Free from Mildew; Figs Drooping Off, 24-25.

**ENTOMOLOGICAL.**—Dose for Diabrotica; The Red Scale on Orange Trees; Parasite on Orange Scale Insect, 25.

**CORRESPONDENCE.**—The Beet-Sugar Industry; Measuring Grain from the Thresher, 18.

**POULTRY YARD.**—Poultry Diseases and Their Treatment, 18.

**ARBORICULTURE.**—The California Black Walnut; The Seedling or Bud Question in Florida, 18.

**HORTICULTURE.**—The Use of the Feet in Sowing and Planting; Improved Seedling Lemons; Experiments with Orange Wine, 19.

**SHEEP AND WOOL.**—The Wool Trade of the Half Year, 19.

**PATRONS OF HUSBANDRY.**—The Patron's Pledge; What is Being Done; The Martinez Grange Warehouse; Visiting the Warehouses of the Western Sacramento Valley, 20.

**AGRICULTURAL NOTES** from the various counties of California, 20-21.

**HOME CIRCLE.**—One by One (poetry); What Some Men Say When They Talk; Give the Girl a Room of her Own; Our New Neighbors at Ponkapog; Proposed National Education for Females, 22. A Mother's Lesson for Girls; Chaff, 23.

**YOUNG FOLKS' COLUMN.**—Our Puzzle Box; How a Little Girl Saved Her Brother; An Affectionate Goose, 23.

**GOOD HEALTH.**—On Diphtheria; Drug-Taking Mania; Brain Work and Skull Growth, 23.

**DOMESTIC ECONOMY.**—Miss Dodd's Recipes; Cleaning Carpets; Raspberry Vinegar; Blacking Stoves; Asparagus Omelette, 23.

**MISCELLANEOUS.**—Wheat Prices in the San Francisco Market for Fifteen Years, 20. State Fair Premiums for Machinery and Manufactures, 26.

**NEWS IN BRIEF** on page 21 and other pages.

## Business Announcements.

Buhach Insect Exterminator, G. N. Miley, Stockton, Cal.  
Wilson Adjustable Chair Manufacturing Co., Boston.  
Golden Gate Academy, Oakland, Cal.  
Semi-Annual Statement of Grangers' Bank of California.

## The Week.

An improvement in wheat prices in this market comes just in time to cheer the harvesters; to gild the outlook for those who are gathering splendid crops, and to comfort those who find their weights cut short by drouth and winds, with the prospect that less weight will still yield a living measure of money. The advance, if it be as we hope and believe, an improvement which will endure, is peculiarly fortunate now, because growers will realize its benefits. As we maintained last week there are good reasons to expect a fairly profitable rate for this year's wheat, because of a continuance of the European demand for foreign wheat with less stocks to supply it. The telegraph still reports the gravest apprehensions of injury to the English crop, and France is under the same untoward skies. The London Times says the anticipations of large need for grain from America is already affecting the gold market in France, or, in other words, the firmness of French exchange is due to the prospect of a demand for gold to send to the United States for grain. This early sensitiveness of the European money market shows how grave is the situation and how clearly a deficiency in home crops is foreseen. The fact that gold must be gathered up to buy food from the United States, also shows the progress which our country is making in supplying itself with articles which heretofore we have largely imported from Europe, and this means development in various arts of production and manufacture. This progress is highly satisfactory. Good prices this year for California wheat will prove a balm to soothe the many distractions which we are undergoing; and that a year so densely packed with politics as this one has been and will be till its close, shall also be a year of prosperity to our leading industry, will be a most happy concurrence of events for all our citizens.

## The Wisdom of Letting Go.

We have been studying the face of mother earth at close range of late, counting such intimate acquaintance with the soil as one gets in weeding a lawn, peeping through the grass-blades to discover the main stems of the creeping plants which interfere with the dense velvet-like growth of grass which we desire. Employing leisure hours in such work we have learned many lessons from the weeds, and one is the wisdom of letting go. For weeds there are which yield to the pull and others which seem strong as wire in the hand. And we have noted that those which let go were really the ones which held fast, and those which held fast were really the ones which let go. Herein is apparently a paradox, yet not in fact; for those weeds which seemed to let go, parted at the surface of the ground, and in thus really yielding, they at the same time held their root-hold and would soon sprout anew and luxuriantly; while those which held like wire were pulled out root and rootlet, and the grass-blades are never again parted by them.

From these phases of weed life we deduce the lesson, of wide application, that sometimes it is a mark of the truest perseverance to cut loose from a work in which one is engaged; that sometimes the one who seems to yield to the inevitable is the conqueror rather than he who fights it; that sometimes the one who accepts the demonstration of failure in a certain work and, while letting go the unripe fruit of a hope less enterprise, still retains a root-hold of determination and hope, will be wiser than he who holds fast in the face of adversity until he is plucked up by the roots and cast out to perish in the dry wind of disheartenment and despair.

We have received letters from readers which indicate that some people there are who may profit by the lesson of the weeds. They are disappointed in the results which they secure from their investments and enterprises. They located their homes in places which have been gilded by the imagination of the descriptive writer or the smooth-tongued agent. They have partly paid for their small places with an amount of money which should have fully paid for twice the area. They have borrowed money, at a rate of interest which doubles the principal in three or four years. They have grown crops for which there is no sale, owing to distance from exporting points and a lack of local demand. In fact, they see nothing before them but a waste of time until they are ejected by the force of the obligations which they have assumed. And in addition to a waste of time we foresee a waste of spirit, a gradual death of ambition, a blunting of energy, a blighting of industry; in short a wreck of hope, a triumph of despair. When these hopeless ones ask our advice we can but urge them to be up and doing, and count present sacrifice but a price which must be paid for past mistakes. If the illusion which designing men created in the mind has passed away, do not linger in contemplation of it. Although we most earnestly deplore the spirit of unrest which causes many to continually seek new homes and fields for labor, there are occasionally cases in which it is eminently wise to take a fresh start, and when this is indisputably determined, the sooner the fresh start is taken the better.

But though this is true we should all guard most carefully against blaming conditions and surroundings for results which may rise from our own faulty methods or lack of energy or enterprise. Before we conclude that our condition and location are incompatible with success, let us inquire whether anyone in the neighborhood has succeeded. If there should be amid the gloom of failures a single ray of success, labor diligently to ascertain upon what plan and by what means success was attained. Sometimes such an inquiring will show a plain path by which we may encompass evils rather than fly from them. It will sometimes appear that we are too heavily burdened to attempt work which they with free hands can easily discharge; that they with no interest to pay can make a comfortable livelihood, while we are continually going backward. There are cases in which past errors can be retrieved by unceasing effort, cases where it is best to search for money where it was lost, but on the other hand there are sometimes inconquerable difficulties which it is folly to fight, and enterprises in which it is wise to let go before spirit is lost and strength dissipated in vain endeavor.

This much is easily said, and its significance is to warn all who may be falling into morbid indolence because they consider their conditions hopeless. This state of mind is the most dangerous result of disappointment. If a man holds fast to his ambition and his industry the world may be said to surely hold some measure of success for him. How shall he discover the opportunity to secure it? This is the harder question because it can only be answered after a thorough understanding of individual traits and abilities, and even then the question is a hard one. To those who have wrecked their fortunes in vain endeavors, there still remains the vast public domain where new homes may still be carved out amid conditions which call for strong hands and stout hearts. There are also now and then chances outlaid where men can gain the chance to earn a home with those who hold out land, teams and seed to those who desire to labor and divide results. Some of these offers are doubtless made with honest intent and may help the man with broken fortunes. But we cannot attempt to prescribe a

general course to fit individual needs. The lesson is to hold fast to industry, to frugality, to ambition and hope, and then employ every means to discover in what way these agents may be employed to reap desirable results. Never sit down in despair, no matter how great delusions and errors have vexed the soul. Be up and doing. Cast aside burdens which depress and enervate, and while these be let go, seize hold upon something, upon anything, which promises a reward for effort.

## Darien Canal.

We shall have occasion to present to our readers in a short time a complete exposition of the proposed canal. In the meantime the resolution offered in the last Congress by Senator Burnside with reference to the foreign ownership of the Darien canal interfering with the Monroe doctrine, has been criticised by the press of France in such a manner as can leave no doubt that Senator Burnside's ideas were correct. It appears from *La Republique Francaise* that the canal will be absolutely neutral territory, and that in consequence America need not fear entrusting the management thereof to foreign hands. This absolutism is just what America has always and will always contend against. Its destruction was the reason of the Monroe doctrine, and the true doctrine of national free will finds an ardent exponent in the American nation. Hampered on every side by the restrictive ties and contracts with nations foreign to this continent, how can this country hope to maintain its prestige? This Darien canal question comes home to our interests, if not more, as much, at least, as our war with England. What the nations cannot accomplish by brute force, they are now attempting to accomplish by diplomatic skill and finesse. "The United States must be checked." It has penetrated to every quarter of the globe with its mechanical and industrial products, and is fast crowding out of the markets of the world the products that heretofore have given European nations their greatness. We cannot afford to permit this thing, and on our own coast the matter is of great importance. The Orient is open to us, and we are gradually commanding its trade. Europe cut off by the natural obstruction of the Western continent, seeks by every effort to cut us off. National ambition to grasp the commerce of the East is the mainspring that moves northwest passage expeditions, and years ago the Darien canal was broached but suspended because it was thought a passage through the Polar sea would be discovered and made available. But now there is no hope of a highway in that direction, so the Darien canal has assumed its complete features. Upon the assumption that the United States can control eventually the commerce of the world, the foreign element on this hemisphere must be kept at a distance, and to Americans belong the right of controlling a highway theirs naturally. The same policy that European nations adopt to protect their commerce, must be adopted and enforced by us; and there is not a nation on the earth that would oppose us in our demands, or that would resist our enforcement of the Monroe doctrine. The star of Europe is setting, while our star of empire is ascending, hence the struggle of Europe to renew its luster at the expense of ours.

**THE STATE FAIR.**—Producers of all kinds of commodities can learn the inducements offered them to show their best works at the State fair this year from the list of premiums which we are now publishing from week to week. The prizes offered are large enough to constitute them rewards for excellence, but they have other and deeper value, because they draw together material from all sources which enable both exhibitors and visitors to enjoy the advantages of close comparison between different products and manufactures. Thus a fair well furnished with exhibits becomes a great "object lesson" from which one can learn facts of value which otherwise could only be obtained at great cost of time and money, if at all. We trust all our readers will examine the lists we print to ascertain the recognition given by the State Society to the specialties in which they are specially interested and then prepare to contribute to the success of the fair by preparing to send forward the objects they deem most worthy. All those who possess merit may thus receive wide recognition and at the same time do the public a service by furnishing advanced standards of excellence which will be accepted eagerly by a progressive people.

**THE ROUND OF WORK.**—Indications are each year accumulating of the wisdom of a much longer working season in grain growing in the San Joaquin valley and in many other parts of the State. Indeed, the system of agriculture which pays best there is one which keeps the farmer and his teams busy nearly the whole year. Mr. Cressey's operations in Merced county illustrate the truth of this statement. His fine crop this year is due to the vigor with which he pushed summer-fallowing last season. This year, as soon as the crop is gathered, he will go to work plowing with 50-mule power, until he plows 5,000 acres, and 3,000 acres will then be plowed twice. Then he will put on the seed sowers and sow at the rate of a quarter section a day. Then his trap will be set for the rains, and he will get and hold the full advantage of them in his well cultivated soil, while others will lose half they get by evaporation.

## QUERIES AND REPLIES.

## Picking, Drying and Gathering Almonds.

**EDITORS PRESS:**—Could you induce some of your many intelligent contributors to give some information relative to the proper time for gathering and the best mode of drying almonds. Should the fruit be gathered before the husk parts? If gathered too early will not the kernel shrink? On the contrary, if the nut is exposed on the tree will it not become discolored and thereby injure the sale or compel the use of brimstone to bleach it, and run the risk of injuring the kernel by its becoming sour? What is the best mode of drying, in the sun or shade? The almond crop is becoming of considerable importance and will be much increased if growers learn to handle it intelligently, and any information relative to the production or care of the almonds will be interesting to many besides.—*INQUIRER, San Francisco.*

**EDITORS PRESS:**—According to your request I will give some facts relating to the subjects proposed by "Inquirer." Almonds should not be picked until the husk bursts open. If the producer will cause the tree to be gone over several times and those almonds picked which have burst open, he will secure bright colored almonds which will need no bleaching and more pounds to the tree. This will not be done by most persons.

The next best way is to wait until nearly all the almonds have burst, then spread a canvas under the tree, get into the tree and shake each limb and complete the work by striking the scattering almonds with a small stick.

The almonds are afterwards run through a machine for hulling, which is a cylinder of wood fluted like a washboard, which revolves against slats set in a concave position on spiral springs. The cylinder is solid, but the slats give and thus permit all the almonds to pass, the hulls fall through the slats and are separated. After passing them through this machine they are sorted as to size and color.

The best arrangement for drying almonds is this: Take 2x3 scantling 12 feet long. Nail two of them together by a board 3 inches wide and 4 feet long at the ends. Then nail heavy laths across from one to the other, so that an almond cannot drop through the cracks—very much the same as for plastering. These racks will receive the almonds and may readily be placed one upon the other and covered at night, and in the morning be separated so that the sun and wind will dry them. When well dried these same racks may be also used for bleaching the almonds.

If the almond is thoroughly dried, kernel as well as shell, there will be very little bad effect resulting from the fumes of brimstone. To bleach, make a box which will hold all your racks, leaving a space next the ground one foot deep. Dig a trench one foot deep and a foot wide along the center. This box may be made of boards set on edge, the cracks covered with paper. At each end of the box should be a movable board so as to feed the fire. A small fire of charcoal, covered by a piece of sheet iron or old tin, must be kept burning in each end of the trench; the heat must not be great. Having placed a rack of fruit from the ground, fill it with almonds, then place a piece of inch board across each end and another rack on top, which is to be filled with almonds, until all are filled. Cover the whole with cloth or boards, and you are ready to fire up. This is done by feeding the fire occasionally with pieces of roll brimstone, which is cheapest and best. Be careful not to smother the fire.

Almonds should be prepared for bleaching by pouring them into a basket and sinking the basket into a tub of hot water for a moment, when it is emptied into the rack. When the almonds become white or light colored, the racks are lifted out and the almonds dried as soon as possible. They must not be exposed to dew.—*W. W. BRIER, Centerville, Alameda Co.*

## Adobe and Stones in Wheat.

**EDITORS PRESS:**—I read an item in your issue of June 14th, taken from the *Record-Union* of June 6th, in relation to finding crumbs of adobe soil and broken stones in shipments of wheat. As the leading journals of the State pronounce this an evil to be abated, it would be as well to examine the matter a little further, so that by getting at the whole truth of the business a remedy can be sooner applied. The evil did not spring into existence with the introduction of the derrick fork. It was brought to my notice, long before derrick forks were thought of, by various county millers, particularly those of Napa City, asking me how they came into the sacks, said parties knowing I was in the threshing business. The evil is not attributable to the derrick fork but to the shovel, hoe and rake of the economical farmer, who insists that every possible handful of grain shattered out about the separator and stack bottoms shall be run through, saying it counts in weight all the same. Occasionally a farmer tells us not to clean up too close, as he don't want dirt in his wheat; but nine out of ten insist upon a thorough clean up, often to our terror and disgust as we listen to the click of the stones among the cylinder teeth, bending one here and breaking out another there.

Every thrasher for his own safety runs his forks so as not to take stones and dirt into his machine, and they can be and are so run. On a variety of soils it makes no difference, as the machine will crush to dust and blow out every particle; but when we arrive at a stack located on gravel or adobe, caution is used, and the machine has no trouble till the forks are laid aside and the cleaning up comes. I threshed a week last year where the Orestimba overflows its banks near the foothills, making a perfect gravel bed of the whole place from the size of a



bean to a walnut. I objected to threshing there unless the cleaning up was omitted. I used caution for my own safety and not a stone did my forks take up, nor had one of the 5,000 bags there a particle of stoue dust in them.

It is of little use for threshers to object to this cleaning up, as their advice is attributed to self-interest, and only when the farmer realizes that he is taking the chance of a bad sample coming to the hand of the buyer and spoiling the value of a choice lot of grain, will the evil disappear.—G. W. T. CARTER, Point of Timber, Cal.

#### Pajaro Valley Strawberries.

EDITORS PRESS:—I sent you, per express this morning, two boxes of strawberries containing the following varieties: Cinderilla, Great American, Crescent Seedling and Cumberland Triumph. They are from plants set out in March last. Cinderilla and Great American have been irrigated once; the others have had no water yet. The Cinderilla is an enormous bearer, and those sent you are a fair sample as to size, etc. The plant is a vigorous grower and of robust habit; fruit stalks very large and strong, standing well up off of the ground. I think it is going to prove a valuable variety with us. The Great American is not a very vigorous grower; it is a good bearer and the fruit is fine and large, and, as you will see, resembles the Cinderilla in many respects. The Cumberland Triumph is very large, a little soft, and I fear its light color will be against it. The Crescent Seedling sent you are small; this comes from the want of water. They are of fine flavor, and when irrigated grow to a good size. They are enormously productive; the form of the berry being very rough, is much against them as a market berry.

I have sent you these samples for you to pass your judgment upon them and see how they will compare with the berries from other localities. I have several other varieties, but they have not borne enough fruit yet to tell anything about their value. The New Rochelle raspberry is doing finely with me; it is most enormously productive. I have never seen anything to equal it. The berries are of good size, firm and bear shipping well; the flavor is good.

—JAMES WATERS, Pajaro Valley Nursery, Watsonville.

These berries arrived in very poor condition, probably being a trifle overripe when picked. Occasionally one remained intact and showed fine flavor, but the most were tainted by the fermentation. The boxes being deeper than the drawers usually employed in shipping strawberries, doubtless contributed to the decay by bringing too great a mass of the fruit together. Our correspondent's notes upon their growth and qualities are valuable and much better than any we could make, since the specimens are so far from their best estate. In a general way, however, it may be truly said that there is nothing coming to this market any better than these berries were when picked. Some of the Cumberland Triumph had a circumference of fully  $\frac{1}{4}$  inches. The light color seems to be fully balanced by size and flavor, for light colored, large berries usually sell from 10 to 25 cents higher per drawer than the average kinds received by dealers. We trust our correspondent will inform us of his future experience with these varieties, and of any other new fruit which he may introduce.

#### Seedling Apricots.

EDITORS PRESS:—Per express I forward a few specimens of early seedling apricots. You may say to yourself, "early apricots," when the fruit has already been in the market the past three weeks. Yes; but did any of them come from this valley? I also send a few of the earliest known varieties for comparison, Dubois Early Golden and Royal. You will notice No. 12 is larger than Royal, and will be ripe long before that variety.—BERNARD S. FOX, San Jose, Cal.

The specimens came in good shape except that the seedlings were overripe, and their juice exuded slightly, while the Early Golden and Royal were very firm flesh—just on the verge of ripeness. It was easy to see that the claim for earliness in his seedlings as maintained by Mr. Fox was well substantiated—we should think there was the advantage of at least 10 days to seedling No. 13, and a little less to No. 12. As compared with the Early Golden and Royal, grown in the same locality, Mr. Fox's, No. 12 has a decided advantage in point of size, the gain being in flesh, for the pit was very little larger. We think a richer hue of flesh and higher flavor may also be fairly ascribed to this seedling. These characteristics also belong to seedling No. 14, although it is nearer the standard varieties named in maturity. We should consider all the seedlings worthy of propagating, and of introduction in parts of the State which produce the earliest and largest fruit. The fruit was all of medium size, but as all the samples come from the same locality the comparative tests are good ones.

#### Gooseberries Free from Mildew.

EDITORS PRESS:—I send you by a friend a small box of gooseberries that you may see what we can do at Ukiah in raising that kind of fruit. They were not selected expressly when picked for you, but taken from a box of seven pounds picked from one bush the day before for market in this place. Those in the papers are also an average of another kind. N. WAGENSELER, Ukiah, June 23d.

These berries are very fine, large and tender, and the skin perfectly free from mildew. Our correspondent is one of few who succeed in getting such fruit from the English varieties of gooseberries, and we believe he has had long experience in growing them. We hope he will give us an account of his method of growing and what he does to succeed so well while others near him fail. Some experimental information concerning gooseberry culture in this State would be very acceptable to many of our readers.

#### Figs Dropping Off.

EDITORS PRESS:—Will readers tell us if there is anything which can be done to prevent figs from dropping the first crop of fruit before it matures. I have the Smyrna and White Marcellas, and they invariably lose the first crop. The second crop does well.—HENRY HOPPELL, Saratoga, Santa Clara Co.

Will fig growers respond with their experience?

ON FILE—"The Garden," S. C. B.; "Mountain-Top Letters," J.

## ENTOMOLOGICAL.

### Dose for Diabroticas.

EDITORS PRESS:—According to request, in the PRESS of June 28th, I send a remedy for diabroticas, which has been used successfully in this neighborhood: Steep the leaves of the laurel or bay tree in water (quite strong) and sprinkle the plants. It is a very simple remedy and very effective.—HENRY HOPPELL, Saratoga, Santa Clara Co., Cal.

Thanks. This remedy should certainly be tried by all who are afflicted by these light-green, black-spotted pests. The bay leaves are at hand in the bay counties, and perhaps elsewhere, and the tea is a safer material than poisons and more cleanly than dusting with lime, etc. We shall try the bay leaves at once.

D. A. Learned, a reader of the PRESS, writes from Stockton that they have a few diabroticas in that region. Are they found by the Sacramento fruit growers? We should like to hear from the rascal wherever he appears.

A Michigan farmer gives the following dose for the "striped cucumber bug," which may be tried in connection with the various antidotes which we described last week: "Take  $\frac{1}{4}$  lb. quassia root,  $\frac{1}{4}$  lb. smoked tobacco, 2 quarts water; boil down to one-half; strain, and add 1 quart soft soap; bottle; when wanted for use add 8 quarts soft water, and apply with a syringe on the under side of the leaves. One application is generally enough, although the new leaves will need some on as they grow out. It is cheap and good."

#### The Red Scale on Orange Trees.

The Riverside Press has a note on the red scale on orange trees which may convey information to some of our new orange growers, and

### The Bennett Polar Expedition.

The *Jeannette* has departed on her eventful voyage to the mysteries enclosed within the Polar circle, and with her and her brave crew have gone the best wishes of the nation for the successful attainment of the objects proposed. To us as a nation relying more upon individual effort than upon national interference will undoubtedly be awarded the solution of a problem so long sought but never solved. To follow the route of the noble sailors who passed Cape Farewell on the east coast never to return to their homes might have been regarded as unwise if not folly, but the same genius that directed the movements of Stanley in Africa, planned also the present movement upon a scientific theory, carrying with it every possible and probable element of success. Ample provision with everything that ingenuity could devise or imagination invent, and manned by tried men and true, the hearty farewell shake of the hand dispelled all doubts of courage and faith in the seaworthiness of the good ship and the successful issue of the voyage.

The numerous currents existing in the ocean have been the cause of the disasters attending former expeditions in search of the northwest passage by way of Baffin's bay. These ocean currents, the great rivers of the sea, move steadily on through waters comparatively tranquil, spreading over hundreds of miles upon the broad bosom of the ocean, not only upon the surface, but also in deep waters, often moving in different directions. The cause of these ocean movements is found in the difference of

sweeping around in a semi-circle between Spitzbergen and Lapland, is divided into two branches by impinging against Nova Zembla, thence uniting its streams again in the Kara sea where it is lost in the Polar current. The Polar current, appearing at the eastern boundary of the Kara sea, flows steadily and rapidly around it and within the 80° parallel of north latitude, oftentimes within 7° of the north pole, forming the Polar channel, thence south between President land and Grant land, under the great ice barrier to Hall land, on the extreme northern end of Greenland, whence it is divided into two branches, the one flowing south along the east coast of Greenland, the other south along the west coast of Greenland through Baffin's bay and Davis strait, until reuniting after passing the most southerly point of Greenland it flows on steadily in one great current until it is lost by sinking beneath the gulf stream at or near the latitude of Newfoundland. This outflowing Polar current has been the cause of the failure of former Arctic expeditions on the eastern coast. The ship is either forced back away from the pole by the force of the current, or else locked in the ice, it is floated with it in its southern course out into the Atlantic, the main outlet of the north Polar waters.

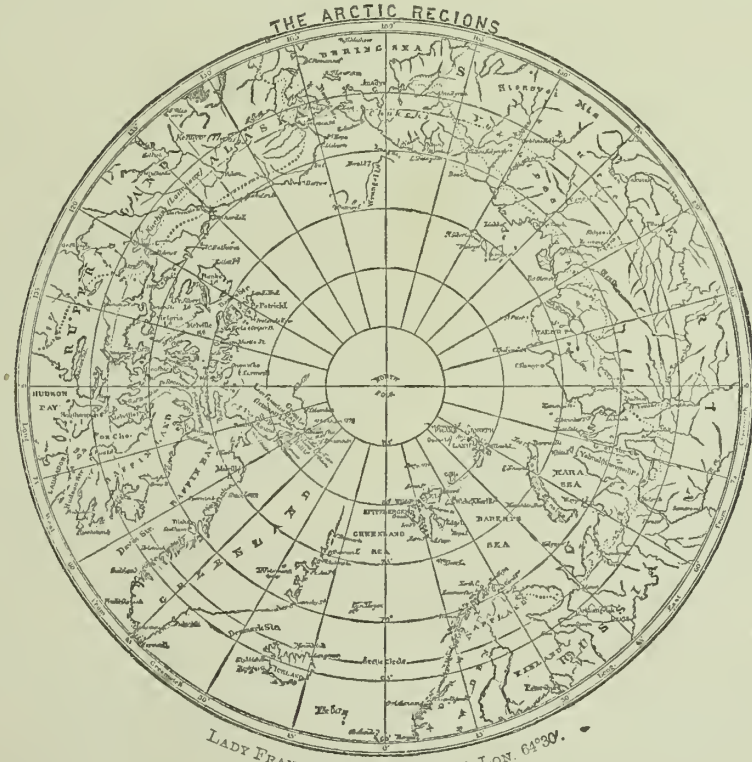
Upon the Pacific ocean the great equatorial current, divided by the coasts of Asia and Australia, divides, and sends one branch south, the other flowing north bends to the north and northeast after passing the Philippine islands and Formosa and becomes the Japanese current (Kuro-Siva), the Asiatic gulf stream. This noble stream, with its vast body of deep blue and warm waters, flows swiftly along the eastern coasts of Japan slanting across the north Pacific to the peninsula of Alaska, one branch sweeping northeast directly through Behring's strait into the Polar sea. Thence sweeping around along the north coast of America to the Arctic islands it unites with the eastern and southern flowing Polar current through the great ice barrier—Barrow's strait, Jones' and Smith's sound—uniting with and forming part of the great Polar current which finds its way to the Atlantic, carrying upon its bosom the ice of the Polar regions. In this current the *Jeannette* will be continually carried onward, east to the Atlantic ocean, as inevitably as she would be carried to the Gulf of Mexico by the current of the Mississippi. Whether frozen in the ice or not, she will be carried east to the Atlantic, or in the direction of the North Pole, by the steady flowing current in that direction. In fact, there is no current flowing in any other direction. The Polar currents all crowd to the east on the American coast, under the influence of the earth's rotation, and because the Atlantic is the only outlet, the shallow, narrow passage of Behring's strait preventing them from sinking under the warm Japanese current, so that from the Pacific to the Arctic ocean there is a constant inflowing current, and from the Arctic to the Atlantic a constant outflowing current, reason enough why the *Jeannette* should succeed if success will ever attend a Polar expedition. The scientific features of the expedition will be of the highest order. No observation will be neglected, whether made by deep sea soundings or in the air, for the benefit of meteorology. Every preparation has been made to provide for the comfort and safety of the men. Electric lights will be used for signaling, and these with 300 miles of wire with telephones, will enable the observers to communicate with the ship at a distance of 450 miles from her, so that sledging parties can report their discoveries or needs to those remaining on the ship. Ample provision for three years' voyage as to provisions, and safe for two years as to fuel, the officers and crew feel buoyant and cheerful, expecting nothing but success, in fact, determined to succeed. With six chronometers, chemicals, microscopes, and barometers of a new and perfect make, and a varied and valuable library, the 33 brave men who compose her full complement, will receive a schooling during her long Arctic sojourn, such as it does not fall to the fate of every man to receive. A strong, tight, comfortable ship, battened throughout with felt and canvas, and all iron below decks carefully covered, the fate of the crew cannot be considered hard.

The route after passing Behring's strait will be governed entirely by circumstances—none has been or can be determined upon. The influence of the inflowing current will be permitted to determine the direction, for it is expected that this current will solve the problem of the Polar regions. After leaving San Francisco the ship will proceed to Alaska and receive additional supplies from her convey, and then weigh anchor immediately for Behring's strait. Success to the *Jeannette* and to her mission.

The general course of the Polar current may be traced from the description by reference to the map of the Arctic regions on this page—for the use of which we are indebted to Dr. A. B. Stout, of this city.

FOUR HUNDRED THOUSAND persons are employed on the railroads in this country; 2,000,000 depend upon them for immediate support, and \$400,000,000 are annually paid to employes and persons furnishing supplies.

In searching the premises of the late Mr. Burke, at Clatsop, Oregon, a few days ago, United States bonds to the amount of \$3,000, with the coupons for 1880, were found sewed in the garment worn by the daughter.



CAPT. HOWGATE'S MAP OF THE ARCTIC REGIONS.

lead them to watch for the appearance of this pest, and fight it if discovered. It says this insect appears to attack the leaf rather than the stem of the orange tree, and its presence can at once be detected by holding up a leaf to the sun, when it will be found to be filled with small punctures, scarcely larger than the pores themselves, defined by a circle of yellow. The leaf soon becomes entirely yellow and falls off. The fruit itself is also covered with very small red scale, and it ceases to increase in size as soon as attacked. The remedy which has been successfully used in San Gabriel is three pounds of bluestone in 30 gallons of water, after which 130 gallons of strong soap suds is added. It is applied by a force-pump to all parts of the tree.

#### Parasite on Orange Scale Insect.

In a brief note in the *Canadian Entomologist* for May, W. H. Ashmead, of Jacksonville, Florida, announces the discovery of minute black mites, which he discovered running in and out of the scales on some orange twigs which he was examining. He has no doubt that these mites prey upon the eggs of the scale insect and thus diminish its increase to a certain extent. Success to the mite; may it live long and prosper.

METEOROLOGICAL SUMMARY FOR JUNE.—The report of the United States Signal Service officer of San Francisco, for the month of June is summarized as follows: The mean height of barometer for the month was 29.913; mean temperature, 59.4; mean humidity, 70.4; prevailing winds, west; highest barometer, 30.103; lowest, 29.766; highest temperature, 85°; lowest 49°; monthly range, 34°; greatest velocity of wind, 30 miles per hour; total number of miles traveled by wind, 8,038; total rainfall, .05 inches. Rainfall in June during former years: 1872, .04 inches; 1873, .02 inches; 1874, .14 inches; 1875, 1.02 inches; 1876, .04 inches; 1877, .01 inches; 1878, .01 inches.

temperature between the polar and tropical regions acting directly upon the waters, the configuration of the continents exercising a certain controlling force as to direction and variation. The cold and heavier waters of the polar regions tend incessantly to flow into the warm and lighter waters of the tropics, and when both meet the colder waters sink and disappear below the warm waters, which return as surface currents towards the polar regions diverted from a perfectly straight course by the steady action of the earth's rotation and by continental obstructions. To illustrate this, place at one end of a glass vessel of suitable dimensions, filled with water, a piece of ice, and apply heat at the other end by means of a spirit lamp; then color the cold water end with carmine and the warm water end with indigo. A current of carmine will immediately flow towards the heated end and meeting warm water will sink, while the blue warm water will flow on towards the cold end, forming continuous currents of carmine and blue, one flowing towards the ice on the surface of the water, the other flowing towards the heat below the surface.

The Gulf stream, which is the current of the North Atlantic, affecting Arctic expeditions in that direction, arises from the accumulation of the waters of the equatorial current in the Gulf of Mexico. It proceeds east until its course is changed to the north by striking against the Bahama Banks. Flowing with great rapidity along the coast of the United States, gradually expanding in volume and diminishing in velocity as it proceeds northward, it turns east at the latitude of New York and crosses the Atlantic to the Azores, when it divides, the main branch returning southward along the coast of Africa, while the northern branch continues its slanting course to the British Isles and Norway. A branch of the gulf stream flows from about the latitude of Newfoundland north towards Iceland, and



## State Fair Premiums for Machinery and Manufactures.

We continue this week our list of the premiums offered by the State Agricultural Society for competition at the fair, in Sacramento, September 8th to 13th, 1879:

### Second Department—Machinery, Implements, Etc.

For the most meritorious exhibition in this department, the Society's gold medal.

Models in Classes I, II, III and VI, cannot compete with full sized machines.

All machinery, as far as practicable, to be exhibited in motion.

All articles named in Classes I, II, III, IV, V, VI and VII, of this department, if of California manufacture, will receive the premium offered and diploma; if not, they will be awarded a diploma only.

#### CLASS I—MACHINERY, ENGINES, ETC.

Best display of general machinery from one shop....	\$40
Best light portable prospecting mill for reducing quartz.....	20
Best concentrator for copper ores.....	20
Best grinding and amalgamating pan combined.....	20
Best turbine wheel (California manufacture).....	20
Best quartz crusher (California manufacture).....	20
Best steam engine (California manufacture).....	40
Best portable steam engine (California manufacture).....	40
Best portable sawmill.....	5
Best saw gunner.....	2
Best self-setting sawmill head-block.....	5
Best stove machine.....	5
Best shingle machine.....	5
Best lathe machine.....	5
Best hoop machine.....	5
Best molding machine.....	5
Best mortising machine.....	5
Best sash machine.....	5
Best tenoning machine.....	5
Best scroll saw machine.....	5
Best wood turning lathe.....	5
Best iron turning lathe.....	5
Best iron planing machine.....	10
Best wood planing machine.....	10
Best water wheel.....	10
Best fire extinguisher.....	Diploma
Best gas machine.....	Diploma
Best self-generating gas burner.....	Diploma
Best machine for manufacture of screwed boots and shoes.....	Diploma
Best machine for securing gold from quartz (California manufacture).....	25
Best machine for reducing cement and securing the gold (California manufacture).....	25
Best diamond drill.....	Silver Medal

#### CLASS II—AGRICULTURAL MACHINES.

(FIRST DIVISION.)

Best display of agricultural machinery by any one house (California manufacture).....	\$50
Best threshing machine.....	50
Best sweep, horse power (California manufacture).....	10
Best circular sawmill, operated by horse power.....	10
Best log crosscut sawmill, horse or steam power.....	10
Best ditching machine, operated by steam power.....	50
Best clover huller and cleaner.....	5
Best hemp and flax dressing machine.....	10
Best cider mill and press.....	10
Best horse hay rake.....	10
Best hay and straw cutter.....	5
Best hay press.....	20
Best power corn sheller.....	5
Best hand corn sheller.....	5
Best corn husker, from stalks.....	Diploma
Best corn husker, ears only.....	Diploma
Best lawn mower.....	5
Best gopher trap.....	5
Best post hole auger.....	5
Best well auger.....	Diploma and 5
Best vegetable washer.....	5
Best vegetable cutter.....	5
Best lawn sprinkler.....	5

#### CLASS III—AGRICULTURAL MACHINES.

(SECOND DIVISION.)

Best header (California manufacture).....	\$50
Best wheat drill (two horses).....	10
Best wheat drill (one horse).....	5
Best grain broadcast sowing machine.....	10
Best machine for cutting and shocking corn.....	5
Best clover seed harvester.....	5
Best self-raking reaping machine.....	10
Best reaping machine.....	10
Best mowing machine.....	10
Best combined reaper and mower.....	10
Best display of reaping and mowing machine knives.....	5
Best hay loader.....	10
Best elevator for stacking grain.....	10
Best nets for header wagons for stacking grain.....	5
Best derrick rig complete.....	15
Best lifter for header.....	5
Best self-binding harvester.....	20
Best self-feeder for threshing machine.....	25
Best hay pitching machine.....	5
Best corn planter (horse power).....	5
Best corn planter (hand).....	2
Best potato planter.....	5
Best field digger.....	5
Best field roller and crusher.....	10
Best harrow.....	5
Best one-horse cultivator.....	10
Best cultivator.....	10
Best horse hoe.....	5
Best double shovel plow.....	5
Best ramie cleaning machine.....	20

#### CLASS IV—AGRICULTURAL MACHINES.

(THIRD DIVISION.)

Best smut machine.....	\$10
Best farm feed mill.....	10
Best fanning mill.....	5
Best flour packing machine.....	5
Best windmill.....	25
Best stock scales for general purposes, to be set up by exhibitor, and be used by the Board during the fair, free of charge.....	25
Best platform scales.....	5
Best farm gate.....	15
Best beehive (without bees).....	3
Best refrigerator.....	5
Best agricultural boiler.....	5
Best ornamental fence.....	10
Best grain separator.....	Diploma

#### SPECIAL PREMIUM.

By Nash & Klees, of \$25, for a better grain cleaner or fanning mill than the "Nash & Klees," to be tested by a committee of farmers on the ground, Thursday, September 11th.

#### CLASS V—TOOLS AND HOUSEHOLD IMPLEMENTS.

Best display of haying and harvesting tools.....	\$20
Best set draining tools.....	5
Best farm road scraper.....	5
Best garden seed drill.....	2
Best cheese press.....	10
Best cheese vat, with heater attached.....	10
Best cheese shelf model.....	5
Best churn, in operation on the ground.....	10
Best butter worker, in operation on the ground.....	5
Best exilage cutter.....	2
Best sausage meat cutter and stuffer.....	2
Best washing machine.....	Diploma and 5
Best clothes wringer.....	Diploma

Best mangle or ironing machine.....	5
Best clothes horse, to occupy the least space.....	5
Best well pump.....	10
Best apparatus for raising water for irrigating purposes.....	20
Best apparatus for raising water for mining purposes.....	20
Best ore carrier.....	5
Best milk cooler.....	10
Best fruit gatherer.....	3

#### CLASS VI—PLOWES.

Best gang plow.....	\$50
Best sulky plow.....	15
Best stubble plow.....	10
Best sod plow.....	10
Best steel plow.....	10
Best cast iron plow.....	10
Best subsoil plow.....	10
Best sidehill plow.....	5
Best one-horse plow.....	5
Best mole or blind ditching plow.....	10
Best open ditching plow.....	10
Best dynamometer.....	10

#### CLASS VII—VEHICLES.

Best two-horse family carriage.....	Diploma and \$30
Best one-horse family carriage.....	Diploma and 25
Best open buggy.....	15
Best top buggy.....	Diploma and 20
Best two-seated open carriage.....	20
Best traveling wagon.....	Diploma and 10
Best farm wagon for general purposes.....	15
Best spring market wagon.....	15
Best cart.....	5
Best truck sulky.....	5
Best track wagon.....	5
Best ladies' phaeton.....	15
Best street goods wagon.....	5
Best wagon or carriage brake.....	5
Best carriage or cab for children.....	5
Best display of carriage wheels, hubs, etc.....	10
Best assortment of carriage material and trimmings.....	Diploma
Best carriage springs.....	Diploma and 10
Best exhibition of wagon and carriage wheels, made of California grown timber.....	15
Best exhibition preserved wood.....	Silver Medal

### Third Department—Textile Fabrics and Materials from which they are Made.

For the most meritorious exhibition in this department, the Society's gold medal.

Articles to be exhibited by or for the manufacturer, and articles which have heretofore received a premium, to be excluded from competition.

#### CLASS I.

Best exhibition of silk goods by one factory.....	\$25
Best display of woolen goods by one factory.....	50
Best ten yards of cloth of flax cotton.....	5
Best piece cotton sheeting.....	5
Best fifteen yards woolen carpet.....	Silver Medal
Best fifteen yards tow cloth.....	5
Best ten yards linen.....	20
Best ten yards linen diaper.....	10
Best ten yards kersey.....	5
Best hearth rug.....	5
Best double carpet coverlet.....	5
Best pound linen sewing thread.....	5
Best shawl.....	5
Best Mackinac blanket.....	5
Best stocking yarn.....	3
Best old cloth table cover.....	3
Best display of cordage.....	Silver Medal
Best ten yards rag carpet.....	10
Best exhibition of burlaps and material of which it is made.....	Silver Medal
Best exhibition of carpets and rugs.....	20
Best gentlemen's shirts.....	Silver Medal
Best knit bedspread.....	5
Best wave bedspread.....	5
Best ten pounds dressed flax.....	10
Best five pounds flax cotton.....	10
Best five pounds flax yarn.....	5
Best exhibition of shoulder braces and corsets.....	5
Best exhibition of neckties and bows.....	Silver Medal
Best exhibition of naval and military goods and regalia.....	Silver Medal
Best display of dry goods.....	20
Best display of fancy goods.....	20

#### CLASS II—MANUFACTURES OF LEATHER, RUBBER AND PAPER.

Best display of shoe lasts, pegs and lasting machine.....	\$ 5
Best pair of dress boots.....	5
Best pair of heavy boots.....	5
Best pair of gentlemen's dress shoes.....	3
Best pair of congress gaiters.....	5
Best pair of ladies' slippers.....	5
Best pair of ladies' gaiters.....	3
Best pair of booties.....	3
Best display of bound account books.....	Silver Medal and 5
Best display of paper.....	5
Best display of paperhangings and borders.....	5
Best silk hat.....	5
Best soft hat.....	5
Best exhibition of gentlemen's clothing.....	10
Best display of printing.....	10
Best exhibition of men's and boys' boots and shoes, gaiters, etc.....	Silver Medal
Best display of ladies' and girls' boots and shoes and gaiters.....	Silver Medal
Best display rubber hose and belting.....	Silver Medal
Best display leather hose and belting.....	Silver Medal

#### CLASS III—NEEDLE, SHELL, AND WAX WORK, CLOTHING, HATS, CAPS, FURS, ETC.

Best display of children's and ladies' clothing, California made.....	\$25
Best ottoman cover.....	5
Best table cover.....	5
Best fancy chair cushion and back.....	5
Best crocheted shawl.....	5
Best lampstand mat.....	3
Best ornamental needlework.....	3
Best silk embroidery.....	5
Best embroidered sofa cushion.....	5
Best embroidered tablespread.....	5
Best embroidered dressing gown.....	5
Best embroidered ladies' dress.....	5
Best embroidered children's clothes.....	5
Best embroidered handkerchief.....	3
Best chenille work.....	5
Best embroidery with beads.....	5
Best made and handsome dress for lady.....	10
Best worked veil for lady.....	3
Best embroidered handkerchief.....	3
Best silk bonnet.....	5
Best velvet bonnet.....	5
Best velvet hat.....	5
Best display of feathers.....	10
Best knit cloak.....	3
Best exhibit of men's clothing.....	10
Best exhibit of printing.....	Silver Medal
Best collection of furs (not less than six pieces).....	20
Best assortment of leather gloves and mittens.....	Silver Medal
Best variety of linen embroidery.....	10
Best variety of artificial flowers.....	10
Best specimen of wax flowers.....	10
Best specimen of wax fruit.....	5
Best and largest variety of wax fruit.....	10
Best specimen of moss or lichen work.....	5
Best specimen of cone work.....	5
Best specimen of leaf work.....	5
Best specimen of flower work.....	5
Best specimen of shell work.....	5
Best braid of straw or grass.....	5
Best specimen of braid work.....	5

Best embroidered picture.....	10
Best white quilt.....	5
Best worked quilt.....	5
Best silk quilt.....	5
Best patchwork quilt.....	5
Best child's afghan.....	20
Best display of millinery.....	5
Best preserved natural flowers.....	Silver Medal
Best wax work statuary.....	10
Best outline embroidery.....	5
Largest and best display of fancy articles by a lady or miss.....	15
Best embroidery in crewel work.....	3
Best lambrequin.....	3
Best fine lace work.....	3
Best and handsomest toilet set complete, work of a lady or miss.....	5
Best display of skeleton leaves.....	3
Best wax autumn leaves.....	3
Best display ornamental grasses.....	3
Best embroidery in crewel work.....	3

#### JUVENILE DEPARTMENT.

Articles exhibited by misses under ten years of age, entrance free.

Best hand sewing, to consist of not less than four pieces.....	Silver Medal
Best pair knit cotton stockings.....	Napkin Ring
Best pair knit wool stockings.....	Napkin Ring
Best netting.....	Napkin Ring
Best tatting.....	Napkin Ring
Best crocheted work.....	Napkin Ring
Best silk embroidery.....	Butter Knife
Best outline embroidery.....	Butter Knife
Best worsted embroidery.....	Butter Knife
Best wax work.....	5
Best needlework picture.....	5
Best silk quilt.....	5
Best patchwork quilt.....	Napkin Ring
Best cotton quilt.....	Napkin Ring
Best pen drawing.....	Napkin Ring
Best painting in water colors.....	Napkin Ring
Best penmanship.....	Napkin Ring
Best hand-made shirt.....	Napkin Ring
Best leaf and moss work.....	Napkin Ring
Best hair work.....	Napkin Ring
Best braid work.....	Napkin Ring
Best feather work.....	Napkin Ring

## Lands for Sale and to Let.

### BERKELEY PROPERTY.

#### Residence and Business Lots

FOR SALE VERY LOW AND ON EASY TERMS.

The Cheapest and most Desirable Property for Investment or for Homesteads in the State.

Lots worth \$200 sold on installments of \$5 per month. Lots worth \$300, \$10 down; installments of \$5 per month. Lots worth \$500, \$50 down; installments of \$10 per month. Lots worth \$1,000, \$100 down; installments of \$20 per month.

Within 40 minutes of the business center of San Francisco, reached at an expense of 15 cents for single trips or \$3 for monthly tickets, being a point at which all the important railroads of the State will center, and where the University and other educational institutions of the coast are located. With fine view and delightful climate and its present rapid improvement, all combine to make this the most desirable place to locate.

Give us a call and we will give entire satisfaction, as we have property in all parts of Berkeley, and can sell cheaper than any others. Call on

S. A. PENWELL,  
652 Market Street, San Francisco.  
Or at residence, cor. 6th and Bristol Sts., West Berkeley.

## A Good Farm For Sale.

The undersigned offers for sale a Farm of 450 acres of fine loamy grain land in a high state of cultivation, 400 acres being well fenced, with house, barn, outbuildings, water tank, house and windmill, orchard, vineyard and garden sufficient for family use. The water is excellent. It is situated 1 1/2 miles north of Arbutuckle Station, on the Northern Railway, in Colusa County.

#### THE TITLE IS COMPLETE.

A Schoolhouse is adjoining this farm, and everything desirable for a

#### Nice and Comfortable Home.

Can be bought for part Cash and part Credit, or payments in installments to suit purchasers. Address

FREDERICK SPRENGER,

Arbutuckle P. O., Colusa Co., Cal.

## Farm For Sale.

Yields an Income of \$4,000 a Year.

Price, \$10,500.



My Farm and Poultry Business yield over \$4,000 a year. The place—116 acres—with orchard, vineyard and improvements, has cost me \$15,000. The good will of the business is worth fully \$3,000. I will sell the business and farm for \$10,500, half cash, or exchange for San Francisco property. It is a bargain such as is seldom offered.

M. EYRE, Napa, Cal.

Law Office in San Francisco, No. 630 Clay St., Room 25.

I am in Napa each Saturday and Sunday; other days in San Francisco.

## FOR SALE.

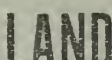
700 Acres. The Finest Stock and Grain Farm in Northern California.

Price, \$25,000, including Farming implements. The whole under fence.

The stock upon this farm, all thoroughbred and graded, embracing some of the finest in the State, will be sold at private sale. Among the stock is some that has been awarded different premiums at State and County Fairs. This is one of the finest opportunities for a man of means in the State. For full particulars apply to

D. B. HAYS,

Real Estate Agent, Oroville, Cal.



Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No drouths, had floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

## LOMPOC

## Temperance Colony.

45,654 49-100 ACRES.

## Cheap and Desirable Homes.

TERMS OF SALE.—25% cash, and the remainder in eight equal annual installments with interest at 10% per annum, or full payment and Deed immediately.

### Rich Soil and Healthful Climate.

Located in the Western part of Santa Barbara County, California, embracing 10,000 acres of the Finest Bean Land in the State; as high as 3,700 feet above the sea level have been raised the present year, while 3,000 lbs. to the acre is not an uncommon yield.

## DAILY MAIL

And Telegraphic Communication with all parts of the State. The Telegraph Stage Co.'s Coaches now run daily, each way, directly through the town of

## LOMPOC.

E. H. HEACOCK, President.  
IRVING P. HENNING, Secretary.  
November 6th, 1878.

## Flour Mill for Sale or Rent.

A good water power flour mill, with two runs of 4-feet wheat stones, one middling and one feed stone, all in good order, situated in southern California, with a good wheat crop near the mill, can be bought cheap, or a part interest can be purchased by a good, reliable mill man, or the property can be leased; mill is running, and has a good reputation. Want of experience, and other business, induces the owners to offer a good trade. Apply to JOS. WAGNER & CO., 105 and 107 Mission street, S. F.

## C. C. RODGERS, CALIFORNIA LAND AGENCY,

Office, 276 First St., San Jose, Cal.

GENERAL LAND, REAL ESTATE, U. S. PENSION AND BOUNTY AGENT.

Will buy and sell Land Warrants; Locate and Survey Public Government Land, Pre-emption Homesteads, Soldier's and Sailor's Homesteads, Timber and Wood Lands, Desert Lands, Etc.

## FARMING LAND

For Sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

## Poultry.

## OAKLAND POULTRY YARDS,

Cor. Sixteenth and Castro Streets, Oakland.

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:



## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

### CATTLE.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

PAGE BROTHERS, 323 Front street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

### SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

### POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magic Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Dogs, etc. Eggs for hatching. Send for price list.

### SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine. Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Thoroughbred Berkshire and Poland-China Swine. Light Brahma and Black Cochon Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

### BEEES.

JOS. B. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

### APIARY SUPPLIES

Of all kinds constantly on hand, including Honey Extractors. Send for illustrated catalogue.

H. M. CAMERON, 232 Sutter St., S. F.

**Grangers' Bank of California,**  
42 California Street,  
SAN FRANCISCO, CAL.

Authorized Capital - \$2,500,000,  
In 25,000 Shares of \$100 each.  
Capital Paid up in Gold Coin, \$405,000.

#### OFFICERS:

PRESIDENT.....G. W. COLBY.  
MANAGER AND CASHIER,  
ALBERT MONTEPELLIER.  
SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

**Grangers' Co-operative Business Association,**  
of Sacramento Valley.

Location: K & 10th Sts., Sacramento, Cal.  
Dealers in GENERAL PRODUCE, RETAIL GROCERIES, and sale of FRUITS. Desire the co-operation and trade of farmers in general. Pay the highest market rates for all produce, and sell for the smallest profit. Our orders are cash on delivery. Goods shipped; marked C. O. D. W. H. HEVENER, Manager.

### GENERAL INSURANCE

— AND —

## Commission Agent.

### FERDINAND K. RULE,

310 Pine Street, Room 31, San Francisco.

Special attention to Fire, Marine and Life Insurance business.

Insurance placed in none but first-class Companies.

### ROOMS TO RENT.

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

# PIANOS

FOR EVERYBODY!

WE WILL SELL THE

CELEBRATED

## FISCHER PIANO

At Prices that Nobody can beat!

### THE "FISCHER"

Is one of the leading Pianos, and has been before the Public For Forty Years.

We Sell no Bogus Instruments.

SEND FOR CATALOGUE AND TERMS TO

## KOHLER & CHASE,

Post Street, near Dupont,

SAN FRANCISCO

*In consequence of spurious imitations of*  
**LEA AND PERRINS' SAUCE,**  
*which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature,*  
*thus,*

*Lea & Perrins*

*which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.*  
*Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper.*  
*Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.*

To be obtained of CROSS & CO., San Francisco.



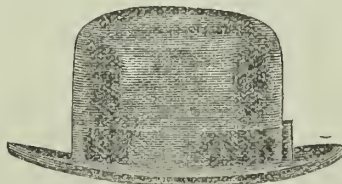
BARLOW J. SMITH, M. D., announces to his friends and former patrons that he has resumed hygienic medical practice at the Smithsonian Medical and Phrenological Institute, 635 California street. The institute provides all forms of Electro-Medical baths and Hygienic boarding. Terms reasonable. Phreno-Physiological examinations in regard to health free. During the past 30 years Dr. Smith has developed a System of Phreno-Physiology that shows the relations that exist between the brain and body and claims that the organs of the brain show the strength of the spine, heart, lungs, stomach, bowels, liver and kidneys, also the reproductive organs, and the tendency of each and all to disease. The most powerful Electroized Magnet ever used in the treatment of nervous and chronic diseases is employed in this Health Institute. Mrs. Dr. Smith has charge of the Female Bathing Department Phrenological examinations daily.

### Patents

OBTAINED IN U. S. AND FOREIGN COUNTRIES; trademarks, labels and copyrights registered through DEWEY & CO.'S MINING AND SCIENTIFIC PRESS Patent Agency, San Francisco. Send for free circular

## HERRMANN'S HATS

ARE THE BEST!



Try one and you will Wear no other.

Spring and Summer Styles,

— AT —

336 Kearny St., bet. Bush and Pine,

— AND —

910 Market St., above Stockton.

Send for Illustrated Spring Style Catalogue.

J. P. JONES.

J. THOMPSON.

## JONES & THOMPSON.

Wholesale and Retail Dealers in

Hay, Grain and Feed.

Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,

1535 Mission St., San Francisco.

60 Elegant Perfumed Cards Chromo, Motto, Lily, Etc., 15c. Gift with each pack. H. M. SMITH, Clintonville, Ct.

## Seedsman.

## R. J. TRUMBULL & CO.,

SUCCESSORS TO

## R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

\*"Guide to the Vegetable and Flower Garden" will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL & CO.,  
419 and 421 Sansome Street, S. F.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

### B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco



### B. K. BLISS & SONS,

Importers, Growers and dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address

B. K. BLISS & SONS, 34 Barclay Street, N. Y.

### FENCING—CHAPPARAL SEED.

Parties wishing to experiment in the cultivation of Chapparal as an economical and valuable substitute for fencing, can obtain the seed in 50 Cts. and \$1 packages, at W. R. STRONG'S, Sacramento. Sent by mail.

## EXOTIC GARDENS.

F. A. MILLER & CO., Mission St., opposite Woodward's Gardens. Send for Catalogue and Price List.

## Nurserymen.

### Blackberry and Cranberry Plants.

100,000 Plants of new varieties of BLACKBERRY Plants—the Early Cluster and Vina Seedling. Missouri Mammoth and Dearing Seedling, the earliest and the most productive of all. I will give satisfactory proof that these berries have realized \$750 per acre. It paid more than double the amount as the old late varieties. Price by mail, \$2 per dozen, \$8 per hundred, and \$80 per thousand. Send for Catalogue. Cherry Cranberry plants for \$150 per acre, planted, not less than 10 acres in one order. We will sell to responsible parties, large orders on time, part cash. H. NYLAND, Bouldin Island, San Joaquin Co., Cal.

## IMPORTANT!

We wish to open correspondence immediately with one or more enterprising parties in each township upon the Coast to

### Establish an Agency

Of our valuable publications, among which are the "Pictorial History of the World," Stanley's "Through the Dark Continent," "Chase's Improved Recipes," the Farmer's Account Book, and many others. Ministers, teachers, farmers and others will find this profitable. Ladies especially are successful. Address for full particulars,

### A. L. BANCROFT & CO.,

No. 721 Market Street, San Francisco, Cal.

TRADE



MARK.

### LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price, \$2 per gallon. For directions and testimonials, apply to PAULKNER, BELL & CO., Sole Agents, 430 California Street, S. F.

## ANGORA ROBE AND GLOVE COMPANY, SAN JOSE, CAL.

Incorporated 1876. Capital Stock, \$50,000. C. P. BAILEY, President and Manager. Manufacture all styles of Gloves, Robes, Hats and Whiplashes. Cash paid for Goat Skins. Send for Circular.

50 CHROMO, Gold Border, etc., 10c., no 2 alike, or 20 Cupid Cards, 10c. J. B. HUSTED, Nassau, N. Y.



## Stockton Industry, Etc.

**Editors Press:**—With your permission and a space in your valuable columns, I will strive to give you a few items of the progress of this city and its leading manufacturing establishments, warehouses, Grangers' and Co-operative Unions, etc., which a short sojourn and limited acquaintance has placed within my reach.

The corporate limits of the city proper run between four and five miles; its streets run at right angles, dividing the city into blocks of 300 feet square. Stockton, with its immense warehouse facilities, makes successful bids for the farmers' grain, and stores it at small percentages. From a town of tents in 1849, it is now placed in the fifth rank as to population (14,000 to 15,000). As a commercial center Stockton has few rivals and no peers. She heads the list of the grain markets on the Pacific Coast. From the close proximity of the capacious warehouses to navigable water, its grain can readily be placed on board of steamers and sailing vessels, and in the bay of San Francisco be transferred to ships for the foreign and domestic market, thus saving the enormous wharf tax in San Francisco. The different warehouses have the following storage capacity: Farmer's Co-operative Union, 15,000 tons; Baggs', 12,000 tons; Stockton, 20,000 tons; Farmers', 14,000 tons; Kalisher, 8,000 tons, and many other buildings used for storing grain during the season. The people of Stockton look healthy, wealthy and prosperous. The farmers as a class come to the city more or less, especially Saturdays, when they bring their wives, daughters and children and let their hard earned twentys take the wing. Many of the farmers have, by honest and upright industry, earned a competent living, and do not allow themselves or their families to want for the real comforts of this world. Their money is honestly come by, and they spend it freely for anything that will tend to their comfort and solid pleasure; neither do they forget or neglect the worthy poor. No man, woman or child leaves their door hungry or thirsty. These citizens of the soil are the ones that impart the great progress and prosperity to this, "the City of Windmills."

### Matteson & Williamson,

Patentees and manufacturers of agricultural implements, corner Main and California streets. This house was established in 1852, at which time Mr. Matteson began to manufacture in this city. Thirteen years ago Mr. Williamson entered this firm, changing the name to Matteson & Williamson. This house manufactures, among other implements, Richards' improved header, canal and railroad plows, scrapers, the famous sulky iron gang plow, "American Chief," horse, hay and grain forks, threshing and stacking derricks, two-edged patent diamond plow, patent chisel cultivator, the base single or sulky tile plow. This firm is now prepared to manufacture any and every article that is necessary in the agricultural implement line. With a force of 50 to 40 (including some of the most skillful mechanics on this side of the Rocky Mountains), leaves this institution excellently fitted in workmanship and durability of their manufacture. During the past year they have erected a three-story brick building, where the blacksmith and wood work is done; recently they have completed a foundry, fronting on Aurora, bounded by Main, Market and Grant streets; working capacity, 50 square feet. About a week ago their first castings were turned out, with entire satisfaction to the proprietors. This enterprising firm has established a reputation which reaches far and wide; they fill orders from all parts of California, also from Oregon, Nevada, Washington Territory, Idaho, Montana, Nebraska, etc. Their improved workshops are among the finest on the Pacific Coast.

### Marsters' Feeder Works, and Regulating Windmills,

Corner California and Washington streets. Mr. E. J. Marsters has been engaged for the last five years in manufacturing the "self-feeder" of a pattern invented by himself, which has been improved from time to time. Four years of practical experience has given it a standard reputation, until now it stands acknowledged head of the list for simplicity, effectiveness, light-running, durability and ease in putting on and taking off, for which testimonials too numerous to mention in these columns for want of space, can be furnished on application to the above works. Marsters' self-regulating windmill, "Tempest," the most substantial self-regulator in the county and State. Its mechanism is of the simplest character, no weights, springs or levers are used in its construction, the solid or banded wheel employed so favorably known, renders it at once reliable and worthy the attention of our people. Marsters' Universal Regulator, especially designed for regulating mill constructed on different styles of turn-ables. This regulator is easily adjusted to old mills requiring the same. Parties desiring new mills or having old ones to repair and regulate, would do well to call at the above works.

### Globe Iron Works,

Corner Commerce and Main streets. One of the earliest and most important manufacturing establishments of this city. Established in 1857 by E. J. Keep. Mr. John Cain is the present owner. Steam engines, machinery and castings of every description are manufactured in these works. A specialty is made of Root's rotary patent force-blast blowers for ventilating mines, and portable forges, Harshberger's patent wheat scourers (smut mill), and all kinds of agricultural implements. Connected with the Globe Iron Works and under the same ownership is the

### Stockton Agricultural Warehouse,

201 and 203 El Dorado street, near Main. Mr. John Cain is the successor to the "H. C. Shaw Plow Co.," which was incorporated December, 1875. There is on hand a large and well assorted stock of standard and late patents of mowers, headers, wagons, engines, etc.; in fact everything in the line of agricultural implements. They also own or control the patent and trade of the

Stockton gang plow and of the Stockton single-gear header, both in use throughout the State.

### Grangers' Union of San Joaquin Valley.

This Union was incorporated May 14, 1874. Its members can be numbered among the most substantial men of Stockton, San Joaquin county and valley, most of whom are practical farmers. In its infancy they occupied a building on El Dorado street. October 1st, 1876, they moved into an elegant brick building, specially built for their own use. The building fronts on Main street, and has a large and fine entrance on California street. The floor contains 11,500 square feet. This Union does a large business and carries a heavy stock of goods, a full assortment line of agricultural implements, iron, steel, mechanical and blacksmiths' tools, wagons, hardware, rope, paints, oils, belting, etc., etc.; in fact everything that man and mind can imagine is kept in this popular and well managed establishment. The Grangers' Union is deservedly popular, well officered, ably managed, upright and prompt in all its dealings, and it is certain to be and remain a shining landmark in the rich and fertile San Joaquin valley. The originators of this institution may justly feel proud of their enterprise.

### Pacific Agricultural Works,

Lafayette, between California and Sutter streets. The above works were established in 1875 by Messrs. G. Lissenden & Co. Both proprietors, Mr. Lissenden and Mr. H. C. Norris, are practical mechanics and supervise their shops personally. This establishment turns out all kinds of late improved agricultural implements. They also repair all kinds of farming machinery as well as manufacture the same. A specialty is made of the sulky plows "Star of California," the riding gang plow "Star of the West," and McCall's mammoth road scrapers. The celebrated header, thresher and separator is manufactured by Lissenden & Co. This establishment gives employment to 15 or 20 men, and is doing a large and extensive business. Prompt attention, work of durability and fair dealing has given these gentlemen a far and wide reputation in their line of business.

### Davis' Windmills.

For twenty years Mr. J. S. Davis has been engaged in manufacturing windmills of a patent invented by himself. He has from time to time made great improvements on these mills, until now it ranks first on this coast. The principal advantages possessed by Mr. Davis' mill is that the wind acts with equal force upon the whole length of the fan at all times. For the last eight years Mr. D. has made and sold an average of sixty mills per year. The celebrated Compound Hay Press is also manufactured by Mr. Davis. This press has a good reputation among farmers and gardeners. Prompt attention is given to repairing and regulating old as well as new windmills, hay presses, etc. Twenty-five years of practical experience give Mr. Davis great advantage in his line of business. His shops are situated west side of Commerce, between Main and Levee Sts.

There are quite a number of manufactories and factories of note that want of space will not allow me to give a detailed account of. Carriage manufactory of Wm. P. Miller, cor. California and Channel Sts.; carriage manufactory of M. P. Henderson, cor. Weber Avenue and California St.; planing mill of White & Thomas, Hunter, bet. Main and Market Sts.; chair factory of A. Wilder, Main St., cor. California; Stockton City Mill (flour), Sperry & Co.; Stockton Paper Mills; Stockton Wooden Mills; Pioneer Planing Mill; Pioneer sawmill; City tannery; Lane's Mills (flour); Stockton furniture manufactory, H. S. Fickett & Co., proprietors. In conclusion, I will say that in view of the existence of these fruitful enterprises of progressiveness in this city, it must necessarily follow and be a guarantee to the outsider that to honest toil and staunch perseverance alone can this fruitful result be ascribed to.

Stockton, San Joaquin Co., Cal. J. W. H.

**PACIFIC RURAL HANDBOOK.**—The little work before us could not have been treated of by a more competent authority. The book manifests throughout the author's ardent love for the beautiful in nature, and is well calculated to inlame and stimulate the same sentiment in its readers. —*Rural New Yorker.*

It treats on the culture of trees, vegetables and flowers, tells all about house plants, ferneries and warden caves, gives some sensible hints how to make the home pleasant, and in fact contains so much valuable information that we should like to see a copy of it in the hands of every head of a household on the Pacific coast. —*West Shore, Oregon.*

The "PACIFIC RURAL HANDBOOK," written by Chas. H. Shinn for the publishers of the PACIFIC RURAL PRESS, will be sent, post-paid, in substantial cloth binding for \$1; in full leather, \$1.50; in cloth, interleaved with fine ruled paper for memoranda, \$1.50. Address

DEWEY & CO., PUBLISHERS,  
No. 202 Sansome Street, San Francisco.

FERRIS attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

**How to STOP THIS PAPER.**—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

**SAMPLE COPIES.**—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate the copy sent.

**EXTRA COPIES** can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.

**FOR INFORMATION** in music matters send a postal to Kohler & Chase.

**LAUREL** Order E. BUTTERICK & Co.'s celebrated pattern. See adv.

### Books on Agriculture, Etc.

The following among other books will be sent post-paid on receipt of publishers' prices, annexed: Tobacco, its culture, manufacture and use, 500 pages, \$3.50; The Patron of Husbandry, 500 pages, \$3.75; The Women of the Bible, 77 engravings, \$4; Wells' Every Man His Own Lawyer, 612 pages, \$2.75; American Husbandry, 2 vols., \$1.50; Gray's Agricultural Essays, \$1; Langstroth's Honey Bee, \$1.50; Randall's Sheep Husbandry, \$1.50; Agricultural Engineering, \$1.50; New Bee-keepers' Text Book, \$1; Pacific Rural Handbook, \$1; Roper's Easy Calculator, \$1; U. S. Land Law, 50 Cts.; Woodward's Graperies, Etc., \$1; Sugar from Melons, 25 Cts.; Strawberry Culture, 50 Cts.; Laynes' Bellies Letters, \$1; Holt's Map of California and Nevada, to subscribers, \$1; Back Volumes PACIFIC RURAL PRESS (bound) \$5; unbound, \$3; Picturesque Arizona, \$2. Address DEWEY & CO., Publishers, 202 Sansome St., S. F.

**DISTANCES FROM SAN JOSE.** S. W. Churchill, proprietor of the Auzerais House, publishes the following table: Santa Clara, 3 miles; Sulphur Springs, 7; Mt. Hamilton, 25; Pacific Congress Springs, 11; New Almaden Mines, 12; Guadalupe Mines, 10; Saratoga, 10; Los Gatos, 10; Alhambra, 13; Santa Cruz, 33; Gilroy, 30; Gilroy Springs, 42; Watsonville, 50; Salinas, 68; Soledad, 100; Paso Robles, 180; Mission San Jose, 14; Niles, 18; Stockton, 80; Sacramento, 120; Yosemite, 700.

**SETTLERS** and others wishing good farming lands for sure crops, are referred to Mr. Edward Frisbie, of Anderson, Shasta County, Cal., who has some 15,000 acres for sale in the Upper Sacramento valley. His advertisement appears from time to time in this paper.

**SENT** to the Great Music House of Kohler & Chase for anything in the music line. 137 and 139 Post street, S. F.

## S. F. MARKET REPORT.

**NOTE.**—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

### Weekly Market Review.

#### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, July 9th, 1879.

The holidays of last Friday and Saturday unsettled the week's business, and since then transactions have been light, although rather more was done yesterday and today. At last Wheat has awakened from its torpor and the local price is raised in sympathy with an advance in the cable and reports of unfavorable growing weather abroad.

#### Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday....	88	6d	9s	3d	9s	2d	9s	6d
Friday.....	88	6d	9s	3d	9s	2d	9s	6d
Saturday....	88	6d	9s	3d	9s	2d	9s	6d
Sunday.....	88	6d	9s	3d	9s	2d	9s	6d
Monday.....	88	6d	9s	3d	9s	2d	9s	6d
Tuesday....	88	6d	9s	3d	9s	2d	9s	6d
Wednesday..	88	6d	9s	3d	9s	2d	9s	6d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1877.....	113	11d	12s	2d	12s	3d	12s	8d
1878.....	103	—	10d	6s	10s	4d	10s	8d
1879.....	88	6d	9s	3d	9s	2d	9s	6d

#### The Foreign Review.

**LONDON, July 8.**—The *Mark Lane Express* in its review of the British Grain trade for the past week, says: The agricultural prospects cause very grave apprehensions. Should the rain continue, the May crop will be useless except as manure. The condition of Wheat is unimproved; barley in heavy land is nearly ruined. Nothing but a speedy advent of sunshine can prevent an almost general failure of the principal crops. In consequence of the weather and light supplies in England, Wheat has improved 1s per quarter in a majority of the country markets; but despite this firmness of holders, it has been difficult to establish any advance for home grown in London in the face of liberal arrivals, and low prices of foreign varieties. Previous rates, however, have been well supported, especially for choice parcels, and the tendency is rather toward an advance than a decline. Large foreign arrivals have not caused scarcity of granary room, as a large proportion has gone direct to the miller, who bought freely to arrive, transactions on spot having lately been confined to the retail wants of small millers. Maize has varied a little, but is rather against sellers. Arrivals at ports of call have been small. Off Coast Wheat was firm at slightly improving prices, particularly towards the close. Maize was steady and unchanged. A good business was done in forward Wheat, particularly for Red Winter, July, August and September shipments, and prices improved 6d per quarter. Maize was not freely offered, though late cheap purchases could not be repeated. The demand is still slack. Last week's sales of English Wheat amounted to 34,905 quarters, at 42s 4d per quarter, against 18,202 quarters, at 46s per quarter, for the same period last year. Imports into the United Kingdom for the week ending June 28th amounted to 1,415,942 cwt of Wheat, and 214,288 cwt of Flour. At Mark Lane to-day (Monday) the supply of English Wheat was again small, and prices advanced 1/2d per quarter. The supply of foreign Wheat was fair, and it advanced 1s. Flour advanced 6d per barrel, and Oats 3d 6d per quarter; Maize and Barley were steady.

#### Freights and Charters.

The holidays broke up last week, and little or nothing was done in Grain charters. It is reported that 42s 6d is asked for wooden vessels to Liverpool, and 45s for iron vessels. Not over 40s was offered for wooden. The chartered Wheat fleet in port numbers 16 vessels of 22,398 tonnage register, of a carrying capacity of 33,000 short tons, or 660,000 cts. Disengaged tonnage in port, 25,000; on the way, 165,000.

#### Eastern Grain Markets.

New York, July 8. The general markets, except for breadstuffs, are generally quiet, but firm. Flour is active for all grades; 10d 20c higher; Wheat is dull, heavy, opened at 30c higher; closed at 1 of the real and 1 1/2 of the nominal advance lost, as neither shippers nor speculators would pay the prices asked. The damage reported to crops from the other side is one which has been known for some time, and is now accepted since it appeared in official form, while that reported from the northwest is simply what may be, and is not what is. Pork is dull, lower; New, \$10.50@10.25; Old, \$9.50@9.75; Lard is quiet, 2 1/2c lower.

Chicago, July 5.—The Board of Trade having been closed yesterday and to-day, we are left without substantial quotations. A few members congregated on the curbstone this morning, and made some trades in Grain at prices slightly in advance of the closing figures on Thursday. Prices for cash and July Wheat during the week have been higher. July has ranged from 96c to 97 1/2c, closing at the latter figure. Shipments have been largely

in excess of receipts, and the prevailing opinion seems to be that prices will be higher before the new crop comes in. Corn, during the week, has been fairly active, and prices have been better, but receipts have been good, and advances have not been maintained, the market closing at 50c for cash and July; Oats, quiet at 33c for July; Rye, 51c; Barley, 70c.

#### Eastern Wool Markets.

New York, July 8.—Wool is quiet, prices are held firmly.

PHILADELPHIA, July 8.—Wool quiet. Colorado washed, 20c 25c; unwashed, 15c 18c; extra and Merino pulled, 35c 38c; No. 1 and Super pulled, 34c 36c; Texas fine and medium, 18c 28c; coarse, 15c 27c.

#### Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon to-day as compared with the receipts of previous weeks:

ARTICLES.	WEEK. June 15.	WEEK. June 25.	WEEK. July 1.	WEEK. July 9.
Flour, quarter sacks..	50,500	21,244	95,216	10,672
Wheat, centals.....	49,615	79,849	50,729	113,901
Barley, centals.....	30,044	32,196	46,085	25,482
Beans, centals.....	3,518	8,756	1,223	521
Corn, centals.....	1,680	5,260	5,524	4,058
Oats, centals.....	5,905	4,699	9,250	5,742
Potatoes, sacks.....	14,920	13,421	8,063	9,276
Onions, sacks.....	1,705	1,525	1,259	1,829
Wool, bales.....	3,900	3,608	3,630	4,523
Hops, bales.....	17	184	184	41
Hay, bales.....	1,742	1,866	1,370	729

**BAGS.**—The trade is somewhat unsettled, and until something definite is decided upon we hold our quotations unchanged. There have been sales of Grain Bags at auction, by S. L. Jones & Co., Oakland Jutes, at \$8.65 per 100, equal to about \$8.75 per 100 for Calcutta. Some private sales, we are told, have been made at 8c. Again the combination machinery is in motion, and the Bag ring is being forged with the hope of twisting up prices. To-day the market is weak at 8 1/2 nominal for Grain Bags.

**BARLEY.**—Brewing Barley has improved a little. We note sales: 600 cts choice Brewing for Australia, at 90c; 1,500 do do, 95c; 1,050 sks good Coast Feed, 68c; 100 sks good Coast Feed at 70c per cwt.

**BEANS.**—Prices for Bayos, Pinks and Small Whites are a trifle lower than last week, but the trade generally is unchanged.

**CORN.**—Corn has been depressed since our last, but has rallied again, and recovered a part of the ground which it lost; prices are, however, a little below the marks of our last report. We note sale of 77 sacks Large Yellow, at 77 1/2c.

**DAIRY PRODUCE.**—Dealers consider the Butter market about 1c per lb worse than a week ago, but allow that the trade may have been affected by the holiday accumulation. Receipts are reported larger, owing to the stopping of packing by the makers. Cheese is in excess, "laden down to our guards" is the expression of one merchant whom we asked about the supply. The situation continues to be gravely unsatisfactory to the producer.

**EGGS.**—Fresh California Eggs are now at 22c for the extreme price, unless it be for small fancy lots, which may reach 23c 24c in some cases.

**FEED.**—Hay has dropped to \$11 as the top for choice Wheat, and a range down to \$5.50 for inferior Stock Hay. Ground Feeds are unchanged, except that some Bran can be bought at \$13 per ton.

**FRESH MEAT.**—The only change is in Milk Calves, which are 2c 2 1/2c per lb higher than reported last week.

**FRUIT.**—Our list shows a further cheapening of nearly all kinds. The market is now fully supplied with choice Fruit.

**HOPS.**—There is no change.

**LIVE STOCK.**—We note sales in the interior as reported by a buyer: 110 head of Cattle, fine steers, at \$25 each; 40 Cows at \$20 each; 1,000 Sheep, year's wool on, at \$2.50 each; 200 Hogs at 4 1/2c; 150 Hogs at 4 1/2c; 307 Hogs at 4 1/2c; 34 dressed Hogs, Marin county, at 4 1/2c; 2 do at 4 1/2c.

**OATS.**—An improvement has been made in choice lots of Milling Oats: Small lot of Surprise at \$1.65; 233 sks choice Washington Territory at \$1.50; 600 do ordinary at \$1.25; 500 do common at \$1.12 1/2; 100 sks choice Washington Territory Milling at \$1.47 1/2; 100 do good Humboldt Feed at \$1.40; and 288 do poor do at \$1.17 1/2 per cwt.

**ONIONS.**—The best price for choice Onions is now 65c per cwt for Whites; Reds are 15c lower per cwt.

**POTATOES.**—Prices are unchanged. Receipts are smaller, but the accumulation is being run into the breach.

**PROVISIONS.**—There is no change.

**POULTRY AND GAME.**—The trade is running along quietly. Receipts just about meet the demand, and rates are unchanged.

**VEGETABLES.**—Our table shows several fluctuations. Marrowfat Squash is now a rarity, and is rated at \$4.00 per ton.

**WHEAT.**—An advance of about 2 1/2c on the best grades is the result of the upward movement thus far. We note sales: 40 tons gilt edging milling at \$1.75; 100 do New No. 1, and 100 do good Milling, \$1.70; 872 do choice Shipping, \$1.68 1/2; 100 do New No. 1, and 80 do good Shipping, \$1.67 1/2; 100 sks fair Milling, \$1.65, and 260 do inferior, \$1.40 per cwt.

**WOOL.**—Trade is at standstill; nothing being done but closing out a few odds and ends. The choice Wool now in is held above quotations, in the hope of realizing more in this future.

### BAGS AND BAGGING.

[JOBBER PRICES.]

WEDNESDAY M., July 9, 1879.	
Eng Standard Wheat, 9 @ 9 1/2	Elights..... 31 @ 4
California Manufacture.....	Hessian, 60 inch..... 12 @ 4 1/2
11and Sewed, 22x36..... 9 @ 9 1/2	45 inch..... 8 @ 9 1/2
24x36..... — @ 11 1/2	40 inch..... 7 1/2 @ 9 1/2
22x40..... 10 @ 10 1/2	Wool Sacks..... 44 @ 45
24x40..... 11 @ 11 1/2	4 lb do..... 47 1/2 @ 48
22x40..... 12 @ 12 1/2	Machine Sewed..... 45 @ 46
Flour Sacks, halves..... 8 @ 10 1/2	Standard Gunnies..... 13 @ 14
Quarters..... 5 @ 6 1/2	Bean Bags..... 7 @ 7 1/2

### Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, July 9, 3 P. M.

SILVER 37 1/2 @ 12 1/2. GOLD BARS, \$90 @ 910. SILVER BARS, \$8 @ 19 1/2 cent. discount.

EXCHANGE on New York, 20 on London bankers, 49 1/2 @ 49 1/2. Commercial, 50; Paris, 50 francs @ dollar; Mexican dollars, 52 @ 55.

LONDON Consols, 97 13 1/2; Bonds (4 1/2), 104 1/2. QUOTATIONS in S. F., by the bank, \$1 lb, 33 1/2.







## THE CELEBRATED GROOVE RING JAR.

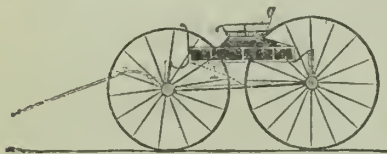


This Jar is extensively used in the Eastern States. It is the most popular, cheapest, and without doubt the simplest and most effective Fruit Jar now in use. It is by far preferable to any Patent Self Sealing Jar, and are as cheap as the poisonous tin cans.

ASK YOUR STORE KEEPER FOR  
**THE GROOVE RING JAR.**

San Francisco and Pacific Glass Works,  
SAN FRANCISCO, CAL.

## H. J. HASKELL,



MANUFACTURER OF

**CARRIAGES,  
BUGGIES,**

— AND —

**SPRING WAGONS,**

At the Lowest Rates.

Corner of Alameda and White Streets,  
SAN JOSE, CAL.

## Anderson's Springs, LAKE COUNTY, CAL.

Nineteen miles from Calistoga, five miles from Middletown, and ten miles from the Great Geysers; between which and Anderson's Springs there is a good stage road.

### HOT SULPHUR WATER

For Rheumatism, Paralysis, etc.; Cold Sulphur for Dyspepsia, Diseases of the Stomach and Bowels. Scenery unsurpassed. Climate mild and equable. Consumptives generally improve in health, and asthmatics are invariably relieved.

TROUT FISHING ON THE GROUNDS.

Deer Hunting in the Immediate Vicinity.  
Accommodations and Cookery good. Board from \$10 to \$12 by the week.

ANDERSON & PATRIQUIN, Prop's.

## PLEASANT SUMMER READING.

### THE NEW PENELOPE

— AND —

**Stories of California Life.**

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. For sale by

**A. L. BANCROFT & CO.**

PRICE, \$2 00.

## A Card to Grangers and Farmers.

HAY, GRAIN, HORSES and CATTLE.

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nos. 11 and 13 Bluxome St., San Francisco.

## The New Beekeepers' Text Book.

By N. H. and H. A. KISS. The latest work on the Apiculture, embodying accounts of all the newest methods and appliances. Fully illustrated. Sent by mail, post-paid, for \$1. DEWEY & CO., 202 Sansome Street, S. F.

## Agricultural Articles.

### The Famous "Enterprise,"

PERKINS' PATENT

Self Regulating

### WINDMILLS,

Pumps & Fixtures

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babbitted boxes.

Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs.

All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

**HORTON & KENNEDY,**

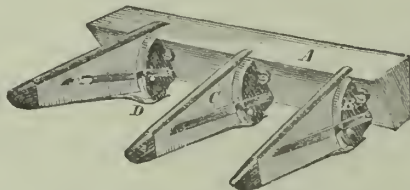
GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

## BONNEY'S PATENT

### Adjustable Grain Lifter

FOR HEADERS.



GRAIN BELTS, GRAIN LIFTERS,

Drapers, and Draper Sticks  
AND FINDINGS

Of wood work for all kinds of Farming Implements furnished at short notice. Also,

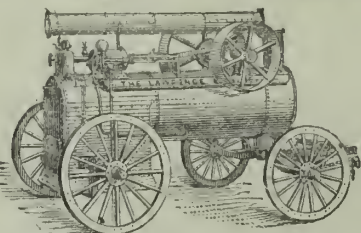
## HAY RAKES

AT COST PRICE.

At O. BONNEY'S,

No. 221 Mission Street, San Francisco, Cal.

## The LAWRENCE ENGINE.



The Best Farm Engine in the World.

AUTOMATIC CUT-OFF,

Less Fuel, Less Water, Less Repairs than any other Portable Engine.

No Commission to Agents! Bottom Price to Purchasers! Engines for all purposes, with and without Wagons.

You can save money by buying direct of us. Order early for next season's use. Send for Illustrated Catalogue and Price List.

**ARMINGTON & SIMS, Lawrence, Mass.**

ARMINGTON & SIMS were lately with the J. C. Hoadley Co

## MATTESON & WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

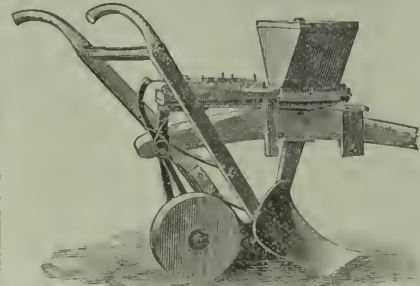
This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

**MATTESON & WILLIAMSON,**  
STOCKTON, CAL.

## UNIVERSAL FAVORITE.

### Easterday's Improved California Planter

For 1879 is now ready for the Market.



This is a No. 1 dropper for Corn, Beans, Peas, and other Seed that may be planted as the ground is plowed, and by its regularity greatly increases the yield, besides the seed and labor saved. Valuable improvements have been made within the past year, and no effort has been spared to make this Machine just what it should be. A large number of these Machines have been sold within the past two years. Our improved Machines have been constructed in the most durable manner, all wearing parts being made of iron. They are easily attached to either single or Gang Plows, and can be thrown in and out of gear conveniently without leaving the driver's seat. When only every second or third furrow is desired to be planted, the lever for the purpose need only be moved backward or forward to stop or start the Machine to operating. Distance of drop, from one to six feet, and easily regulated for amount and distance. Being attached to the Plow Beam by a bar of spring steel, they pass easily over obstructions without in the least interfering with the working of the Plow, while at the same time the Machine is caused to move firmly in the furrow. Price of the improved Machine, \$20. All parts duplicated. Full instructions with each Machine. When ordering call for the Improved Machine.

We also have on hand some of our last year's style Machines, of which the cut here shown is an excellent representation, which we will sell at reduced rates. These are good Machines, and warranted to work perfect. All orders promptly attended to.

**BREWINGTON & EASTERDAY,**

Manufacturers, Watsonville, Santa Cruz County, Cal.  
BAKER & HAMILTON, Gen'l Agts., San Francisco.  
This patent for sale by State Rights, or if desired the whole is offered on reasonable terms.

\$50.

The New

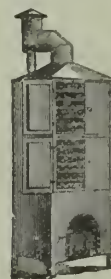
Worthington

Windmill

Manufactured by

W. D. PARSON,

1364 San Pablo Avenue, Oakland, Cal.  
Also, maker of the "Colorado Wind Engine," Wind Cistern Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern of Deep Well and Artesian Lift Pump Cylinders. Circulars free.



## ZIMMERMAN

FRUIT AND VEGETABLE

### DRYER & BAKE OVEN

Over 11,000 in use.

The BEST in the Market.

Made entirely of Galvanized Iron

AGENTS WANTED.

Send for Circular. Address

**ZIMMERMAN FRUIT DRYER CO.,**

Cincinnati, Ohio.

## THE BOSS PRUNER.

Patented January 8th, 1873.

ENTIRELY NEW!

Works on a cog principle. Smallest size cuts one inch, and largest size two inches in diameter. Has been thoroughly tested, and given perfect satisfaction. Sold by

**GEORGE LARKIN,**

Newcastle, Placer County, California.

## SUMMER MUSIC BOOKS!

For the  
Sunday School  
or Mountaineer  
or Seashore  
to read.

### THE GOSPEL OF JOY!

35 Cents. Just out. Great favorite.

### GOOD NEWS!

35 Cents. Well known. Always good.

### SHINING RIVER!

35 Cents. Very beautiful songs.

### GEMS OF ENGLISH SONG!

\$2 50. Best song collection.

### CLUSTER OF GEMS!

\$2 50. Capital Piano Pieces.

### GEMS OF THE DANCE!

\$2 50. Brilliant Waltzes, etc.

Lives of Beethoven (\$2 00), Mozart (\$1 75), Schumann (\$1 75), and others; most interesting; also, *Rever's History of Music*, 2 vols., each \$1 50. *Musical Record* (\$2 00). Good reading; once a week, all the news, and fine selection of music.

*Descriptive Catalogues* (10 Cts.), of almost all Music Books that are published. Very valuable for reference. 1,500 books.

Any book mailed for retail price.

**OLIVER DITSON & CO., BOSTON.**

C. H. Ditson & Co., 843 Broadway, N. Y.

## AGENTS. READ THIS.

We will pay Agents a salary of \$100 per month and expenses, or allow a large commission, to sell our new and wonderful inventions. We mean what we say. Send free. Address **SHERMAN & CO., Marshall, Mich.**

## Stock Notices.

### BERKSHIRES.



Breeder and Importer of the "Crown Prince," "Sambo," and "Bob Lee" families of Berkshires. Also, pure Suffolk hogs and pigs. Short Horn and Jersey, or Alderney cattle. Merino and Cotswold sheep. Prices always reasonable. All animals sold are guaranteed as represented and pedigreed.

**PETER SAXE, Russ House, San Francisco.**



### SPANISH MERINO SHEEP.

Choice stock of thoroughbred Bucks and Ewes, guaranteed free from disease. Purchasers are invited to examine. About 10 minutes' walk from the Railroad terminus, adjoining State University.

**E. W. WOOLSEY,**

Berkeley, Alameda County, Cal.

### THAD STEVENS' COLTS,

### Thoroughbred Mares,

TROTting-BRED HORSES,

And JERSEY CATTLE.

Some of all the above for sale. For particulars address the undersigned,

**R. P. CLEMENT,**

San Francisco, Cal.

### Thoroughbred Spanish Merino Sheep

FOR SALE.



Wool Growers and Sheep Breeders desirous of improvement are invited to examine the *Banner* and *Premium* flock of the State. All 1st Premiums taken at State Fair in 1878, with strong competition. No sheep superior in the world. 100 head yearling and 20 head 2-year old Rams for sale, large sized carcasses free from wrinkles. Heavy shearers, long staple of white glossy wool. A few young Ewes also for sale. All Sheep warranted free from disease. Send for circular and price list or come and see us at once. Laurel Ranch, Haywards, Alameda County, Cal. One mile from depot on C. P. R. R.

**J. H. STROBRIDGE.**

### ANGORAS AT THE FAIRS.

The undersigned would announce to those interested in ANGORA GOATS, and the public generally, that he will have a lot of

### Choice Angora Bucks

On Exhibition at the State and District Fairs

This fall, namely: At the State Fair at Sacramento, the Golden Gate Fair at Oakland, the Nevada State Fair at Reno, and the Oregon State Fair at Salem.

These Bucks will be sold at fair rates.

**JOHN S. HARRIS,**

Hollister, San Benito Co., Cal.

### BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

**JOHN RIDER,**

15th and A Streets, Sacramento City, Cal.

**JOHN ROGERS & SONS,**

GENERAL STOCK AND SALE YARD,

Corner Market and 9th Sts., San Francisco.

HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN. Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

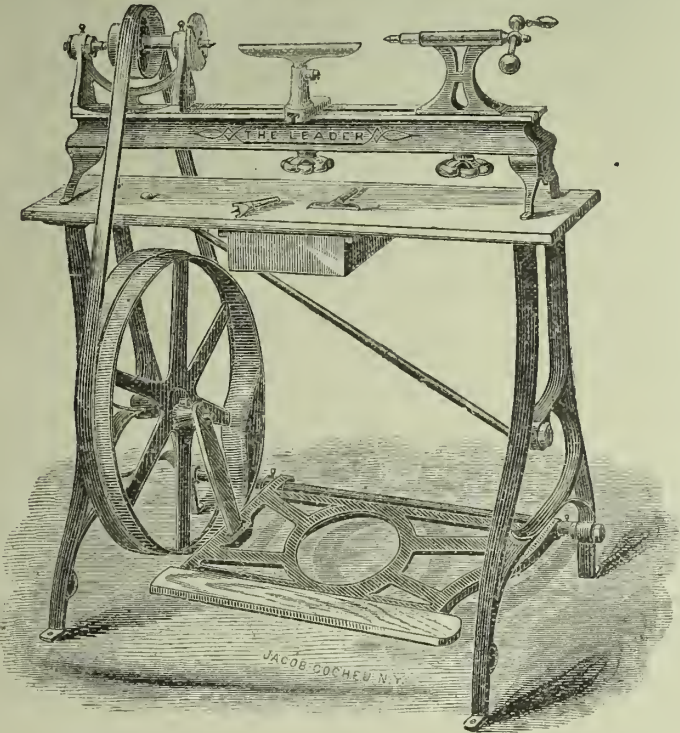


# Dunham, Carrigan & Co.,

Nos. 107, 109 & 111 Front Street, S. F.

## Lathe Without Saw Attachments.

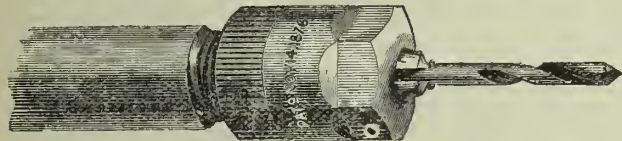
This lathe has been made especially to meet a want felt by many for a really good and substantially made Foot-Lathe at a reasonable price, and we think that we can safely say that it is the best Lathe ever placed on the market at the price asked. The bed, head, and tail stocks are of iron; the spindles of steel. The bearing of the head stock is conical, so that the wear can be easily taken up.



Material eighteen inches long and eight inches in diameter can be turned upon it. The pieces that accompany this lathe without extra charge are two T rests, two plan centers, one spur center for wood turning, and one face plate.

Price of Lathe without Saw Attachments, \$45. Price of Lathe with SCROLL Saw Attachment, \$55. Price of Lathe with both Scroll and Circular Saws, \$70.

## Trump Drill Chuck.



Chuck for drills  $\frac{1}{2}$  and under, Price, \$1.50  
Chuck for drills  $\frac{1}{4}$  and under, Price, \$2.25  
They are made on solid steel plug, centered and readily fitted to Lathe or Drill Press.  
SEND FOR CIRCULAR

— OFFICE OF THE —

## BLACK POINT PACKING AND SLAUGHTER HOUSE.

MERRY, FAULL & CO., Proprietors.

### TO OWNERS OF LIVE STOCK!

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

### SQUARE DEAL and FULL MARKET PRICES

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices.

Please address our

Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.

## BUTTS'

IMPROVED ANTISEPTIC "CHALLENGE"

### Fruit, Vegetable and Hop Drier AND CANNING APPARATUS.

The cheapest, quickest and greatest labor saving Drier ever introduced. Retains the quality, color and flavor of the fruit. The Canning Apparatus has a capacity of from 500 to 4,000 cans per day. Machines varying from 500 lbs. to 10 tons capacity per day constantly on hand. For Circulars, prices, etc., address

WM. BUTTS, Patentee,

S. E. Cor. Spear and Mission Sts., San Francisco. P. O. BOX 1,859.

State, County and Individual Rights for Sale.

## Mission Rock Dock & Grain Warehouses,

SAN FRANCISCO, CAL.

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

Grain received and weighed in free of expense. Wheat Cleaned and Graded. Deep Water Berths for the largest ships. Insurance and storage at the lowest rates. Loans effected on wheat stored in Warehouse at lowest rates. Apply to

CHAS. H. SINCLAIR, Superintendent,

Or to the California Dry Dock Co., Office, No. 318 California Street. San Francisco.

50 Perfumed, Snowflake, Chromo, Motto Cards, name in gold and jet 10c. G. A. SPRING, E. Wallingford, Ct.

50 Perfumed, gilt edge & chromo Cards, elegant case, name in gold, 10c. ATLANTIC CARD CO., E. Wallingford, Ct.

## Winchester Repeating Rifle,

MODEL 1873.



One-third size by Dr. E. H. Pardee.



The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

String measuring from center of target to center of each shot, 32 inches. Average distance of each shot, 1 9-100 inches.

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and cheek stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder.

JOHN SKINKER, No. 115 Pine Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.

## FOR SALE.

### COMPLETE THRESHING OUTFITS,

Consisting of HOADLEY'S STRAW-BURNING ENGINE, 15 horse power, JACKSON'S REMODELED PITT THRESHER, with Feeder, Elevator, Derrick, Forks and Water Wagon,

\$2,500 to \$3,000,

Fully Guaranteed to Equal the Best Improved Outfits in the Market.

Also, one four-sided, six-inch SMITH'S MOLDING MACHINE, and one HOADLEY WOOD-BURNER 12-horse power, at a bargain. Also, new 3 1/2-inch Thimble-Skein Wagons at \$75, and 10-foot WINDMILLS at \$30.

Machine Work and Castings of all Kinds to Order.

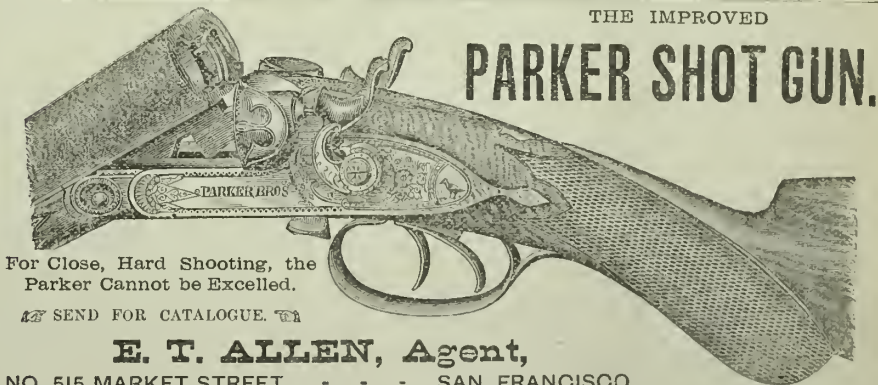
— FOR CIRCULARS ADDRESS —

### Jackson Agricultural Works,

S. E. Corner of Sixth and Bluxome Streets, near S. P. R. Depot, San Francisco.

THE IMPROVED

## PARKER SHOT GUN.



For Close, Hard Shooting, the Parker Cannot be Excelled.

SEND FOR CATALOGUE.

E. T. ALLEN, Agent,

NO. 515 MARKET STREET, - - - SAN FRANCISCO.

Importer of Muzzle and Breech-Loading Shot Guns and Rifles.

Sole Agents for Burgess Repeating Rifles—45 cal, 70 grains; Whitney and Phenix Rifles, Muskets and Carbines; Phenix Single-Barrel Breech-Loading Shot Gun; Allen Rifles, 44 cal, rim fire, very cheap; Lovell & Sons Revolvers, the best and the cheapest.

## PACIFIC

### Bone-Coal and Fertilizing Material Co.

Office, No. 515 Market Street, San Francisco.

### Pure Bone Meal, Superphosphate, Animal Fertilizers, Bone Meal for Chicken and Stock Feed.

In order to introduce our fertilizers, and to prove that we are using nothing but pure materials, and being positive that when properly used they will double the yields of most crops, and at the same time enrich the soil, we are willing to furnish small lots, of 100 pounds and upwards, at low prices.

For Circulars giving information concerning the use of the fertilizers on different crops, apply to or address the Company's office, 515 Market Street, San Francisco.

A. HAAS, Manager.

### Engraving.

Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the MINING AND SCIENTIFIC PRESS, San Francisco, at favorable rates. Send stamp for our circular and samples.

### Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.





Pyrethrum Cinerariae Folium—A California Production.

THE MOST WONDERFUL DISCOVERY OF THE NINETEENTH CENTURY.

This wonderful Insect Powder will exterminate Flies, Weevils, Caterpillars, Mosquitoes, Midges, Crickets, Cockroaches, Spiders, Tarantulas, Scorpions, Ants, Hawk-bugs, Phylloxera, Plant Lice, Moths, Beetles, Grasshoppers, Locusts, Bed-bugs, Fleas, and every species of Insects.

Remember that none is genuine unless my Trade-Mark is attached to every package. Put up in eight-pound cans at \$10 per can, wholesale. Ask your druggists and grocers for it, and take no other to rid yourself of Insects. Sold at \$1.50 per pound or 12½ cents per ounce, retail. Agents wanted everywhere.

\$100 WILL BE PAID IF IT FAILS TO KILL ANY INSECT. Endorsed by Prof. E. W. Hilgard, of the University of California, and by Prof. C. V. Riley, Chief Entomological Commissioner at Washington, D. C., and pronounced superior to any imported article, and perfectly harmless to man and beast.

G. N. MILCO, Patentee and Sole Manufacturer, Stockton, Cal.

### SEMI-ANNUAL STATEMENT

— OF THE —

Grangers' Bank of California

TO THE BANK COMMISSIONERS.

July 1st, 1879.

Amount of capital actually paid in U. S. gold coin \$400,020 00

State of California, City and County of San Francisco—J. W. Colby and A. Montpellier, being duly sworn, severally depose and say that they are respectively the President and Cashier of the Grangers' Bank of California above mentioned, and that the foregoing statement is true.

(Signed) G. W. COLBY, President.

A. MONTELLIER, Cashier.

Subscribed and sworn to before me this, the 2d day of July, A. D., 1879.

(Signed) J. ROBERT REED, Notary Public.

### Statement of the Actual Condition

— OF THE —

Grangers' Bank of California

At the close of business, on June 30th, 1879.

#### ASSETS.

Bills Receivable and Overdrafts secured by Mortgage and other Collaterals.....	\$338,169 71
Real Estate (Bank's interest in Grangers' Building).....	77,200 00
Other Real Estate.....	4,208 70
Due from Banks.....	1,210 28
Office Furniture, Fixtures and Safe.....	3,226 30
Interest accrued.....	16,570 45
Expenses, Taxes, Etc.....	7,120 92
Cash on hand.....	45,515 39
<b>Total.....</b>	<b>\$554,241 75</b>

And that said assets are situated in the following counties, to wit: Alameda, Butte, Colusa, Contra Costa, Inyo, Merced, Kern, Washoe (Nevada), Solano, Sonoma, Stanislaus, San Francisco, Tulare and Tehama.

#### LIABILITIES.

Capital Stock paid in gold coin.....	\$400,020 00
Due Depositors.....	92,180 81
Bills Payable (Mortgage assumed on Real Estate).....	40,000 00
Dividends left in Bank.....	1,293 60
Interest and Loss and Gain Accounts.....	20,757 34
<b>Total.....</b>	<b>\$554,241 75</b>

State of California, City and County of San Francisco—G. W. Colby and A. Montpellier, being each duly sworn, severally depose and say that they are respectively the President and Cashier of the Grangers' Bank of California, above mentioned, and that the foregoing statement is true.

(Signed) G. W. COLBY, President.

A. MONTELLIER, Cashier.

Subscribed and sworn to before me this, the 2d day of July, A. D., 1879.

(Signed) J. ROBERT REED, Notary Public.

### AMERICAN MACHINE AND MODEL WORKS.

Experimental and Fine Special Machinery, Planing, Gear Cutting, Patterns, Models for Inventors, etc. Printing Press and General Machine Repairing. Punches, Dies, Taps, Reamers, etc., made and repaired.

I. A. HEALD, Proprietor.

514 Commercial Street, above Sansome, San Francisco

### MONEY TO LOAN

AT LOWEST RATES,

ON FIRST-CLASS COUNTRY REAL ESTATE AND OTHER APPROVED SECURITIES,

McAFEE BROS., Real Estate and Loan Brokers  
202 Sansome Street, San Francisco.

### WANTED—100 FARMERS.

We will give the use of 50 acres or more of choice land, rent free, for one year, with the privilege of purchasing at a low price thereafter; crops of all kinds may be planted nine months of the year. Apply to

J. F. GREENMAN,  
Room 10, No. 320 Sansome Street, San Francisco.



SOLE PROPRIETORS AND MANUFACTURERS

— OF THE —

### Celebrated Detrick "E W" 22x36 Grain Bag.

CALCUTTA, DUNDEE and PACIFIC JUTE HAND-SEWED BAGS always on hand. OUR No. 1, No. 2 and No. 3 SECOND-HAND GRAIN BAGS selected and graded with care.

### TWINES.

3, 4 and 5-ply for Grain Bags, 6 and 8-ply for Potato Gummies, 3-ply EXTRA FINE for Flour Bags, made expressly for our trade and QUALITY GUARANTEED.

FLOUR BAGS Printed to Order WITHOUT EXTRA CHARGE. POTATO GUNNIES, Wool, Bean, Ore and Salt and Seamless Cotton Bags.

### Tents, Awnings and Hydraulic Hose.

ORDERS PROMPTLY FILLED AT LOWEST MARKET RATES.

119, 121 and 123 Clay St., and 118 and 120 Commercial St., San Francisco.

### READING RANCH,

Shasta Co., Cal.

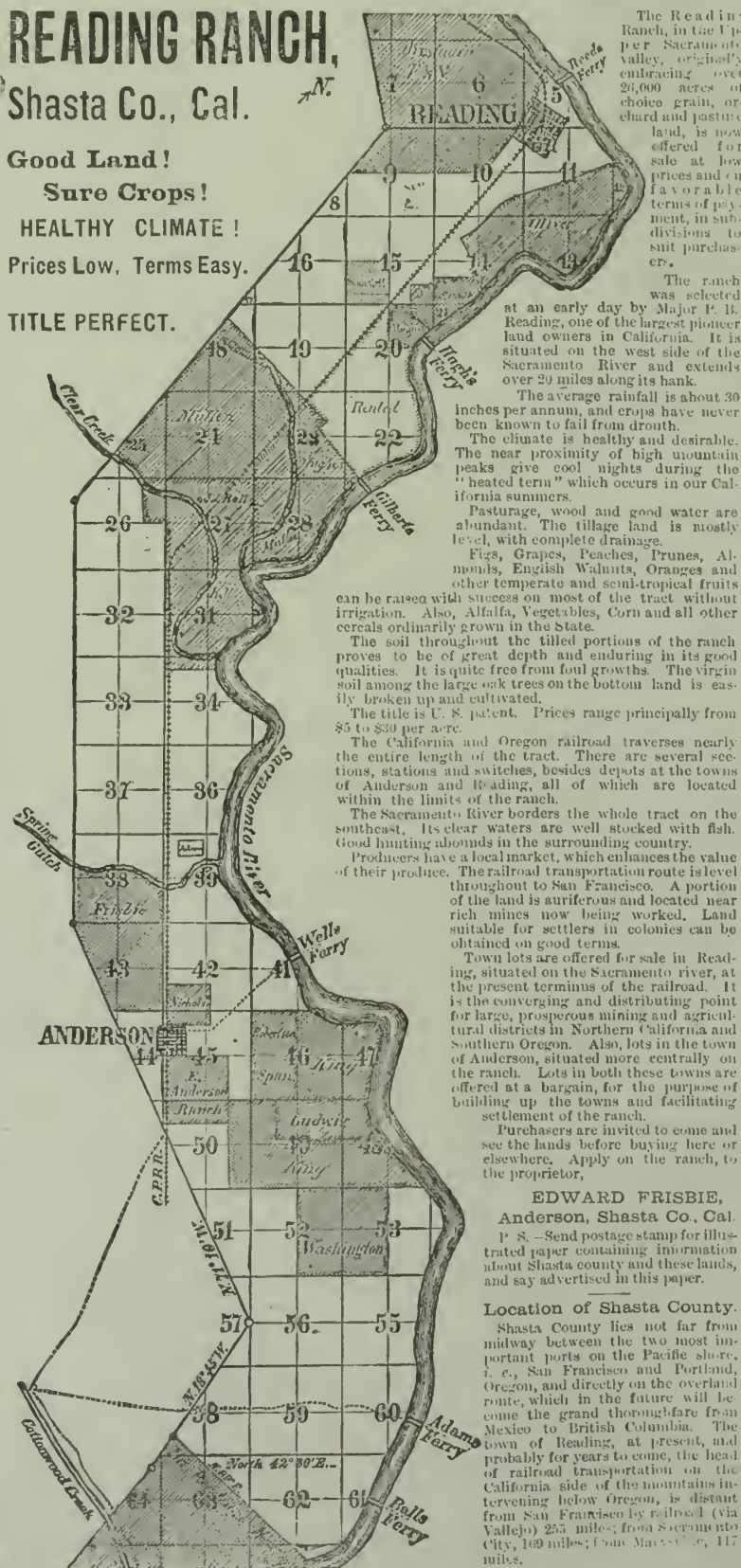
Good Land!

Sure Crops!

HEALTHY CLIMATE!

Prices Low. Terms Easy.

TITLE PERFECT.



The Reading Ranch, in the Upper Sacramento valley, originally embracing over 26,000 acres of choice grain, orchard and pasture land, is now offered for sale at low prices and on favorable terms of payment, in subdivisions to suit purchasers.

The ranch was selected at an early day by Major F. H. Reading, one of the largest pioneer land owners in California. It is situated on the west side of the Sacramento River and extends over 29 miles along its bank.

The average rainfall is about 30 inches per annum, and crops have never been known to fail from drought.

The climate is healthy and desirable. The near proximity of high mountain peaks give cool nights during the "heated term" which occurs in our California summers.

Pasturage, wood and good water are abundant. The tillage land is mostly level, with complete drainage.

Figs, Grapes, Peaches, Prunes, Almonds, English Walnuts, Oranges and other temperate and semi-tropical fruits can be raised with success on most of the tract without irrigation.

Also, Alfalfa, Vegetables, Corn and all other cereals ordinarily grown in the State.

The soil throughout the tilled portions of the ranch proves to be of great depth and enduring in its good qualities. It is quite free from foul growths. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

The title is U. S. patent. Prices range principally from \$5 to \$30 per acre.

The California and Oregon railroad traverses nearly the entire length of the tract. There are several sections, stations and switches, besides depots at the towns of Anderson and Reading, all of which are located within the limits of the ranch.

The Sacramento River borders the whole tract on the southeast. Its clear waters are well stocked with fish. Good hunting abounds in the surrounding country.

Producers have a local market, which enhances the value of their produce. The railroad transportation route is level throughout to San Francisco. A portion of the land is auriferous and located near rich mines now being worked. Land suitable for settlers in colonies can be obtained on good terms.

Town lots are offered for sale in Reading, situated on the Sacramento river, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

Purchasers are invited to come and see the lands before buying here or elsewhere. Apply on the ranch, to the proprietor.

EDWARD FRISBIE, Anderson, Shasta Co., Cal.

P. S.—Send postage stamp for illustrated paper containing information about Shasta county and these lands, and say advertised in this paper.

Location of Shasta County. Shasta County lies not far from midway between the two most important ports on the Pacific shore, i. e., San Francisco and Portland, Oregon, and directly on the overland route, which in the future will become the grand thoroughfare from Mexico to British Columbia. The town of Reading, at present, and probably for years to come, the head of railroad transportation on the California side of the mountains intervening below Oregon, is distant from San Francisco by railroad (via Vallejo) 255 miles; from Sacramento city, 169 miles; from Marysville, 117 miles.

### LAND FOR SALE OR RENT IN SUB-DIVISIONS.

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y.

JEWELLER.—E. E. Stacy, Reading, repairs all kinds of watches and jewelry. Refers by permission to the publishers of this paper.

Baling Fencing Telegraph Telephone Galvanized

WIRE

### Barbed Fence Wire.

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the Trademark.



A. S. HALLIDIE

Wire Mills.

Office, No. 6 California St.

SAN FRANCISCO.

WIRE ROPE and CORDAGE

Of every kind on hand or Made to Order.

### GOLDEN GATE ACADEMY.



A first class Boarding and Day School. Location unsurpassed; methods most approved; health preserved and physical development secured by daily gymnastic and brief military drill. Preparatory department for ladies in successful operation. Attention invited to methods and terms. Address for particulars.

H. E. JEWETT, A. M., Principal,

Oakland, California.

N. B.—The next school year will commence July 29th, 1879

### THE WILSON ADJUSTABLE CHAIR.

With 30 Changes of Position.

Patented in the United States and Foreign Countries. BEST CHAIR IN THE WORLD.

Parlor,	Combining
LIBRARY,	Beauty,
Invalid Chair	Lightness,
Rocking,	Strength,
BED or	Simplicity
LOUNGE	and
	Comfort.

READING POSITION.

Same Chair in Cane Seating, very desirable for summer. Manufactured of the best of wrought iron and rivets. Custom made purposely for the Chair. Everything to suit exact science. **IT WILL LAST A LIFE-TIME.**

Has been awarded Medals, Prizes and Diplomas for its superiority and merit which it has been exhibited. Orders by mail promptly attended to. Goods shipped to any address. C. O. D. Sent for Illustrated Circular.

Address the WILSON ADJUSTABLE CHAIR MFG CO.,

535 Washington St., Boston.

### CHEAPER YET!

### Tension Sewing Machines!

A large number of nearly new genuine SINGER, WHEELER & WILSON, HOWE, WOOD, WILSON, GROVER & BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

NO TENSION MACHINE.

Wilcox & Gibbs' S. M. Co.,

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.

M. COOKE.

R. J. COOKE

### PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,

AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOK & GREGORY.

### FOR SALE.

Three Young Short Horn Bulls,

Ready for use. Selected from the old established herd of W. L. Overhiser, and got by that beautiful Gwynne bull, "Minstrel Duke," whose sire, "Kirklevington Duke, 2d," and dam, "Oxford Minstrel, 2d," I bought in England and now own. Pedigrees guaranteed.

ROBERT ASHBURNER,

Baden Station, San Mateo County, Cal.



# PACIFIC RURAL PRESS

Volume XVIII.]

SAN FRANCISCO, SATURDAY, JULY 19, 1879.

Number 3.

## The Dairy Industry.

The dairy industry was the last to be affected by the era of low values which has come upon our agricultural production. As cheese and butter prices were upheld longer than the produce of most other specialties, there was a continual and rapid growth of dairy production, as it was the industry to which other clouded specialties transferred their capital and energies. This was true not only in California, where the discovery that many districts were adapted to dairy production led to a great increase of productive power, but it was also the disposition of affairs at the East, where the dairy regions spread westward from New York and Ohio until the great Northwest rushed forward immense shipments of cheese and butter; some of it of peculiar excellence, as shown by the premiums captured by the West at the Centennial and at the great dairy fair last year in New York city. The result of this rapid growth of the interest now tends to depress the value of its products even lower perhaps than the general decline in produce prices. East and west dairymen are now down to bedrock and even boring into it, because it is doubtful whether much of the produce sold brings its actual productive cost. At the East, in spite of the splendid outlet which was found in the English consumption of cheese, there is now a range of rates which is depressing to contemplate. We notice that the choicest central New York factory cheese is now sold by the carload at five and six cents a pound—prices which the most degraded, leathery "skims" would have recoiled from four years ago when we were connected with the dairy interest of New York. It is little wonder that such values are exerting an influence toward reducing the dairies and lessening zeal, and the result will be a flight from dairying on the part of those who perceive a chance for better compensation in other lines of production. Nothing but the severest cheapening of the cost of production and the elimination of all wastes will enable producers to survive the financial drouth which must be felt when the best cheese nets producers but about four cents per gallon of milk and leaves him to discover how he can produce it at that price.

In California the situation is relatively similar, except that rates have not dropped quite so low on the average. Still, they are altogether too low for comfort, both in cheese and butter, and there are large amounts of each held in the hope of improvement. With these visible supplies it is difficult to see chances for large and immediate improvement, unless there should follow a year which would curtail production. It is reasonable to expect a gradual strengthening of the market during the coming months, because the season of reduced yield has set in. But whatever clearance of supplies is accomplished must be done by straightforward eating on the part of consumers, and whenever the price reaches a certain amount, the cheap Eastern dairy goods will surely flow this way and prevent any notable improvement.

It is not easy to prescribe a way by which dairymen may get rich at present prices. It would be like telling them how to make something from nothing, which is a creative ability not entrusted to mortals. The only advice would be for those whose lands are particularly adapted to dairying, and to nothing else, to stand by the ship, to clear the decks of every thing which can be dispensed with so as to lighten the craft for shallow water. Wherever a reduction can be made in cost of production it must not be overlooked. Labor must make concessions because of the reduced value of its products, and if men should double their exertions it would only be a fair contribution from them to the safety of the ship they sail in. Unusual inquiry and test should be made to determine the quality of the cows, for take the dairies through there is many a cow which does not pay her way, and thus occupies the place of a better one which would make a small contribution to the general fund. A poor cow is like a poor tool, always a hindrance, and in an emergency is both a detriment and a danger. There must be the greatest effort made to reach the

highest quality in the product either of butter or cheese, for the best brings little enough and the poorest is sacrificed and its producer perishes with it. Everything must be done in every way to hold the property, and the investment in appliances, above water until the turn comes, for a turn in affairs will come, because the present experience will drive from the industry those whose abilities or properties do not enable them to creep along at present prices.

### CULTIVATION AND ABSORPTION OF WATER.

It seems from correspondence from East India that agriculturists there are noticing the effect of water absorption by deeply cultivated land, and its consequent ability to maintain vegetation, while shallow worked soil became parched and barren. Thus, in India as here, the question of substituting cultivation for irrigation is engaging the attention of the people. A writer in the London *Agricultural Gazette* maintains the affirmative of the proposition. It seems a cyclone visited the Madras country in May, and in a short time about four and one-half inches of rain fell. The observer writes: "I have rarely seen so marked a result of the after effects of the rough cultivation as this storm afforded. Although in most places the land hereabouts was broken up about a month or six weeks ago, after some unusual showers which fell then, the river which flows past my house rose rapidly, showing that evidently a very considerable portion of the rain which fell over the country in general ran off the surface. On some land, which has been under, comparatively speaking, deep cultivation for several years, the surface drains scarcely showed that there had been any flow of water in most places. The significance of this fact can be well understood; for, if we can, by the simple process of deepening our arable soils, retain in them a great proportion of the rain which falls on them, we shall, of course, be better able to withstand drouths, by making use of the rains which do fall, and which fall so frequently in heavy falls at widely distant periods."

**SALMON DISEASE.**—The salmon disease afflicting the fish of Scotland is causing considerable anxiety, and it is feared that it will extend to all the rivers of the country. Sir Robert Christison, Bart., describes the disease as "a branching fungus which attaches itself in the first instance to those parts of the fish which are destitute of scales." The irritation thus produced causes the fish to rub its scales off against the sand and gravel, in doing which great cuts and gashes are inflicted, leading to death by exhaustion. Carefully conducted inquiry has failed to reveal the cause of this epidemic, which last year killed multitudes of salmon and seems no less destructive this year. There is no longer any disposition to attribute it to town sewage, as experts agree that the influence of all the refuse that goes into the rivers is inadequate to account for it.

## Agricultural Indians in Arizona.

We take from Mr. Conklin's "Picturesque Arizona," published by the Continent Stereoscopic Company, of New York, a portrait of a Navajo Indian youth, which certainly shows an aboriginal inhabitant in a much better condition of dress and with a face more generously endowed with signs of intellect than are generally seen either in person or in picture, since the Indian has fallen from the grasp of Fennimore Cooper. This young red skin is of the Apache nation, though of a tribe which seems of more human mold than its congeners. It is the testimony of ex Gov. Stafford, of Arizona that since the subjugation of the Apaches they have shown a



A YOUTH OF THE NAVAJO TRIBE.

decided disposition to abandon their barbaric arts and to settle down into self-supporting and peaceable tillers of the soil. It is also stated by Col. Hinton in his "Haudbook of Arizona" that the Navajos have exhibited no little high-mindedness and are executing manufacturing and productive works which certainly do them great credit.

As the Navajos have thus enrolled themselves in the rank of industrialists, it is but fair that we should give them the recognition implied by giving this young man the place of honor on our pages. Col. Hinton states that the Navajo reservation, by treaty of June 1st, 1868, is located in the northeast corner of Arizona and adjacent portions of New Mexico; it comprises an area of 5,200 square miles, or 3,328,000 acres, about half of which is pastoral land, but little adapted for cereals or vegetables. An addition of six miles in width at the south end would greatly increase the cultivable portion. On this strip they have for several years raised corn and wheat. Although of the main branch of

the Apache people, they differ in their tribal organization, in the manufacture of superb blankets, and their agricultural and pastoral habits. Their stock consists of about 15,000 horses, 200 mules, and 1,000 cattle. They raise annually about 3,000,000 pounds of corn, and succeed well with pumpkins and melons. Peaches of good size and flavor are raised by them in the Canyon de Chelly. Their blankets are a perfect protection against rain, wonderfully warm, and sometimes command as high as \$125 each. These, with sashes, leggings, etc., they sell to the amount of \$20,000 annually. The wool for white yarn they obtain from their own sheep, estimated to number 400,000; and in addition to the wool used in the manufacture of blankets, they sold 200,000 pounds in 1876. The men are as expert with the needle as the women, and have often been seen, on getting the goods from the agent, to make their own shirts and pants, and to appear in less than half a day with an entire new suit. They number 5,852 males, and 6,106 females. Of the whole number, 3,500 are of mixed blood.

## California Porcine Interests.

We know of no country where the hog is grown in a way better calculated to promote its bodily health, and consequently insure wholesomeness in its flesh, as an article of human food, than in California. The animal generally has the run of the ranch. The breeze fans his cheek, the sun warms his swarthy hide, and free field for exercise makes his blood active and pure. In its season he has abundance of natural green forage, and most growers take measures to insure a longer supply by irrigation and alfalfa or some other green crop. In some parts of the State he has generous fruit lunches during the dry months, and even the grateful grape has sometimes figured in his menu. Everywhere he has light, air and freedom. As a result of this system of growth the California hog, as a rule, does not assume the weight of fat taken up by his confined and corn-fed Eastern cousin, for here he is not put upon his grain diet until just as he enters the shadow of the butcher's knife, and then he is commonly forced to harvest his own grain, and even in fattening has exercise enough to keep him healthy. Although this system of feeding is not so conducive to laying on of adipose as a life of greedy gormandizing in close quarters, it can be fairly claimed to produce a healthier flesh, which is certainly a point to be regarded by consumers.

Upon another page of this issue of the PRESS will be found some facts about the healthfulness of California hogs in an article contributed by a Santa Barbara physician to our leading medical journal. The position taken by the writer is eminently true, and is borne out by our own observation and by the reports which we have received from butchers and pork packers. Not only are our swine freer from liver disease, but other diseases even more dangerous in their effects upon eaters of pork are noticeable by their rarity or absence. We have occasionally submitted to us for examination a piece of "measly" pork, but we have never yet found in California pork that other parasite, the trichina, which are far too prevalent in Eastern swine flesh. It has been discovered by the European official food examiners that many of the American hams which are imported into European countries contain the encysted trichinae, and we only lately read a report of a large number of these hams which were condemned after microscopic investigation. It cannot be doubted that the trichinae is much more common in Eastern pork than the occasional cases of trichinosis in human subjects would indicate, for the American habit of thoroughly cooking meat kills the parasites, and yet if the danger exists it is quite sure to break out now and then through indulgence in partially cooked or raw smoked pork. We do not desire to be alarmists nor to take share in the cry of "trichinosis," which is often raised for sensational purposes, but while the disease is known to exist in Eastern pork and has never yet been found in Californian, it is quite fair to turn the attention of California pork eaters toward home-grown produce in preference to the imported.

Pork packing and curing in this State is each year making commendable progress, but there should be still greater efforts put forth to substitute California for Eastern meat products in our markets. Some time ago we announced that the United States Government had so far overcome its prejudice in favor of Eastern provisions that our local producers are permitted to enter bids for their own goods for army and navy supplies. This is but just, for there is no reason why California taxes should be expended for the enriching of other agricultural interests. There are also springing up local curing establishments at different points in the interior by which the local demand for smoked meats is supplied. All these will have an influence toward making us self-dependent in the matter of hog products and will bring greater prosperity to meat producers. We would urge upon all consumers the advisability of patronizing California curing establishments as far as their interests permit.





## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—EES

## Lumber, Mining and Tourists in Fresno County.

EDITORS PRESS:—Though crops in Fresno county are generally light, except on the few lands well wet by irrigation or mountain rains, other interests are giving considerable life to Madera, Berenda and Borden. Madera is not only the railroad terminus of the great lumber flume 52 miles long, which winds along Fresno river, and has brought millions of feet of timber from the sawmill seven miles northeast of Fresno Flats, but is the point of departure for Washburn's stages, which carry a large part of the Yosemite tourists, to visit that beautiful valley, some 400 having passed over this popular route from May 4th to July 4th. Again, large amounts of supplies are shipped from below to Madera and Borden for the

Lake Mining District, of Mono County. And intermediate mines of more or less recent development, around Fresno Flats as a center; also for the new mining districts along the upper San Joaquin, in the eastern edges of Fresno county, on the western slope of the highest ridges of the Sierras, and only from 10 to 15 miles east and northeast of Mammoth City. These supplies are hauled by freight teams to Fresno Flats and to still higher points, and are thence carried to their various destinations by pack trains, Mammoth City, the extreme point, being from 50 to 65 miles from Fresno Flats, according to various rough trails. To enable passengers to reach the Lake district and Bodie, by a quick route, a coach is run from Berenda twice a week (Tuesdays and Fridays) and these connect with

French's Saddle Train at Fresno Flats, The horseback ride being made to Mammoth City in a day and a half. By this route it is possible by hard riding, to make the trip from Mammoth City to San Francisco in 32 hours. The usual time from San Francisco to Mammoth City this way, is 22 hours to Fresno Flats, and 26 thence to Mammoth, or 48 hours, spend one night on cars and in Berenda, a second night at Beasore Meadows, some 20 miles east of Fresno Flats and 38 miles west of Mammoth. Fare by this route is \$14 to Berenda from San Francisco and return, and \$10 by stage to Fresno Flats and return, thence \$25 to Mammoth City and return, or about \$25 for the trip each way. The saddle train usually passes the only sawmill that is supplying lumber from

## The Great Timber Belt

On the south side of the San Joaquin in Fresno county. This mill was erected in '73 and '74 at a cost, with the necessary roads, of about \$50,000. Sawing and the building of their flume commenced in June, '74, and the flume was completed in August, '76, requiring about 7,000,000 feet of lumber, costing between \$225,000 and \$250,000, according to the Secretary's books. It is the longest flume in the world, making a descent to Madera of over 4,400 feet, about one-third of this being made in the first five miles from the mill. The original company was known as the California Lumber Company. But the property changed hands last August, the present company, which is vigorously pushing the work ahead, being known as

## The Madera Flume and Trading Co.

Juan Malarin is President, E. McLaughlin, Manager; remaining stockholders, C. T. Ryland and Return Roberts, all of San Jose. Wm. H. Thurman and James Dickinson, stockholders in the original company, now have a contract to cut, saw and pile the lumber at the mill. This mill runs by steam two five-foot circular saws and one gang edger, easily averaging 40,000 feet per day. They have turned out in the last five years, over 20,000,000 feet of lumber, and will saw from 5,000,000 to 6,000,000 feet in the next five months. From November to May they are obliged to stop operations on account of the heavy rains and snow, the latter falling sometimes to a depth of 10 feet there and on their timber claim, at altitudes varying from 4,500 to 6,000 feet.

The great timber belt of the Sierras is about 10 miles wide here, extending in all

## Over 400 Miles.

From Keru river on the south into Oregon on the north, its general width varying from five to ten miles; altitude, from 4,000 to 6,000 feet. The sugar pines and firs here reach diameters from six to nine feet, and produce excellent lumber when carefully selected. The fencing and scantling made from the best firs is establishing a reputation equal to Oregon pine, Henry Miller having used 400,000 feet of fencing sawn from firs. He strongly endorses it as equal to Oregon pine, as Mr. Thurman informs me. Redwood posts are also shipped in large quantities by the flume. They are cut from the smaller members of the big-tree family (*Sequoia gigantea*). They are quite as lasting as those from the small redwood (*Sequoia sempervirens*). In the North and South grove of big trees, extending from two to three and one-half miles north of the Company's mill, are about 500 of these trees, varying in diameter from 4 to 30 feet, to say nothing of numerous small ones.

## The Three Sisters

Are large, handsome trees in a straight line, the outer ones not being more than 100 feet apart.

The girth of the largest is nearly 100 feet. Their height varies from 250 to 350 feet. Fresno Flats is becoming an important station as the center of the gold mines of this county and a stopping point for teams, stages, pack trains and saddle trains. Its height above the sea is 3,150 feet, its climate is healthy and a fine type of the best mountain climate of California. It is surrounded by a number of very fine mountain ranches, where plenty of hay, potatoes, vegetables and fruit are produced. Some of them are provided with water for irrigation, which is very valuable in a season like this. This is especially true of the fine ranch of Wm. H. Crooks, settled by him in 1853, about six miles down the Fresno river from this point. His ditch and flume cost him about \$1,200, and his ditch now supplies water for the arastras of the valuable Enterprise mine, a mile from him. A future letter will give your readers some facts about mining interests of Fresno county.

J. W. A. W.

Fresno Flats, July 4th.

## Notes in Napa and Sonoma Valleys.

EDITORS PRESS:—Two weeks of rest and quiet have we enjoyed moving about through the beautiful valleys of Napa and Sonoma. In and about St. Helena business seems active, judging from the number and variety of stages and private conveyances full always of pleasure and health seekers. The vineyards covering the greater portion of this valley promise a bountiful harvest. We were informed that the shipment of wines and other products has doubled in two years at this point.

Calistoga puts on its usual amount of activity upon the arrival of trains, especially in and about the Magnolia hotel, the starting point of all stages for the interior. From this point we enjoyed a pleasant drive of less than an hour through Knight's valley to Kellogg, where all nature in her freshness and quiet seemed to extend a glad welcome. There were grassy lawns flooded with most golden sunlight, trees laden with promise of profuse ingathering of fruit, and water cool and clear added a delightfully refreshing murmur everywhere. Fragrant flowering vines cover the low porches, surrounding the main hotel building, providing a cool shady retreat at all hours. The neatness, order and refinement pervading all ordering of affairs at this place, coupled with the courtesy of Mr. Hastings and Mr. and Mrs. Steele, created the desire for an unlimited stay in this care-free oasis of peace and beauty; but pressure of business forced us onward, so over the mountains we journeyed toward the Geysers.

The grandeur of the scenery along this route is too familiar either by eye-witness or through the pen of others to need comment from us. After a night's rest at this place of nature's great wonders, partaking of the hospitalities of the Geyser hotel, the popularity of whose proprietor is well earned by his unwearying efforts for the comfort and enjoyment of his guests, we took our way led into Sonoma valley along the banks of Sulphur creek, to Cloverdale and Geyserville and to Skagg's Springs, where we enjoyed an entertainment by amateurs on the evening of the Fourth.

The waters of these springs are said to possess wonderful medicinal properties which will yet make them the resort of thousands in search of health. Here ended our vacation, and once more relentless business claims us. J.

## The Blue Side.

EDITORS PRESS:—One of your Los Angeles correspondents writes a very discouraging, disheartening, sickening account of farming in his section of country. Only a small proportion of the grain is harvested, the remainder goes for sheep ranch, and that is all the land is fitted for. Only here and there in that semi-desert can anything much be raised, and many thousands of hard cash have been thrown away by planting where nature's laws are against man, although as fine crops as he ever saw have grown there. Half his bees are dead, and the prospect is flattering for the other half to go the same road.

I sincerely sympathize with this correspondent in his ill-luck and misfortunes, but the fact is he is a little blue. He, and others as well, must not be so easily discouraged. He must pick his flint and try again. Farming, as all other pursuits, has its ups and downs, and no section of country is free from occasional misfortunes and losses of crops. I hope this correspondent will see better times next year. I lived in Kansas in 1874. It was a year of drouth. No corn was raised; a little wheat here and there was spared by the millions of chinch bugs and army worms; a few grapes were saved from the swarms of rose-bugs by constantly going over the vines with brooms; a very few cabbages and potatoes were rescued from the armies of grasshoppers that darkened the air like a thick falling snowstorm, taking every green thing; while the borers were destroying our fruit trees like a raging fire. Theague shook the last breath of life out of some of us, and the cerebro-spinal meningitis threatened to decimate the entire population. Everybody was in debt, every farm was mortgaged for three times its selling value. Thanks to kind aid sent in from other States, even distant, generous California, we lived through it all; and now Kansas is one of the most prosperous States in the Union. So it is ever and every-

where. The better way to meet these inevitable reverses is to pursue a more diversified system of farming. No two seasons are exactly alike, and no two crops are exactly alike successful every year. There are always seasons favorable to some crops and unfavorable to others. With a diversity of crops, some are sure to succeed every year, and the farmer is not left entirely destitute. It is a good rule—far too seldom adhered to in California—for the farmer never to buy anything that he can raise on his farm. And the longer I live in California, the more I find that he can raise many more things than he is accustomed to suppose. When he learns to raise all his own fruit, all his own vegetables, his own pork, and beef, and mutton, as well as all his necessary wheat, corn, barley, beans and sorghum molasses, he will find that, although some of these will fail some seasons, yet most of them will succeed most seasons, and all nature will not present so cerulean a hue as to make him sick unto death. And when, as will sometimes happen, the worst comes to the worst, let him search diligently for the brightest side and keep his eye unwaveringly upon that. S. P. SNOW.

Santa Barbara, Cal.

## California Grown Insect Powder.

EDITORS PRESS:—In answer to your inquiries concerning the plant which I introduced from Dalmatia, for the manufacture of insect powder, I reply as follows: In regard to the article in the *Canadian Entomologist*, on "insect powders," I have not seen it, but I have seen an article in the New York *Weekly Tribune*, of May 14th, quoted from the *Entomologist*, giving my powder the credit of being fresher, stronger, etc., than the imported powders, and the editor of the *Entomologist*, Mr. Sanders, gives it as his opinion that the *Pyrethrum Cinerario folium* powder was far superior to the *Pyrethrum carneum* and *Pyrethrum roseum* powders. He speaks of the *Pyrethrum Cinerario folium*, as being a Dalmatian plant. Now the New York *Tribune*, in its remarks, credits me with raising the *Pyrethrum carneum* and *Pyrethrum roseum*. You will oblige me very much by stating through your worthy paper that my plant is of Dalmatian origin, and is nothing more nor less than *Pyrethrum Cinerario folium*.

I am of full belief that there is no such difference in the material known in commerce of the world as insect powders, no matter whether they are sold as "Persian Insect Powders," or as "Dalmatian Insect Powder." I claim that there is no difference between the Persian or Dalmatian, or mine; the true active principle is alike in all the powders offered to the world. There is the same smell and the same color. The only difference that I can find between my powder and all the powders that are imported to this country is this, that the so-called "Persian," and the so-called "Dalmatian" powders, are heavily adulterated before they reach the hands of the consumers. I will here prove that this must be the fact. The price of the imported powders from Dalmatia at present is 70 cents per pound in San Francisco; this being the wholesale rate, while the same powder is quoted in New York from 75 to 90 cents per pound. The whole of this is imported from Trieste. The price of the blossoms on the plantations in Dalmatia, in the vicinity of the City of Ragusa, was 80 cents American coin per pound for the same crop that sells at 70 cents per pound in San Francisco by our wholesale druggists. Now then, the speculators that are purchasing the blossoms in Dalmatia ship them to Trieste, a distance of over 300 miles, by steamers. The freight is considerable to Trieste, and there is a loss of about 4% in grinding the blossoms to insect powder, which is done exclusively in Trieste. The man who purchases the blossoms at 80 cents on the plantations in Dalmatia sells them in Trieste at a round profit above all expenses of at least five cents per pound. The merchant at Trieste that grinds it loses 4% in milling, as above stated, and he packs the powder into suitable packages for exportation to New York, and makes from 3 to 10 cents per pound on the New York merchant. The New York merchant pays the freight and makes a handsome profit by selling to his customers; besides he pays the Custom-house duty. Now then, how is it and why is it that all of the druggists are making so much profit on the powder they sell from foreign countries at a less price than the blossoms bring on the plantations?

I have submitted my powder to scientific men in America and Europe and they pronounced it, long ago, a superior article, as the climate and soil of California are particularly favorable to the plant after it is once acclimated.

Prof. C. V. Riley calls my attention, in several of his letters, of his trials on different insects, and of several articles published in the New York *Tribune*, wherein he records his own experiments. I have sent him a large supply of my powder of this year's growth at his request, with which he will go South to experiment on cotton worms. Prof. Gamgee, at Prof. Riley's instance, has decided to try its effects as an anti-yellow fever remedy and upon other lower forms of life that are invisible.

## Distribution of Pyrethrum in Europe.

I will here again state upon the subject of the plant, and I wish this to go before the world, that I find in my experience as a native of Dalmatia that the plant which is named by

scientific men *Pyrethrum Cinerario folium*, now extensively cultivated in the southern part of Dalmatia, a portion of Herzegovina, and Montenegro, has been known to exist in a wild state in the same country, but it was not cultivated until about 16 years ago. I claim that the plant was originally brought in seed from Persia by the historical and beautiful little European quail. The migratory quail has its young in Persia and remains in Persia from early spring until the 25th of August of each year and then emigrates from Persia to Africa, beginning on the 25th of August and continuing until about the 1st of November of each year. They remain in Africa during the winter, and in the spring they go back to make their nests in Persia. These quails start from Persia in the evening and the next morning they are generally in Africa before daylight. But if the wind is blowing during the night from the northeast, you can find millions of quail in the very territory where the celebrated *Pyrethrum Cinerario folium* is found to grow wild, and I am sure that the quails have deposited the seed of this valuable plant and this seems to me to decide the identity of Persian and Dalmatian insect powders. You cannot find any quail in any contiguous country where this plant does not grow. The same quails remain only one day in Dalmatia, Herzegovina and Montenegro, and the next evening they start for Africa. If the wind is favorable to them they get there; if not they are scattered all over Italy, France and Germany, and even England. On many occasions millions have perished in the Mediterranean sea, on account of two winds meeting each other while they are flying, and at times ships have been covered with many dead quails where the tempest would overtake them.

I have endeavored to give you a history of this plant, as I have made it my study for a good many years, and I am of the opinion that in less than five years, if I am encouraged, that we shall produce a very superior article of insect powder in California to supply the world.

G. N. MILCO.

Stockton, Cal.

## THE DAIRY.

## The Santa Clara Cheese Factory.

A reader sends us a copy of an account of this establishment from the *Echo*, with request for its publication in the Press. As our correspondent, G. W. M., made the factory the subject of a letter in our issue of May 3d last, we shall take from this later article only such points as were not mentioned in the letter of G. W. M. Following this guide, we quote as follows:

It is required that the milkings of night and morning be kept in separate cans, and great care is taken not to receive any milk which contains any impurities or has been skimmed or adulterated. Any person delivering impure, skimmed or adulterated milk, is subject to a heavy fine.

For those who desire to feed the whey to calves, a portion is kept in a separate tank and boiled, by which process it is kept sweet for at least 24 hours. For feeding hogs only sour whey is desired.

In pressing the curd or cheese an invention of Mr. Cole, of Gilroy, is used, called the telescope hoop, which is a great improvement over the old method, and enables the pressing of four or more cheeses under one screw, where only one cheese could be turned out at a time by the old-fashioned manner. The factory has facilities for pressing 900 or more pounds of cheese at once by the present improvement.

At present the factory is turning out about 500 pounds a day, with facilities for about double that amount, and an abundance of room to increase the facilities as the business may require. About eight pounds of milk, or a pound less than a gallon, is required for a pound of cheese, so that the present quantity of milk used is from 450 to 560 gallons a day. The yield of cheese from curd is 75%, 40 pounds of curd making a 30-pound cheese. Milk is hauled to the factory by parties living eight miles off, Messrs. Spence and Weller, two of the principal patrons, living in the vicinity of Milpitas. Thus it will be seen the factory furnishes farmers within a radius of 16 miles square a profitable market for their milk.

The demand for the company's cheese has steadily increased from the day the factory started, and now they have more orders than they are able to fill. The cheese is of a superior quality, and wherever it has been introduced it has given universal satisfaction. The company now supplies almost the entire home market, San Jose and Santa Clara consuming about 2,400 pounds a week, the surrounding towns 750 to 1,000 pounds more, while agencies are established in San Francisco, Oakland, Stockton and other points for the sale of this cheese.

C. O'Brien the superintendent of the factory, came here from Gilroy, where he still retains a cheese dairy of considerable dimensions, at present in charge of a relative. Mr. O'Brien is a live and energetic worker who thoroughly understands his business, and has the interest of the establishment as much at heart as though he was one of its heaviest stockholders. The company was exceedingly fortunate in securing his services. Mr. S. I. Jamison is President, Mr. E. A. Braly, Treasurer; and Mr. A. B. Hunter, Secretary, who with a board of directors have exclusive control of the corporation, and the success which is attending it shows that it couldn't well have fallen into abler hands.



## FLORICULTURE.

### Camellias and Camellia Culture.

A writer in the *London Gardeners' Chronicle* has devoted no little time to investigations into the history of the *Camellia japonica* in England and gives some very interesting points concerning varieties and methods of culture and propagation. As this plant is being grown with varying degrees of success by many in this State, facts about its career and culture elsewhere will be interesting. We quote from the *London* writer the following statements:

The *Camellia* derives its name from George Joseph Kamel, or Camellus, a Moravian Jesuit. In the "Vegetable Kingdom," by Dr. Lindley, the plant is placed in the natural order *Ternstroemiaceae* (Threads), between the genera *Pyrenaria*, Blume, and *Thea*, Linn. It is there remarked: "The different species and varieties of *Camellia japonica* are the glory of gardeners." In the Linnean system it belongs to the class and order *Monadelphica Polyandria*.

The *Camellia japonica* or Japan rose, the species from which nearly all of our more valued garden varieties are descended, is, as we have already seen, said to have been introduced in 1739; but it is not mentioned in the sixth edition of Miller's *Gardeners' Dictionary*, published in 1771. Notwithstanding this I find it thus described in *A History of Plants*, by John Hill, M. D., published in 1751:—"Camellia.—The calyx is imbricated, and composed of several leaves, the interior of which are the larger. It is an oriental, described by Kämpfer in his *Japan*, 850."

It is interesting to trace the progress of the camellia. It is more than a century ago (1739) that the species *C. japonica*, or single red, was introduced, but it was not till early in the present century that the other species, with several improved varieties, were imported. The beauty of the plants naturally attracted the attention of the cultivator, and awakened in his mind the desire to increase the number and variety of sorts. Probably the first step was to sow the seeds indiscriminately, and to preserve such kinds only as were considered different or more beautiful than their prototypes. Artificial fertilization was next resorted to, and as the seedlings increased in number and variety no doubt a standard of beauty was set up, to the attainment of which artificial fertilization was directed.

In our judgment the floriculture of the camellia admits of at least three types, which we shall describe, with the view of guiding the cultivator in the improvement of varieties:

1. The Imbricated Form of Flower.—Example, Double White. The flowers here should be full, and the petals, whether pointed or round, regularly arranged, thick, smooth, and clear in color.
2. The Anemone-Flowered.—Example, Press' Eclipse. The outer petals here should be large, thick, smooth, and well rounded; the center being made up of a series of small thickly-set petals, leaving a broad margin of the outer petals.
3. The Long-Petalled Kind.—Example, Conspectus. The petals here should be few, but large, thick, and smooth.

This is our idea of the three distinct types or strains of flower that are open to development at the hands of the florist. They all belong to *C. japonica*; but if he choose to extend the area for improvement, he may set up separate ideals for the other species, especially *C. reticulata* and *C. Sasanqua*; but these do not at present seem to present so fair a field for the exercise of his ingenuity and skill, or to promise so remunerative a return for his labor.

There are also already in existence some single and semi-double varieties of *C. japonica* which are characterized by the prodigious quantity of flowers they produce, and there is room for improvement here by extending the range and introducing intermediate tints of color. The cultivator who stands by hard and fast lines might probably look coldly on such kinds, but they have their admirers, and they certainly are gorgeous objects from the wonderful profusion of bloom they produce. The old corallina with its blood-red flowers, and tricolor, white flaked with crimson, are examples of these, and few of the more exact flowers produce anything like the effect of these, whether grown in pots or tubs, or planted out in the conservatory.

In writing on the improvement of the camellia by raising seedlings from artificially fertilized flowers, while paying first and due regard to the shape, substance, and colors of the flowers, it would be a great mistake to overlook the constitution and habit of the plant. This is unquestionably a point of vital importance, and the improver who does not pay due regard to it only half does his work. However beautiful a flower may be, if the habit of the plant is inelegant or the constitution feeble, the pleasure derived from its cultivation is considerably lessened.

When fertilizing artificially with the object of raising improved varieties no flowers should be used except such as are the most perfect of their kind, and on one side or the other the habit should be comely and the constitution sound.

Proceeding upon these grounds there opens before us almost an unbounded field for the variation and amelioration of the camellia. Former laborers have but broken up the ground, and the rich harvest they have obtained augurs well for the results of higher and more extended cultivation. To particularize, there is the variety known as

mathotiana, perhaps the finest in flower of all the crimsons, but the habit is unquestionably bad. Lady Hume's Blush, although one of the oldest varieties, is still of unsurpassed loveliness, but is generally, although not always, met with in an unsatisfactory condition; and even the old double white, which everybody grows, is open to improvement on this ground—it is a long way behind elegans, for example, in constitution. Those who may engage in raising seedlings should seek to obtain a cross between such kinds, and others of good habit and better constitution. In the present state of the camellia we may conceive increase of size and substance, higher models of form, an extension of the range of color, as well as improvement of habit and constitution, and work for the realization of our conceptions. And in this labor Nature, though abounding in varieties, is on the whole working with us, or to put the matter more correctly, we are working with her, and she often encourages us with unlooked-for results, which at once help forward our aims, and surprise and delight us.

What florist call branch-sports are of frequent occurrence among camellias, and this is a means of improvement which should not be overlooked. It is not yet made clear how these sports are produced, that is to say, it is not within the gardener's power to produce them at will. It would seem, however, that anything which leads the plant out of its natural course—especially an excessively vigorous growth—is favorable to their production. When sports occur they should be scrupulously preserved by inarching or grafting.

The exactness of form of many varieties of camellias appeals strongly to the sympathies and taste of the educated florist, and those who take more delight in color than in form will find here the most varying and delicate shades of white, rose, crimson, etc., and the great substance of the petals presents the eye with a charming solidity of color scarcely met with in any other group of cultivated plants.

## SHEEP AND WOOL.

### Origin of the Merino Sheep.

We learn from the *American Cultivator* that Mr. George Wm. Bond, of Boston, so widely and favorably known by his life-long studies of wools, which has justly given him the position of the highest authority on this subject, has treated the origin of the Merino sheep with the greatest care, the results of his investigation having been given from time to time in special reports prepared for our Government, through the authority of the treasury department. So far, however, as the classification of the Old World breeds is concerned, Mr. Bond makes his acknowledgements to Dr. L. T. Fitzinger, of the Imperial Academy of Sciences of Vienna, whose system, though in some respects at fault, is followed because it has not been improved upon or modified in any particular by any succeeding writer, though it was first made public in 1859—20 years ago. The studies of Mr. Bond upon this general subject, and especially on the origin of the Merino breed, possess deep interest, more especially as the latter question has lately been the subject of a noticeable treatise from the pen of Mr. Ernest Oldendorff, lately chief of the Department of Agriculture of the Argentine Republic, and not long ago published in this country.

It is not at all satisfactory to people who like fact to admit that the origin of the Merino breed of sheep—a breed or race most highly prized the world over—is unknown, or, in other words, is lost in the obscurity of remoteness. Such, however, seems to be the case, and in the absence of positive knowledge, several theories have been set up by both ancient and modern writers. The more general belief is that it is the result of a cross made by the Moors of Spain, with sheep imported by them from Africa, in the eighth century, and from time to time afterwards, with the native sheep which they found in Spain. Others believe that it was created by crossing the black and colored sheep of Spain, so widely known when the Roman Empire was in its glory, with the white rams imported by the Saracens from the East, in order that they might have the material required for their white garments. Again, some writers affirm that it is a peculiar race indigenous to Spain. Now, any one of these theories is as good as any other, provided all rest upon the same class of testimony; but that must finally be accepted as nearest correct or true which is supported by the greatest show of reason. After a long analysis of the subject, Mr. Bond concludes there is no evidence to support the theory that the Merino is a race indigenous to Spain. Next comes the theory of origin based upon the character of the wool alone. A long line of highly learned names subscribe to the belief that the Merino was introduced by the Moors, by importing rams from Africa; yet it is generally admitted that no sheep of Africa have been known which had wool resembling that of the Merino. Mr. Oldendorff, in his treatise, to which we have alluded, thinks the belief of African origin to be erroneous, the many distinguished advocates of it to the contrary notwithstanding.

There can be little doubt that the original coat of our domesticated sheep was hair, with an underlayer of wool, or a sort of down. Wool is the product of care and climate, and

the character of the wool depends upon the kind of food, the care, as exposure, etc., and the particular climate of the country. In the pre-historic ages the people soon found out that wool was of greater service to them than hair, and hence they came to bestow great care upon their flocks, for the purpose of reducing the hair and increasing the amount and improving the quality of the wool. It is also well known that wool, with neglect, exposure and hard pasture, will revert to hair; and it is true also that hairy lambs are frequently dropped in the purest Merino flocks. This is not a freak of nature, an accident, but is undoubtedly governed by the natural law of reversion, that law by which any peculiarity of form, color or habits may make its appearance in the offspring without having been observed in the parents. With so many evidences of the effects of this law as appear in works on breeding, who can limit it? How far back may it not extend? May it not go back to the original ewe, however remote? M. Lefour, a French writer quoted by Mr. Bond, gives his testimony to the frequent occurrence of hairy lambs in flocks of the Mauchamp Merinos of France. This breed is regarded by Mr. Oldendorff as one not very fixed or positive in its characteristics—one lacking the power to transmit their peculiar qualities. He also says that in pure-bred Rambouillet and Negrete flocks he has frequently seen the folds of the neck and hip bones covered with bunches of hair, a sign that the wool fleece has a tendency to turn back on the more exposed parts of the body to the original coat of the sheep, hair. This writer brings numerous instances to his aid in assuming that the original Merino ewe was dark colored, or even black, and that we must look for the improvement of the Merino race to the dark-colored ewe of Spain, and the white-wooled rams of Syria.

## THE FIELD.

### Growing Sugar Beets at Alvarado.

Mr. E. T. Gennert, the expert in charge of the new endeavor at Alvarado, who is contributing a series of articles to the *PRESS* on the beet-sugar industry, is also enlightening Eastern people upon the growth of beets in this State. The same information will be appreciated by our readers in parts of the State where beet sugar is talked of but not yet attempted. We take some extracts from Mr. Gennert's letter to the *American Cultivator*:

Of late I have watched the beet fields in this vicinity with the greatest interest, as on them depends the whole success of the newly formed Beet Sugar Company. At this date, June 15th, most fields are laid by; they have been cultivated, weeded and thinned out, and as the leaves cover the ground completely, nothing more can be done till harvest time. The largest contract made in this section by one farmer was for 115 acres actual measurement, excluding roads. Of course I have been anxious to see how this contractor would get along, but he is one of those men who can not only take care of themselves, but also of their farms, and do it in the most thorough style. He performed the whole planting in about a week and a half in a most excellent manner. I met him the other day and asked him if he had a good stand of beets. He smilingly replied: "Good stand, why they stand as even as the hair on a dog's skin, and almost as thick." I have at last made it a point to find a man who would complain, but have been unsuccessful. Three or four farmers who would not wait for the horse planters did the planting by hand drills, but these planted too deep and the seed did not germinate. As we could not furnish them with seed again, they had their contracts canceled, which are in all 20 acres.

But notwithstanding this we have over 1,100 acres now growing, and promising a heavy crop. Most farmers who have cultivated field beets before, estimate the whole crop at between 20,000 and 25,000 tons; some think it will exceed the higher figure.

The principal weeding or weed killing is done with the plow. I have seen land as foul as any I have seen around Fryeburg in Maine, but in turning it under in a shallow furrow and giving the beets the start of the weeds, it works well. There is no such thing as witnessing a combat between the weeds and beets on any field here, as was the order of the day in Maine last year. All the beets have been planted in rows 15 inches apart, and the seed drills were set at that distance, and people had neither time nor disposition to change them. All the weeding is done with the shove hoe, which is a flat knife in goose-foot shape, with a pair of thin mold boards on the sides. These mold boards not only protect the young beets, that no earth can fall on the leaves, but they also serve as guides for the hoe. A man in working these hoes pushes them in front of him, walking at a slow, even pace, and in an erect and easy position. Seeing the operation at a distance it almost looks as if the man was walking for exercise. The regular hoe is used after thinning, so as to kill any weeds in the row.

All the beet fields here look fully as clean, and more level, than those in the sugar districts of Germany. The system of cultivating the beet on shares appears to work very well, and gives general satisfaction.

Any number of men can be had here who are

anxious to do the cultivating, weeding, thinning and harvesting at \$1.50 per ton. They do it well, and it does pay them well; while the farmer who receives for ground rent, plowing and hauling in \$50 per acre, has certainly no reason to complain. Hence the general opinion that sugar beets delivered at the factory, at \$4 per ton, pay better than any crop the farmer can raise at present prices.

## THE SWINE YARD.

### Healthfulness of California Swine.

Dr. L. N. Dimmick, of Santa Barbara, writes to the *Pacific Medical and Surgical Journal* an article on the greater healthfulness of California hogs as compared with Eastern, which has direct bearings upon the industry of hog growers and pork packers and curers on this coast. We quote from Dr. Dimmick as follows:

It is a fact well known to butchers and others throughout the Mississippi valley, that the livers of domestic animals, more especially of the hogs slaughtered for meat, are extensively diseased. The livers have, on the outside, a spotted or mottled appearance, and on cutting off a section, are found to be studded with grayish white indurated spots, from the size of peas up to the size of walnuts. The larger ones are often ulcerated and filled with purulent matter. They resemble somewhat tubercular cavities.

During a residence of more than thirty years in the Mississippi valley, this unpleasant fact was constantly to be witnessed, and rarely have I seen a hog over one year old slaughtered, that, upon examination, did not exhibit this disease.

Since making my home upon this coast, it occurred to me to ascertain the facts in regard to its existence or not upon the Pacific coast. To my surprise I learn, as far as I have prosecuted my inquiries, that it is almost, if not entirely, unknown on this coast. Colonel Hollister informs me that the livers of 99% of the hogs that are killed are perfectly healthy. I have made inquiries of various persons who have been engaged in slaughtering hogs and other domestic animals at various places on this coast, from Humboldt to San Diego, and all agree in saying that it is extremely rare to find a diseased liver.

Omitting speculations as to the difference in climates, or other causes producing the result, a practical question presents itself—Is it wise, in a sanitary point of view, to neglect the growing of hogs on this coast, and the production of a healthy article of pork, and to import from the east an inferior article, made from animals that, while living, were afflicted with extensive disease of an organ whose slightest derangements disturb the digestion and assimilation of food, and this disease often so far advanced as to suggest the danger of the direct absorption of the pus into the blood of the animal while living?

It seems to me that this is a strong argument for our farmers to make an effort to supply the people of this coast with an article of pork of which there is no question about its freedom from disease. At the present time, so popular is an article produced away from home, that Eastern pork, lard and hams will sell here for higher prices than are paid for home productions; that is to say, higher prices for the meat of an animal that may have suffered from blood poisoning, instead of low prices for healthy meat grown on the Pacific coast.

May not the low vitality produced by this disease of the liver in the animals, afford a partial explanation of the very extensive mortality among the swine in the Eastern States, from what is known by the name of hog cholera?

**LIGHTER BACON.**—A short time ago it was deemed essential by breeders of both cattle and hogs to get as much weight and fat as possible, to the almost utter neglect of symmetry and style. A notable fact, and one worthy the special attention of breeders and raisers of hogs, is that light, evenly fattened and fine-boned swine, averaging a little over 200 pounds in weight, is the only grade of our hogs that has proved satisfactory to our British cousins; and heavier weights do not stand the long journey and confinement on shipboard as well as stock of lighter weight and less fat. There are several English houses here, as most of our readers well know, that are almost exclusively engaged in the curing and shipping of English cuts; and, as is generally a well-known fact, to meet the requirements of this trade, hogs must not be too fat, but compact and well bred.—*Drovers' Journal, Chicago, Ill.*

**BERKSHIRE BULLETIN.**—The American Berkshire Association has begun the publication of a *Bulletin* in the form of a neat pamphlet, which will be issued monthly. It will be devoted to the interests of Berkshire breeders, disseminating information of the value of the breed, and it will contain advance sheets of the pedigrees accepted for entry in the "Record." The editor is Phil M. Springer, Springfield, Illinois. It is a publication which will, we think, be found valuable to all Berkshire breeders.

EVERY adult man has 1,400 square feet of lungs; rather, the mucous membrane lining the air cells of his lungs, if spread upon a smooth, plain surface, would cover an extent of 1,400 square feet.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

## Grange Notes and Suggestions.

The Grange don't seek nor pretend to make money for the farmer. It presents for his consideration and acceptance the maxims of worldly wisdom tried and approved by successful men. It invites for discussion and adoption the ways and means that shall make the farm pay. It asks his thorough knowledge of modes of business; the cost and value of his own products and the commodities he buys. It establishes agencies on whose fair dealing he may rely. And with it all it inculcates the necessity of co-operation as the one essential element of success.

The complete and perfectly rounded Grange never loses sight of the three great cardinal principles of the Order: First, to stop the leaks of the farm; second, to promote a higher intellectual and agricultural education; and third, to give an added dignity and character to the farmer and farming. The three, in a measure, are mutually dependent. The prosperous Grange keeps them all alive, and makes each one tributary to the others.

Not only those who never saw the interior of a working Grange, but many who ought to be familiar with all that relates to the organization, seem to be ignorant of the principles that underlie the Order. We would suggest that the Master or Lecturer or some one specially appointed read consecutively with comment and illustration, a portion of the "Declaration of Purposes" as part of each evening's work. A half-hour may be very profitably employed by a Grange in discussing the portion read.

Farmers and farmers' families are apt to say they have no time to read—too busy or too tired, or too expensive to buy books. Has it never occurred to those who make these excuses that in a Grange of any literary taste—and every Grange ought to encourage and cultivate these—three or more choice literary selections read at a weekly session, would in the course of a year give to the members from 100 to 200 of the choicest passages in the language. Multiply these by five or ten years, and we have a wide range of literature. Give to the members generally an appreciation of this with the power of critical analysis, and we are not only doing what is possible, but contemplated in all intellectual culture, by our high schools and colleges. —Grange Bulletin.

## The Material Advantages of Co-operation.

It is specially important that Patrons knowing the many benefits and advantages arising from our Order should keep before the minds of their co-laborers on the farm who do not belong to the Order all the facts necessary to inform them of its principles, purposes and intentions; for we hold that no farmer who once becomes thoroughly conversant with its fundamental principles and purposes can hesitate for a moment about joining the Order. It is our duty to elevate our fellow-workers; and in no better or more simple way can this be accomplished than by increasing the boundaries of the Grange, and instilling into the minds of farmers the personal interest each has in the Order and its co-operative movements. We feel that we cannot too strongly or too frequently present this subject to Patrons. The co-operative business feature of the Order is the great lever that must move agriculturists. Self-interest is the ruling passion in humanity, and the farmers as a class are but human in this respect. They must see that the Grange will pay in dollars and cents before they will come in. Members of the Order have it in their power to convince their neighbors of the pecuniary benefits of our co-operative system. It is not necessary that any of our confidential arrangements be unlawfully revealed, but we can show our neighbors that the material advantages which result from the co-operation of many people are very considerable and not to be lightly regarded; that to sell to the best advantage, and to buy as cheaply as possible, is to increase the profit of farming, and consequently any plan which is likely to enable farmers to do these two things must be considered worthy of serious thought and attention. That the Grange organization is capable of doing this for its members is so well known and accepted a fact that no true Patron thinks of denying it. Mistakes may occur, of course, but that is the fault of individuals and not of the system, which is calculated to insure satisfaction if but carefully carried out. —Farmers' Friend.

CALIFORNIA FARMERS' INSURANCE CO.—In answer to inquiries from readers we would state that we are informed by Mr. Kellogg, attorney for plaintiff in the case of G. W. F. Carter, vs. the California Farmers' Mutual Fire Insurance Company, that in a few days a motion for an injunction against the Insurance Company will be heard by the Court. An injunction is prayed for to restrain the Insurance Company from collecting all and any assessments levied upon the mutual policy holders. We may be able to give the result of the hearing in our next issue.

## PRICES OF WHEAT BAGS IN THE SAN FRANCISCO MARKET

FROM JANUARY, 1870, TO JULY, 1879.

The following valuable table showing the fluctuation in price of Wheat Bags in this market during the last 10 years, has been compiled by A. MONTPELLIER, Manager of the Grangers' Bank.

MONTHS.	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
January...	Highest 10 Lowest 10 Average 10	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....
February...	Highest ..... Lowest ..... Average .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....
March....	Highest 12½ Lowest 9 Average 10½	15 11 13	17 16½ 16½	16½ 16 16½	14 13½ 13½	11½ 11 11½	12½ 11 11½	9½ 9 9½	10½ 10½ 10½	9½ 9 9½
April.....	Highest 13½ Lowest 9½ Average 11½	14 11 12½	18 17½ 17½	16½ 14 15½	14 13½ 13½	12 11½ 11½	12½ 12 12½	9 8½ 8½	11½ 11 11 3-16	9½ 9 9½
May.....	Highest 14 Lowest 14 Average 14	14 11½ 12½	18 17½ 17½	16 15 15½	13½ 12½ 13	11 10½ 11 11-16	13½ 12 13	9½ 9 8½	11½ 11½ 11 5-16	9½ 9½ 9½
June.....	Highest 14 Lowest 12½ Average 13½	16 13 14½	18 17½ 17 13-16	15 12 13½	14½ 12 14½	11 10½ 10½	13½ 13½ 13½	10½ 9½ 9½	11½ 11 11 3-16	9½ 8½ 8½
July.....	Highest 15 Lowest 13 Average 14	16 12 14	17½ 16 16½	15 14½ 14½	14½ 14 14½	11 10 10½	13½ 13 13½	12½ 9½ 11½	12½ 10 11½	8½ 9 11½
August...	Highest 14 Lowest 12 Average 13	12½ 12 12½	19½ 14½ 17	15 12½ 13½	14 13½ 13½	9½ 9½ 9½	12½ 12 12½	12½ 12½ 12	13½ 12½ 13½	..... ..... .....
September	Highest 13½ Lowest 9½ Average 11 7-16	12½ 12½ 12 11-16	20½ 15 17½	18 12½ 12½	13½ 12 12½	10 9½ 9½	12½ 12 12½	12½ 10 11½	14½ 13½ 14	..... ..... .....
October..	Highest ..... Lowest ..... Average .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....
November	Highest ..... Lowest ..... Average .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....
December	Highest ..... Lowest ..... Average .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....

## Keeping Silver Accounts.

The Grangers' Bank gives notice that it will keep silver accounts, although the leading commercial banks of the city have closed their dealings in silver. The cashier and manager has issued the following circular to the banks of the interior, which we print, that our readers may know what is going on in financial circles:

The city banks, here, which make their exchanges through the Clearing House, having closed up all silver accounts since the 1st of July, both with their city and country customers and correspondents, it will cause a serious annoyance and embarrassment in silver exchange with the country, where, outside of wheat and wool, most of the balance of the produce of the soil, the dairy, etc., is sold for and payable in silver, amounting to large sums of money annually. This bank, in compliance with the request of its customers, farmers, etc., throughout the State, will continue to keep silver accounts as formerly, for the convenience of its patrons exclusively. Lately we have opened a number of new silver accounts with commission houses in this city, who find it to be quite convenient for their business, and the number promises to increase every day. Should you deem it advisable to keep a silver bank account in San Francisco, for the convenience of your customers and residents of your vicinity, we will be pleased to keep it for you. We will collect all silver bills free of charge, place amount to your credit, and we feel confident that our business relations would be mutually satisfactory.

## Boiler Explosions—No. 4.

[Written for the Press by H. W. Rice.]

The explosion of Mr. Anway's boiler, at Rio Vista, a few days ago, adds further proof of the want of skill that is found in the management of these useful servants, threshing engines. The engineer, a man about 50 years of age, on whose countenance is stamped all the appearances of candor and sincerity, swears before a jury that he had one and one-half inches of water in his gauge glass at the time the boiler exploded. If five hundred engineers and experts had sworn to the same thing, the boiler plates will just as positively contradict the statement. It is as plain as daylight that the water was low at the time, and nothing is easier than to see that the plates over the grates—the hottest place in the boiler—were the first to start downward, and the twisted and torn sheets of iron show the water line, and most positively tell that over 1,400 inches of the crown sheet was bare and hot. The engineer also swore that two days before the explosion he had a pressure, indicated by the gauge, of 105 pounds, and that the gauge at the time of the explosion indicated 85 pounds. The engineer at the time was repairing the lower valve of his pump, which had broken the day previous, and he had drilled a hole through its seat and mended it with a wooden plug and had been trying to work it, and to keep sufficient water in the boiler, which he had failed to do. When the engineer found that his pump was not doing its duty he stopped with his water low, and the steam gauge showed 80 pounds pressure. The fireman closed his damper and waited, but when it was thought to be nearly time to start he put in just two small feeds of straw, the steam quickly arose to 85 pounds, and the explosion occurred. The engine was not moved an inch, and nothing about it or the running gears was in the least injured. Had the boiler been double-riveted and stayed, like the Hoadley's, not a person of those near it would have been left alive to testify. Mr. An-

way has owned this engine since 1874. He is not an engineer himself and relies upon the men he employs. During the time he has owned the engine it has always done good service, except, at times, when he has had unskilled or incompetent men. He says that one engineer tested his boiler with live steam at over 160 pounds, and also says that he had not seen water in the gauge glass for four days previous to the explosion. When he asked the engineer the cause, was told by him that the pipes were stopped up.

A close investigation, however, does not show any stoppage in the pipes or the glass. Many cases have come to my knowledge where engineers have deceived their employers by recklessness or perhaps foolishness. In this last-named case the intelligent reader may judge for himself what name to call it, when he stops to think, that a man, claiming to have knowledge sufficient to take care of and operate a steam boiler and engine, does not know better than to try to force water against a pressure of 80 or 90 pounds to the square inch, with a brass valve with its seat made partly of wood.

There are many men, to-day, who are operating engines, who, if their glass was broken or disabled, would not know how to try the water with the common water gauges, and would not know if the water was low, or the plates bare. Last season an old engineer in Contra Costa county broke his glass, and his boiler was so hot that the felting was on fire between the boiler shell and the wood lagging. He bored holes through the wood and had water poured in to put out the fire. He then told the fireman to fire up slowly, and as he started the engine it blew up. He then saw what he might easily have seen before, that his water was at least eight inches low, and that the hot plates were marked with a line which could not be mistaken.

Although it was the cause of serious bodily injury to his fireman and to his reputation as an engineer, yet he did not try to deceive himself or others, but told the plain truth and explained the true cause of the explosion, that it might be a warning and assistance to others.

WASHINGTON COLLEGE.—The announcement is made in our advertising columns that the next year at Washington college will begin on Thursday, July 31st. This institution is situated in one of the most beautiful and healthful valleys of our State. The buildings are of recent construction, commodious and well furnished with appliances for instruction and comfort. The principals, Rev. and Mrs. Harmon, are among our best known and most highly esteemed educators, and the large family of students which they gather together enjoys their most enthusiastic efforts, most thorough culture and kindest care. Washington college draws its students from all parts of the coast, and thus exerts a wide influence toward good scholarship, and the inculcation of true manhood and womanhood. The college faculty is comprised of instructors peculiarly qualified in their several specialties of instruction.

SINUS NOT SINEWS.—One of our composers made "tough work" of it when he set up "sineus" for sinus, as Mr. Rixford wrote the word in his article on seedling lemons, in last week's PRESS. Let readers who preserve the PRESS make the correction in their files.

## AGRICULTURAL NOTES.

## CALIFORNIA.

## AMADOR.

THE WHEAT CROP.—Times, July 12: Taking in the lone, Buckeye, Dry creek, Jackson and Mokelumne valleys, we have taken pains to make diligent inquiries, and we feel quite safe in saying that while there is a largely increased acreage over that of last year, the yield and quality, on an average, will be better than for some time past. The cool spring has had a good effect in preventing shrinkage, and the rust which it was feared would be caused by the late rains, proves to have been trifling in extent and unimportant in its bearing upon the general results. We know of only one bad case of rust and that is on low land, where the crop was laid flat by the rain, and the moisture of the soil made bad work with it. Barley promises well, although the acreage is less than usual, owing probably to the larger amount of wheat and corn. The latter has been planted far in excess of former years, and its appearance is very promising.

## COLUSA.

GOOD WHEAT.—Sun, July 12: Most of the wheat of Colusa county will be of excellent quality. Where there was a failure it was generally total.

## CONTRA COSTA.

ANTIOCH WHEAT.—Ledger, July 12: Farmers have gathered most of the grain into stacks and a considerable portion has been threshed. A number of schooner loads have been shipped from Antioch and the various landings on the Robinson ranch. The kernel is plump and there has been no complaint of rust or mildew.

EDITORS PRESS.—Harvesting in Contra Costa county from San Pablo to Point of Timber is well under way. Hay presses, headers and threshing machines are in full operation. Grain is not turning out as well as was expected, though some fields are very fine. In the south-east I saw large fields headed where the heads only were reaped, the stalk being about seven inches high. Such may bring three sacks to the acre. The summer-fallow is turning out well. One or two threshers will be sufficient to thresh all the grain raised on the plains. The rust in the San Ramon and adjacent valleys has not materially injured the grain, the rust being on the blade, not on the stalk. The hay crop in the San Ramon is immense; from two to four tons to the acre. I have never seen hay in greater abundance. One-third of the grain west of the Diablo valley has been cut for hay, owing to the wild oats. The potato crop is first-class in quantity and quality, but a failure in price, 25 cents a sack being the price in the tules southeast of Antioch. This will not pay expenses. A sloop load sent from Babbe's landing to the city, when sold brought eight dollars less than the expenses, consequently potatoes remain in the ground. I hear of grain shrinking in some places, but I have examined heads in different parts of our county and find the grain well matured and exceptionally good. The drawback of the season, north and west of the "divide" overlooking Marsh creek, is wild oats and foulness. The absolute necessity for thorough cultivation, and a more generous treatment of the soil, is being forced upon our farmers in a way they cannot misinterpret. Men are growing poor on some of the finest farms in the State, while others with less land and poorer soil are growing rich.—W. H. T., Martinez, July 15th.

## FRESNO.

DISTRIBUTED MOISTURE.—Expositor, July 9: As an illustration of how irrigation changes the condition of a country where it is applied, a person has only to go to the Washington or Nevada colonies and take a shovel and turn up the soil, and it will be found that it is moist clear to the surface, and that water can be obtained by digging down a few inches. Three years ago this same soil was as dry as a sand heap, and to obtain water a well full forty feet deep would have to be sunk. In a few years, it seems probable from the vast amount of water that is being poured out on the surface, the water level will be raised all over the plains, then, seasons when the rainfall is light, will not be so severely felt as now.

RIVERDALE DITCH.—C. D. Davis informs us that the survey for the ditch from Cold slough to Riverdale settlement has been completed, and the work of excavation will be commenced at once. The ditch will be about 36 feet on the bottom and will have a capacity of over 100 cubic feet of water per second—the grade of the ditch being about one foot to the mile. The main canal will be seven miles in length, and it is proposed to have it completed by the 1st of December. The stock, divided into 100 shares, representing a foot of water each, has all been taken. The ditch will have a capacity to irrigate about 20,000 acres of land.

WHEAT.—A Kingsburg correspondent says: The new wheat crop is now beginning to arrive at the depot in Kingsburg. Many persons whose means of information are good, express the opinion that there will be more grain shipped from Kingsburg than last year. The grasshoppers are taking great privileges in some localities. Sand-storms have somewhat discouraged the people, but the "old prophets" say a good season is coming.

## LAKE.

CROPS.—Bee, July 12: The grain crop of



Lake county is now being harvested and is a most abundant one—perhaps the largest ever raised here. This is the information received from every portion of the county.

## LOS ANGELES.

LEMON SALE.—Santa Ana Herald: D. C. Haywood, of Orange, shipped a box of lemons as samples to the San Francisco market, which were sold at the rate of \$30 per thousand. This week he shipped 15 boxes more of the same variety.

ITEMS.—Downey Courier, July 12: Thirty-six thousand acres of wheat were sown in San Fernando valley this season, which will average a yield of from 10 to 12 sacks to the acre, and weighing from 130 to 136 pounds to the sack. The peach crop in this valley is immense. During a somewhat extended ride we did not see a single tree that was not weighed down heavily with fruit. Within the limits of the moist and irrigable lands, the corn is excellent. Every stalk looks green and fresh. Here and there one can see bare spots, upon which the wire-worm destroyed the corn early in the season. The farmers are utilizing these spots by planting pumpkins on them. A valuable flowing well has been recently completed on the mesa about half a mile beyond Fulton's Wells. The bore is about 250 feet, and the water is strongly impregnated with sulphur. As a large reservoir is formed near the well, it is a favorite resort for cattle. A herder, who was watering his cattle at the time of our visit, says that the stock are exceedingly fond of the water, and it is good for them. It now appears as if artesian water can be obtained anywhere on the mesa in that section. If this should prove true, that will be a most delightful section for homes.

## MENDOCINO.

SHEEP ON WHEAT.—Ukiah Press, July 11: The finest wheat we have seen anywhere this season, from Sacramento into Potter valley and up the Russian River valley, is on the ranch of David Streeter in Potter. It was sown early, fed down twice by sheep and now stands four feet high, thick and even, and not a stalk of anything but wheat to be seen in it.

## MERCED.

THE SEASON.—EDITORS PRESS: In consequence of the lateness and uncertainty of the rain, the ranchers generally around here commenced an early summer-fallow, consequently an immense section is now in fallow. Some has been plowed twice. Some few, as Messrs. Huffman, Aikins, and others, have some hundreds of acres of fair wheat grown on the more sandy land. There is a large artesian belt around here, where wells have been easily and successfully sunk, and on this land vegetables are raised and command a fair price. There are two colonies started here, the "Merced Colony" and "Fowler's Eagle Colony," on land where artesian wells are successfully found; there is also irrigating canal water on both. Land and terms are most moderate and every encouragement given to settlers to locate. Both colonies are about 10 miles from the thriving city of Merced, which boasts of two large grain warehouses, the Grangers' and Huffman's. A fine level, rich wheat and agricultural country surrounds Merced, with the beautiful snow-capped hills in the distance. Two rivers, the Merced and San Joaquin, are not far away. The former furnishes irrigating water here, the latter also, but to a lesser extent, but is useful commercially as a navigable river. It should be cleaned out, but small steamers run out as it is.—M. J. O'BYRNE, Merced, Cal.

## NAPA.

FRUIT.—Reporter, July 11: The early fruit crop in the immediate vicinity of Napa has fairly commenced coming in. In conversation with several of our fruit growers we learn that the yield will not be a large one—not up even to the average. This is due to the injury done by frosts. The late crop will be nearly up to the average.

HOPS.—St. Helena Star, July 11: Mr. Clock informs us that his hops are looking about as usual for this time of year. The prospect is fair for a fair crop. He has 12 acres in this year. Storey Bros. have 30 acres; R. T. Montgomery, 6; James Dowdle, 15; and C. Hartson, in Clock's old Lodi ranch, about 20. Altogether 83 acres within three miles of St. Helena. This is about the same acreage as last year.

WILD OATS IN WHEAT.—Mr. Leonard Tully, who has a large ranch in Chiles valley, informs us that his wheat crop is troubled with an unusual quantity of wild oats. He thinks that in many places from 10 to 12 bushels of oats could be cut to the acre. And his is not an exceptional case. The same prevails through many parts of Napa valley, Chiles, Pope and Berryessa. We noted lately the cutting by Chris. Adamson of about 100 acres of wheat for hay, because of the wild oats. This was a case in point, and Mr. Tully says that many in Pope valley are doing the same. Wild oats have always appeared to a limited extent in the wheat here, being a natural production of the country, but why they should be so much worse this year than heretofore is the question. Mr. Tully thinks that perhaps a circumstance of seeding may account for it. There was an unusual crop of wild oats last year, and seeding being done at a wet time, the oats were in good condition to come up just at the time the wheat planting was done. Then being harrowed in altogether they naturally come up first and got a start in growth. The season, too, was particularly adapted to the growth of oats rather than wheat, even distinctive oat fields doing unusually well.

## SACRAMENTO.

FRUIT.—Folsom Telegraph, July 12: The Natoma Water & Mining Co.'s vineyard and orchard below town promises a fine yield and their fruit-drying house is being made ready for the drying of this and other fruit.

## SANTA BARBARA.

EDITORS PRESS:—Crops of nearly all kinds are fair to good. My corn, pumpkins and beans the best I have raised in the State; my cabbages, turnips, beets, rutabagas, onions the poorest, and yet I am entirely unable to account for the difference. An immense amount of hoeing and weeding was required this year, but that leaves the surface in good condition to withstand the winds. I think a few hot, windy days we had in blossoming time, destroyed some of our apricots, although we have plenty in places. Peaches and apples are usually plenty, as also blackberries. Grapes good in places. Bees scarcely making enough honey for breeding purposes, and our bee men doubling up their bees, and talking of feeding.—S. P. S. July 7th.

## SAN DIEGO.

BEES.—News, July 10: From a conversation we had yesterday with Mr. Campbell, who has an apiary on the Atkinson grade, we were glad to learn that, within a short time back, the bees have been doing a little better in honey making, owing to an improved condition of the moisture. Mr. Campbell says that his bees will make a little more than a living. Mr. Mel. Sargent who dropped in to see us, from the San Vicente, gives us the most cheering statement that we have heard, viz., that his bees will enable him to sell some honey; they are doing so much better of late.

## SAN MATEO.

GOOD GRAIN.—Redwood Times, July 12: The barley and wheat crop in this county is turning out splendidly. Nearly all the grain in this valley is already cut, and the threshers will begin operations next week.

THE HORTICULTURAL SOCIETY.—The regular quarterly meeting of the Horticultural Society of San Mateo county was held at the Tremont house on Tuesday evening, James Burns, the President, in the chair, and a goodly number of members in attendance. A very attractive display of rare fruits and vegetables were exposed on the tables and fully discussed. Among these were several specimens of a variety of melon wholly new in this latitude. They are a small fruit, seemingly a cross between a cantaloupe and the ordinary muskmelon, though much richer in flavor than either. They have a bright orange-colored rind, and have been denominated the golden melon. Some exceedingly large cucumbers were also shown. The paper on lawn culture appointed to be read at this meeting was deferred, though the subject was elaborately discussed. At the next meeting the subjects of sub-tropical bedding, lawn culture and fern growing will be considered.

## SHASTA.

GOOD CROPS.—Millville Record, July 12: Harvesting has commenced in earnest and headers are cutting the golden grain in all the adjacent valleys. The crops this year are splendid, more land has been seeded than ever before, and should the present rise in wheat continue till the farmers can dispose of their grain, the hard times that have been complained of so long will give way and prosperity and plenty take their place.

## SOLANO.

UNFAVORABLE RESULTS.—Vallejo Chronicle, July 12: The crops between Elmira and Vacaville are almost a total failure. On many of the ranches the grain has been so badly affected with the rust that it will not pay for harvesting. Some of the farmers will raise about half a crop, and others will not harvest at all but turn their stock in the fields to feed. Owners of headers are heading on shares instead of by the acre on several of the ranches, and from indications will barely make enough to pay their gang by the time the grain is threshed. On one ranch the threshers were at work last week, in the vicinity of Elmira, and after running all day were only able to count about 140 sacks, whereas if the grain had been good they could have threshed from 800 to 1,000 sacks in the same time. We were shown Wednesday by Mr. J. Frank, of Suisun, two samples of Oregon club wheat, one from Suisun valley, and the other from Suisun creek. The former is shriveled and dried up, and the ranch from which it came will not be harvested at all, while the latter is considerably better looking, and will yield about half an average crop.

DIXON.—Tribune, July 12: Grain is very spotty, and luck has as much as anything else to do with it. It has been frequently said that the adobe land would produce the best crops this year, but there seems to be no foundation for the report. J. F. Brown has turned hogs on a part of his fields.

PEACHES.—Solano Republican: The peach crop is reported to be light in Suisun valley.

## SONOMA.

BODEGA.—EDITORS PRESS: Although times are hard, they would seem harder to be deprived of the weekly visits of your valuable journal. I have taken it so long, it has become a family necessity. The crops of grain in this vicinity are a full average. More potatoes are planted this season than usual, and unless some calamity overtakes the crop it will be good. I learn that the blight has made its appearance up the coast and in a few fields in this vicinity. It is too early to predict the amount of damage, but fears

are entertained that it will be considerable. Dairying is on the wane. Cows are drying up fast. All farm products are so low that after paying expenses there is little or nothing left, and farmers are reduced to the necessity of lessening their wants by retrenching their appetites.—E. H. CHENEY.

RUSSIAN RIVER CROPS.—Enterprise, July 10: Harvesting is now under full headway. Near town the reaper has been preferred to the header; at Geyserville headers are now busy, and in a short time all the grain will be ready for the threshers. Most of the wheat ripened and filled well. In many fields some of the grain dried off, and the berry shrunk, but this will not materially affect the yield of grain being over the average. Corn is doing extraordinarily well. Many of the farmers say the prospects never were better. The corn on the river below Healdsburg and at Geyserville is now tasseling; has a good color, and could not have a much better stand. The change in the weather at this particular season of the year is very favorable to corn.

GRAIN.—Petaluma Argus, July 11: Harvest has commenced in earnest. So far, nothing but reapers have been used in wheat fields, and the grain is being bound. The wheat now ripe is good and will yield well; much of the wheat which is still green will not do as well as the early sown. There are several fields of wheat on Dry creek and on the river that will turn out better than for many years past. Barley is not so heavy as last year.

## SUTTER.

LARGE POTATOES.—Banner, July 11: We received from Meridian during the week a box of large potatoes, of the varieties known as the "Oregon Biscuit" and "Russet," raised by J. B. Fuller, of that place. We measured one, its size being 16 inches in circumference one way by 12 inches the other.

GRAIN.—Harley's Corners Cor. Banner: Much of the wheat is badly shrunken, partly on account of rust, but we believe more from the effect of the hot north wind that prevailed during the past month. Mr. Littlejohn's grain is so badly down as to require lifters on the header, and several other pieces are in the same fix. Some of the best summer-fallow wheat has been threshed, which only yielded 24 bushels to the acre, and a great deal of it will not go over 20, and winter sowing must be correspondingly light.

## TULARE.

ITEMS.—Delta, July 10: Around Lemoore the crops are turning out better than was anticipated. Harvesting is about over, and farmers are talking of threshing. Hanford for the past few days has been enlivened by the arrival and unloading of grain wagons. About 1,500 sacks come in daily at the two warehouses. Mayer & Schoenfeld's commodious warehouse begins to display a formidable breast work of stored grain, besides making frequent shipments. Compared with last year, more than half a crop of grain will be realized—in some localities a larger crop. At present the ruling price is from \$1.20 to \$1.30 per cental, according to quality. There is probably no county in the State in which fruit matures earlier than in Tulare. Early fruit was shipped this season from Visalia to Los Angeles, and other fruit producing counties, and the Delta was among the ripening of the various kinds of fruit as they came in season.

## VENTURA.

CROPS.—Free Press, July 12: The barley crop just threshed is above the average in point of quality, being very bright and heavy. One crop that we hear of weighs 140 pounds to the sack. The wheat crop, also, was safely harvested, is altogether the finest crop ever raised in the county, both in quantity and quality. From Mr. Blanchard and other gentlemen whose business makes them familiar with this matter, we learn that besides what is needed for home consumption and seed, the county will have in the neighborhood of 23,000 sacks for export. Considering the limited area sown, this is an astonishing yield. The bean and corn crop promise to yield fairly this year. The flax crop, we regret to learn, will be light—perhaps not over five sacks to the acre. In fruit, we learn that the peach, apple, apricot, fig, and plum crops will be very fine—perhaps better than ever before. Of course there is not demand here for the amount raised, and we learn that Mr. James Day, with the enterprise which characterizes him, has contracted for some thousands of tin cans in which to put up preserved fruits, and will besides dry a large quantity with a machine for that purpose of his own getting up.

EDITORS PRESS:—The long looked for fogs have come at last, in time to save most of the heavy corn crop and beans. The wheat crop is good, not so hoavy to the acre as could be wished, but what there is, is fine. I visited 1,800 acres on the Sine grant last week, and should judge from 16 to 25 bushels to the acre would be an average. The most of this belongs to Mr. Barnett who estimates his crop at 10,000 sacks, and by some enclosed you will see the average quality. The barley is good all over the county, though light. We are having cool breezy days and damp nights. There is nothing doing in the bees this season; it is all they can do to live. There will be no new honey this year from this county.—R. W. K., Springville, June 22d.

[The new wheat heads are quite creditable, and are evidence of a fair yield. Our correspondent's favor was very tardy in reaching us in the mail.—EDS. PRESS.]

## News in Brief.

THE corn crop in Iowa is said to be the best in years.

THERE is not a single Russian soldier left in Roumania.

HALF a dozen sunstrokes occurred in St. Louis last Saturday.

BULLION in the Bank of England decreased £38,000 the past week.

AN earthquake agitated the people of Victoria, B. C., July 12th.

THE Bank of Bengal has reduced its rate of discount from 6% to 5%.

THE funeral of the Prince Imperial was an imposing demonstration.

PART of the striking colliers at Shamokin, Pa., resumed work yesterday.

A SEVERE earthquake was experienced at Alexandria, Egypt, July 11th.

SPECIE in the Imperial Bank of Germany last week decreased 7,860,000 marks.

FOURTEEN fires occurred in San Francisco from July 3d to the 6th, inclusive.

DURING the past week specie in the Bank of France decreased 30,000,000 francs.

GEN. VON MANTEUFFEL is to become Governor of Alsace-Lorraine in August.

A PARTY of 650 Mormons, en route to Salt Lake, have arrived at Council Bluffs.

THE German Reichstag has finally passed the protective customs tariff—217 to 117.

THERE is 25 feet of snow in Emigrant Gap, near the summit of the Sierra Nevada.

QUITE a considerable emigration is taking place from New England to Tennessee.

THE recent heavy rains in British Columbia have had a disastrous effect on the crops.

THE exports of British Columbia for the quarter ending June 30th reached \$145,155.

THE Orange procession at Toronto last Saturday was the largest seen there for many years.

CHINESE-AMERICAN war rages in the shoe shops at North Adams, Mass. Chinamen whip.

PRINCE JEROME BONAPARTE has virtually assumed the attitude of chief of the Imperialists.

GEN. SIR GARNET WOOLSEY arrived at Cape Town July 15th, and immediately left for Natal.

THE Louisiana State Board of Health report that New Orleans was never healthier than now.

THE French Chamber of Deputies passed the Educational bill yesterday by a vote of 352 to 159.

SERBIA claims 3,000,000 francs from the Porte, on account of Albanian raids into Servian territory.

THERE are over 67,000 Sunday-schools in the country, with an average attendance of 3,000,000 children.

CARDINAL MANNING preached the funeral sermon of the Prince Imperial at Chiselhurst July 13th.

THE total value of stamps, stamped envelopes and postal cards issued during the last year is \$29,539,050.

ACCORDING to the new directory of New York, that city has increased 43,000 in population within the past year.

PERU has got a crystallized woman. She or it has been sent to England for exhibition in the Westminster aquarium.

IT is reported that Grant has decided not to return until after the Republican nomination for the Presidency is made.

OPERATIONS against the Achinese have been resumed by the Dutch, four strongholds of the former having been captured.

THE Spanish Minister of Marine declares that his government has no intention of sending a man-of-war to Chilean waters.

THE cost to Russia of the war with Turkey amounted to £150,000,000, and the deaths in the Russian army numbered 200,000.

THE dissenters from the orthodox church in Russia, hitherto unrecognized by the State, are to have entire liberty of worship.

AN Arizona dry goods man has, by proclamation, cut that Territory loose from San Francisco. Snipped the apron-string, as it were.

PORTABLE gas is sold and delivered in England like milk. People in the country and villages receive it in copper vessels from large cities.

A MEXICAN at El Paso recently routed the American army at that place. Loss, all the Americans killed but one, and he was taken prisoner.

MR. BURCH, the Secretary of the U. S. Senate, has refused to pay Senator Sharon his senatorial salary—on the ground that he has not earned it.

A "PACIFIC Ladies' Escort Company" is about to be organized in San Francisco with branch agencies all over the coast. A prospectus will soon be issued.

GREAT BRITAIN is not the wealthiest country on earth as has been supposed. Late estimates show that France is worth \$2,085,600,000 more than Great Britain.

THE Central Pacific railroad uses a hand car with three wheels for one person. Weight of car 100 pounds, propelled by hand or foot. Speed about 18 miles per hour.

THE Anaheim Gazette, says that two young ladies became intoxicated from the odor of eucalyptus trees in a grove near that place. The eucalyptus has been slandered enough.

THE railroad vacuum left at San Diego by Tom Scott, will be filled by Mr. Swan's "Olive" lemon and "Asher's Best" orange.—News. [A small vacuum or a big orange?]

THE New Jersey Supreme Court has affirmed the death sentence pronounced against Mrs. Smith and Cove Bennett for the murder of the former's husband at Jersey City. [What became of the money raised to procure a reversal?]





### The Old Barn's Tenantry.

The rooster stalks on the manger's ledge,  
He has a tail like a scimitar's edge,

A marshal's plume on his afghan neck,  
An admiral's stride on his quarter deck;

He rules the roost and walks the bay  
With a dreadful cold and a Turkish way,

Two broadsides fires with his rapid wings  
This sultan proud, of a line of kings—

One guttural laugh, four blasts of horn,  
Five rusty syllables rouse the morn!

The Saxon lambs in their woolen tabs  
Are playing school with the a, b, ab;

A, e, i, o? All the cattle spell  
Till they make the blattin vowels tell,

And a half-laugh whinny fills the stalls  
When down in the rack the clover falls.

A dove is waltzing around his mate,  
Two chevrons black on his wings of slate,

And showing off with a wooing note  
The satin shine of his golden throat—

It is Ovid's "Art of Love" retold  
In a binding fine of blue and gold!

Ah, the buxom girls that helped the boys,  
The noble Helens of humbler Troys—

As they stripped the husks with rustling fold  
From grain-rows yellow as gold,

By the candle-light in pumpkin bowls,  
And the gleam that showed fantastic holes

In the quaint old lantern's tattooed tin,  
From the hermit glim set up within;

By the rarer light in girlish eyes  
As dark as wells or as blue as skies.

I hear the laugh when the ear is red,  
I see the blush with the forfeit paid,

The cedar cakes with the ancient twist,  
The cedar cups that the girls have kissed,

And I see the fiddler through the dusk  
As he twangs the ghost of "Money Musk!"

The boys and girls in a double row  
Wait face to face till the magic bow

Shall whip the tune from the violin,  
And the merry pulse of the feet begin.

—B. F. Taylor.

### The Mule.

Nor north, nor south, nor west, nor east  
Can fortune find another beast  
Cut out by such a cross-grained rule  
As marked the making of the mule.  
Two ears, like hairy windmill sails;  
The most absurd of curious tails;  
A hoof to mark each lightning paw,  
A voice like filing of a saw;  
An eye that seemeth calm and kind,  
That sees for half a mile behind,  
And never fails—with glances quick—  
To guide the well-directed kick  
That lays the luckless driver low  
And whelms him with its weight of woe.  
He lives on thistles, weeds and sticks,  
With stubborn spells and tireless tricks  
Caught up in nature's slyest school,  
Where mischief fills the faithful mule  
With arts that mock at human rule.  
They say that mules can never die—  
Are never hungry, never dry  
Can live on sin and simple song  
And spend their time the whole day long  
Contriving tricks, or skillful plan  
To grind with grief the soul of man.  
Nor do they mind how ill they fare  
So they but cheat his watchful care,  
And kuock him over any where.

—New York World.

### Mountain-Top Letters.—No. 3.

[Written for the RURAL PRESS by JEWELL]

On the warpath! Yes, this farm life seems to be a constant battle with squirrels, gophers, cutworms, borers and bugs of all sorts, until I, a peace woman, feel at war with all vermin kind. My days are spent with pail of poison and hoe (for the weeds, too, are enemies we must fight continually), cautiously searching every squirrel track and hole; and my nights are haunted by imaginary enemies of our young trees and growing crops! Even my quiet meditations take the form of inventing some wonderful manner of wholesale slaughter of the pests.

I do not like this phase of farm life. If one could plant and harvest in a peaceful way, I would not mind the hard, hot, daily care of corn, beans, potatoes, etc., and if it be true, as your correspondent in a late paper says, "that squirrels follow civilization," then, indeed, am I ready to give up in despair! But an old valley farmer assures me that after a continual struggle with squirrels and gophers for eight years or more, they have routed the enemy, by combined effort, and so I take fresh courage. But it is very hard to see the big squash vines eaten, root and leaf, and the young, thrifty fruit trees, stripped of leaf and branch, and row after row of shiny green peas disappear as if by magic!

Then there is the old white cow! Bless me, even she is an enemy of our turnip and cabbage

beds! Five times in one day was she driven out of our garden, and my "gude mon" had to stop planting, and go to fence making, which was quite discouraging; but as our cow was not the only one on our mountain top, it was quite necessary they were kept ignorant of our new shiny rows of green corn just beginning to wave in the breeze. I begin to understand the cow nature; which is to starve, trying to get a sly mouthful of garden stuff, rather than to eat the rich, sweet, tall grasses that surround them everywhere.

Now what a charming peaceful time we would have on our mountain-top farm, if the squirrels and gophers would only confine themselves to such things as we don't value, ferns, wild sunflowers and the like, thus helping us to clear the land of them; the bugs and cut worms did the same, birds ditto, instead of tasting of our corn now, and fruit in the good days coming; if the cattle stayed just where the grass was the best and shade most charming, and did not require a fence to be kept in place. In short, if the seed planted grew and one felt sure that what their eyes saw growing would mature and repay a hundred fold, ah! that would be too good, and everybody would turn farmer perhaps. What would become of the cities, with their idle rich and poor folks, their theaters, libraries, banks, lawyers and doctors, and the saloons and all the whisky and fermented drinks. Goodness! it is awful to contemplate the change to the future generation, if all humanity should go into farming and raise all the non-educated; or, in other words, if we had no non-producers to support, save children, old people, and the sick!

If all lived in the sunshine and took sufficient exercise they would be out of the doctor's reach; and if all lived within their means and did not mortgage their farms, the lawyers would soon forget their lore, and peace, plenty, and health would be the consequence. The small farmers would join hands and help to kill obnoxious rodents and weeds, build roads with overhanging trees for shade, erect water fountains for man and beast (without a saloon attached) every two or three miles, and do very many things for man's benefit instead of his detriment, because, as a rule, the farmer is a better, purer, more honest, and a healthier man than any other, consequently his thoughts are better and nearer right.

Looking at life from any point it is a battle. In the cities one's enemies are men, who crowd and push and endeavor to live off the labor of others; and they who attempt to act from principle must bear the snubs and jeers of the masses, which is less easy to endure than to do battle with insect life and rodents here on the mountains. The one is but living its best life, eating that which it likes, while the other enemy not only lives his worst nature, but by his example tends to lead others astray. So, friends, we may not be doing our best duty by trying to live peacefully without the effort of waging war with vice, intemperance, dishonesty, etc., in the cities, or doing our utmost to destroy all the pests of our farm life, remembering always never to be weary of well-doing.

Deer Ridge Farm, July 6th, 1879.

A COUNTRY TOILET.—A country toilet may be of navy-blue linen, trimmed with embroideries in light blue. The front of the skirt is trimmed with a plaited flounce, bordered with a light blue cording. A trimming is made in the shape of an apron, with two embroidered flounces and linen platings. Two straight pieces of goods fall down the sides of the apron, which are trimmed with an embroidered ruffle and cordings. These pieces are draped over the hips and then fastened under the front seam. The back of the skirt is made of straight seams. The top part of these seams is raised in puffs, and the lower part plaited in large hollow plaits fastened down on the wrong side by means of ribbons. The puff is trimmed with sky-blue ribbons. The waist, with a plastron, is of navy-blue linen. The back is cut "tailleur" shaped, and is open on the lower part of the seam; below this are ribbon loops. Near this opening are two tongues embroidered with light blue. The waist is hooked in the middle, over the plastron, which buttons on either side, and is separate from the waist. Around the waist is a light blue cording. The collar is shawl-shape, and terminates in revers. The sleeves reach to the elbow, and are trimmed with an embroidered ruffle and a ribbon bow. The hat is of white rice straw, trimmed with a light blue Amazon feather. The bows and draperies around the hat are of navy-blue satin.—N. Y. Times.

LOCATION OF THE GARDEN OF EDEN.—Of the four rivers which encircled the Garden of Eden in Genesis, the Phrat and Chiddekel have long ago been identified as the Euphrates and Tigris. A cuneiform monument in the British museum has a series of geographical names, and among them occur Pisan and Gnehan, both canals of the Euphrates. Pisan was a canal running south of the Euphrates, and in the epoch of Alexander the Great, went under the name of Pullakopas canal; it is the Pisan or Pischon of the Bible, and Gnehan is the Gihon. The Hebrew people had therefore placed the cradle of the human race in the vicinity of Babylon.

THE tramp's last dodge is to ask your advice about going to the next town, and when you warmly advise him to go, he says he has much confidence in your good judgment, and will emigrate further on at once. "But," he adds, "wouldn't you advise me to borrow ten cents before I start?"

### Cultivation of Character.

[Written for the RURAL PRESS by S. C. B.]

This is only to those who seek in your pages a suggestion as to what will "pay" most largely for the cultivating; to them is the confident announcement that there is nothing upon which time and labor can be expended that will yield so large a return as work in that garden the dear Father has given each one, our own character! They need to be weeded of the little vices; the giant tree of selfishness which grows so fast and shades and dwarfs so many fairer plants needs to be lopped off, branch by branch, and its final uprooting Christ himself will direct and assist. Then in the heart of the garden "charity and good-will" must have a place, that under its shade we may remember judgment does not belong to us, and reflect upon the wisdom that reserved it for the only One who can see the temptation and the palliating circumstances. Carefully must we plant and nourish those virtues and qualities of mind and heart which command our best regard, and if they do not take root easily, and reward our efforts with rapid growth, we may draw encouragement from the fact they have never failed to flourish in time where they were prayerfully and perseveringly cultured. There must be a spot allotted to those which bear the fragrance of good deeds, and we must seek carefully for all which exhale the influences that make us wiser, purer and better.

Our garden will need the sunshine of patient and faithful endeavor, and the streams of divine love and mercy (which can be had for the asking) to water their roots, and bring forth the fairest of earthly flowers. It needs, also, to be fenced by integrity; the posts, our honest and upright purposes; the pickets, our faithfulness in small things. Then must we be careful to lose none, leaving an unsightly gap where small enemies may enter and work mischief. Then if Truth be chosen watchman, our garden will be saved from a multitude of foes, and be one in which we may dwell with happiness, peace and contentment, having the respect and confidence of those we care to please; and what more do we seek, in seeking wealth? Has the experience of the world demonstrated the proposition that gold alone can give as much? At least it is not the "one thing needful" in these gardens of ours, which all may have who are willing to be earnestly watchful and patient.

As beautiful results in the gardens of the world can not be had by wishing for them, so shall we find that in realizing how susceptible our own are of improvement, and giving them little by little, and day by day earnest thought and care, we shall make them worthy of the One who gave them, and an example to those who have found how utterly unprofitable and unsatisfactory is the service of "The world, the flesh and the devil." It will yield us the "fruits of good living," and its apples will never turn to ashes between our teeth. All the effort that can be expended upon it, so far from interfering with the practical business of life, will greatly assist it; be it to it always as the "power behind the throne" and prove the best of investments. Riverside, Cal.

A RUSSIAN BABY.—Russian babies are always swaddled and rolled up in bandages, so that they may conveniently be put away without risk of getting themselves into mischief. On entering one of their homes, an enthusiastic traveler thinks he has come upon some pagan tribe, having their idols and penates with the heads well carved out, and the rest of the body left in block. He looks curiously at one laid upon a shelf, another hung on the wall on a peg, a third slung over one of the main beams of the roof, and rocked by the mother, who has the cord looped over her foot. "Why, that is a child!" cries the traveler, with a feeling similar to that experienced on treading upon a toad which was supposed to be a stone. "Why, what else should it be?" answers the mother. Having learnt so much in so short a time, the inquisitive traveler wishes to inform himself about the habits of the creature; but his curiosity being somewhat dampened by the extreme dirt of the little figure, he inquires of the parent when it was washed. "Washed!" shrieks the horrified mother; "washed! what, wash a child! You'd kill it."—N. Y. World.

FROZEN KINDNESS.—This world is full of kindness that never was spoken, and that is not much better than no kindness at all. The fuel in the stove makes the room warm, but there are great piles of fallen trees lying on the hills where nobody can get them; these do not make anybody warm. You might freeze to death for want of wood in plain sight of all these fallen trees if you had no means of getting the wood home and making a fire with it. Just so in a family; love is just what makes parents and children and brothers and sisters happy. But if they take care to never say a word about it—if they keep it a profound secret; as if it were a crime—they will not be much happier than if there was not any love among them; the house will seem cold even in the summer, and if you live there you envy the poor dog when anybody calls him "poor fellow."

WHEN an Oswego clergyman in a sermon Sunday, said "the bloom of youth is upon many of you," the ladies got frightened and covered their faces with their handkerchiefs.

### Having a Home.

When little Mrs. Weston had been married three months, I went to Beverly to spend the day with her. She was living in a convenient, pleasant little house into which she moved after boarding a month at a small hotel, during which time she furnished her prospective abode, and got everything in readiness for housekeeping.

"How glad I am to see you; come right into the parlor," was her greeting, and I followed her into her "best room." Actually, I felt a chill steal into the very marrow of my bones. The blinds were all down, and it was as dark as Egypt at first, but that was soon remedied, and I had a chance to look around while divesting myself of shawl, hat and gloves.

What a stiff looking parlor! every chair stood at just such an angle; the blue and gold books of poetry on the center table were laid with the greatest precision one on the other; not a speck of dust, not a scrap of lint to relieve the terrible newness of everything. There were two spotless Parian marble vases on the mantle, and between them stood a bust of Dickens, but there were no autumn leaves, no ferns or fancy work, no flowers in the vases, actually nothing which in the least could relieve the room of its homeless appearance. No one would suppose that it had ever been used by anybody. I wondered if I was the first guest who had stepped across the threshold.

Nellie Weston seemed uncomfortable. She sat bolt upright on the sofa, and I sat in an easy-chair which belied its name, and neither of us seemed to know what to say, though we were intimate friends.

"Don't let's sit in here," said Nellie, at length. "I never feel at home in the parlor, I suppose it is a sign of plebeian blood, but I prefer the kitchen. Would you mind if I took you there?"

"Not at all," I answered, "I would like it of all things. The newness of this parlor strikes a chill through me."

"That is just what John says," cried Nellie. "We decided when we first went to housekeeping to sit in the parlor every evening, so that if company came we should be all ready to receive them. But we soon grew tired of it. John said he felt as if he was on his best behavior as soon as he crossed the threshold, and was stiffened whenever he sat in one of the chairs. I am sure I can't imagine what is the matter with the room, the furniture is nice, and the carpet real Brussels; but since he liked the kitchen we always sit in there."

Ah, this was something like home! this sunny, pleasant kitchen with its warm looking rag carpet, the big Maltese cat in the window seat, the bird singing in its cage, the dozen or more blooming plants in the sunniest window, the open sewing machine with its piled-up work basket, the singing kettle in the range—no wonder John preferred this room to the parlor. Who could blame him?

"How comfortable it is in here," I said, taking a seat in a mammoth wooden rocking chair in which was a big feather cushion, "Now I feel at my ease."

"And now I can talk," said Nellie. "I feel as if my tongue was tied when I sit in the parlor; but of course I can't ask casual visitors into the kitchen; they would feel insulted. Now please tell me, if you can, what is the matter with that parlor?"

"The whole of the matter is that you don't live in it," I answered. "If you had your bird, your cat, your sewing machine and your flowers in there, you would soon feel at home in the room, and find it pleasant; but six chairs, a sofa, a carpet and a small table with half a dozen nicely bound volumes of poetry lying on it, don't make a home habitable. Then you keep the outside blinds closed, and the shades down, making it like a dungeon all the time. The sun never penetrates there, and consequently it is always chilly."

"I think it would be just as well, if not better, if we housekeepers dispensed with parlors altogether," said Nellie. "What is the use of furnishing a room which is to be kept nice for the sake of a few acquaintances for whom you care nothing, and who call perhaps once a month, and stay about ten minutes? My friends can always be invited into my kitchen or small dining-room, where we can be merry and at ease. I don't believe I have ever laughed in that parlor. I believe a laugh would sound out of place. And what shall we do when it grows too warm to sit in the kitchen? The fire will make it uncomfortable here in summer."

"Take my advice and move your flowers, machine and bird into the parlor," I answered. "You are naturally orderly, and the room will always be neat enough to receive visitors. Don't keep an expensively furnished room for the sake of a few acquaintances whose opinion, good or bad, will not affect you at all. Your first duty is to make a home for your husband, and every part of the house should be a home to him. In no room should he feel ill at ease."

"I believe you are right," said Nellie, who is never hard to convince, having a very amiable disposition. "And I will try your plan, and will certainly let you know how it works."—Florence H. Birney, in American Cultivator.

"Did you see Baron Y.'s horse fall on his jockey over that hurdle?" "Oh, yes! The jockey's killed, but the horse is all right." "Yes, I know. It don't amount to anything, but the Baron must have been fearfully scared."



## Chaff.

Mrs. O'BRALAGHAN: "Shure, an' it's the truth oi've been tellin' yer, Mrs. Muggins; you never caught a lie a-comin' out of my mouth." Mrs. Muggins: "No, indeed, Mrs. O'Bralaghan; they comes out so fast nobody could't catch 'em."

LITTLE BILLY was told, "Never ask for anything at the table. Little boys should wait until they are served." The other day little Billy was forgotten in the distribution, and was not served at all. What could he do? Presently, after reflecting seriously, he asked: "Mamma, when little boys starve to death, do they go to heaven?"

"WHAT made you quit the East?" said a man in Nevada to a new-comer. "I got into trouble by marrying two wives," was the response. "Well," said the other, "I came out here because I got into trouble by marrying only one wife." "And I," added a bystander, "came here because I got into trouble simply by promising to marry one."

A RURAL bride of considerable beauty went to Indianapolis on the honeymoon tour. Her husband was manifestly proud of her good looks. While they were going about the city, she was struck in the face by a falling sign-board and her nose broken. The attending surgeon said that she was badly disfigured for life. "Just my darned luck," the husband exclaimed; "property always goes to ruin in my hands."

THERE is a man in Illinois who scoffs at the comforts of a patent spring mattress, with the accompanying pillows, bolsters, sheets, and snowy coverlets, and even deems the Indian luxury of a blanket and fire effeminate and unworthy of man. In his back yard there is a shallow trench, in which he lays himself every night at bedtime, and a faithful man servant shovels earth over him till nothing but his head is left uncovered. He has no fear of fire or burglars, but sleeps serene and happy in his couch of earth. Nothing so truly rural has been recorded in regard to beds and bedding since Nebuchadnezzar went to grass. If he should wake up and find himself dead, some morning, he would be both dead and buried.

A SHARP-LOOKING youth walked up quickly to the counter of the post office in a town not a hundred miles from Newcastle, and emptying a bag of coppers thereon, asked the clerk, who was attending to other customers, for five shillings' worth of penny stamps. "Oh, you be bothered!" was the answer. "That's not a legal-tender; it is all copper." "What is a legal-tender then?" asked the boy. "Why, one penny is a legal-tender for a penny stamp." "Oh," exclaimed the youth, "is it? Come on then"—passing a coin from the heap—"a penny stamp, please." The clerk gave him one. "Another, please." A second was given him. "Ano—." "Here, stop that," the clerk said; "give me the money. It will be the shortest way to get rid of you." After counting the money, he gave the value thereof in stamps to the lad, who was heard to mutter: "Aa thowt aa would tire him out!"

THE WORLD IN WAX.—Mr. Grube, a maker of wax images in New York city, has constructed what is claimed to be the largest globe of the world, showing the ranges of mountains and other peculiarities of the surface of the earth, in relief, now in existence. Its diameter is four feet and about one inch, the scale being one in 10,000,000. The range of even the Himalayas would not be visible upon this globe if the scale were adopted for the elevations as for the map, and accordingly the relief is made upon a scale which exaggerates heights twenty times. The oceans, seas and rivers are colored blue; the continents are yellow; the glaciers, icebergs and floating cakes of ice white. Plains and mountain ranges are clearly shown, and every part of the world is exhibited in its true character. Red, black and white lines cross the globe to indicate the isothermal belts, the variations of the magnetic needle, the date line where ships correct their logs by skipping from Saturday to Monday, and *vice versa*, and other facts of like character. The map has been corrected in the light of the latest discoveries down to two months ago. The northern coast of Siberia has been much altered in the atlases by the Nordenskjöld expedition, the ships sailing in deep water over places marked as 500 miles inland, and being compelled to go hundreds of miles around promontories, etc., which are occupied on the maps by bodies of water. The globe is made of wood. The relief is formed by wax. Mr. Grube has been two years in perfecting his globe, and Chief Justice Daly and other geographers have lately been giving attention to it.

POSITION OF THE PLANETS FOR JULY.—Mercury can be seen after sunset all through the month of July. Early in the month it keeps nearly the path of the sun; later it moves south of the point of sunset. On July 20th, it may be seen east of the crescent moon. Venus, on July 8th, passes near to the planet Uranus, but moves rapidly toward the east. It will be near the crescent moon July 22d. Mars, Saturn and Jupiter can all be seen at a late hour in the evenings of July, about midnight. Jupiter will be known by its size and brilliancy, Saturn by its white light, and Mars by its ruddy glow. Uranus may be found with an ordinary glass by its nearness to Venus. On July 8th, Uranus is a little south of Venus, after that it will be found west of Venus and a little north.

## Young Folks' Column.

## The Child-Dike.

Holland is a beautiful country, full of green fields, with cattle and sheep grazing in the pastures, but there are few trees and no hills to be seen. The ground is so flat and low that two or three times the sea has rushed in over parts of it and destroyed whole towns. In one of these floods, about 200 years ago, more than 20,000 people were drowned. In some of the towns that were flooded not a creature of any kind was left alive.

A large part of the water that came in at the time of that flood still remains. It is known as "the Maas," and in one part of it an old dike or dam—which is called the "kinder-dike," or child-dike, and it got its name this way:

The waters rushed in over one of the little Friesland villages, and no one had any warning. In one of the houses there lay a child asleep in its cradle—an old-fashioned cradle, made tight and strong of good stout wood.

By the side of the cradle lay the old cat, baby's friend, probably purring away as comfortably as possible. In came the water with a fearful roar. The old cat, in her fright, jumped into the cradle with the baby, who slept through all the turmoil as quietly as ever. The people were drowned in their beds. The house was torn from its foundations and broken into pieces. But the little cradle floated out on the angry sea in that dark night, hearing safely its precious burden.

When morning came there was nothing to be seen of the villages and green meadows. All was water. Hundreds of people were out in boats trying to save as many lives as possible; and on this little bit of an island that I have spoken of what do you think they found? Why, that same old cradle, with the baby asleep in it and the old cat curled up at her feet, all safe and sound.

Where the little voyagers came from, and to whom they belonged, no one could tell. But in memory of them this little island was called "kinder-dike"—the child-dike—and it goes by that name to this day; and this story is told to thousands of little people all over Holland as a remarkable instance of God's providence.—*Nursery.*

## A Smart Dog.

Wonderful stories are told of the wisdom of dogs and our young folks doubtless enjoy them. We find in a scientific paper, which certainly should tell the truth, the following about a dog named "Mori." He used to go into the dining-room at meal times. One day a minister was visiting Mori's master and Mori went into the dining-room with them, and kept quietly under the table till the end of lunch, when he begged for a little food, and he was given a small shred of beef. They returned to the drawing-room, while the servant cleared away, and the beef was taken into the pantry. The dog did not think he had his fair share. Now, he had been taught to stand on his hind legs, put his paw on a lady's waist, and hand her into the dining-room. He adopted the same tactics with the minister, but the sagacious dog, instead of steering for the dining-room, led him in the direction of the pantry, along a passage, down steps, etc., and did not halt until he brought him to the pantry, and close to the shelf where the beef had been put. After giving him a piece of beef, the minister went up stairs and refused again to be led down as before. Finding he could not prevail on the visitor to make a second excursion to the pantry, he went out into the hall, took in his teeth the minister's hat from off the hall table, and carried it under the shelf in the pantry, where the coveted beef lay out of his reach. There he was found with the hat, waiting for its owner, and expecting another savory bit when he should come for his hat. The story does not say whether the minister gave him another piece of meat or not, but we suppose he did, for who could refuse such a smart dog.

NIG'S "THANK YOU."—Papa was drawing hay to the barn, and he saw Nig jump off the mow. He climbed up, and found in one corner of the barn, almost covered up with hay, three little kittens. He brought them to the house in a basket. My little brother and I made them a house with two rooms—a dining-room and a bed-room. We took the kittens out of the basket and put them in the bed-room. Nig would put her nose to each one, then mew, run to the barn, jump upon the mow and try to get her old nest; but papa had covered it up with hay, so she came back to her kittens again; then back to the barn she went. This time she stopped at the corner of the barn, gave a jump and climbed right up the side. She hung there a minute, then fell down, but did not hurt herself very much, for she climbed up again and mewed and mewed. Just then papa came with another load of hay, and he said he thought he heard a little kitten cry. Pretty soon he heard it again. Then papa got the ax and pried a board off, climbed up the ladder and got it. Nig was so pleased to get her kitten that she lay down and rolled and rubbed her head against papa's foot. Then she took the pussy in her mouth and carried it to the house and put it in the bed-room with the others. Now don't you think my pussy cat knows how to say "Thank you?"—*Bertha King, in N. Y. Tribune, Jr.*

## GOOD HEALTH.

## Sight and Reading.

M. Javel, in a recent lecture, tries to answer the question, "Why is reading a specially fatiguing exercise?" and also suggests some remedies for this fatigue. First, M. Javel says reading requires an absolutely permanent application of the eyesight, resulting in a permanent tension of the organ, which may be measured by the amount of fatigue or by the production of permanent myopia; secondly, books are printed in black on a white ground. The eye is thus in presence of the most absolute contrast which can be imagined. The third peculiarity lies in the arrangement of the characters in horizontal lines, over which run our eyes.

If we maintain, during reading, a perfect immobility of the book and the head, the printed lines are applied successively to the same parts of the retina, while the interspaces, more bright, also affect certain regions of the retina, always the same. There must result from this a fatigue analogous to that which we experience when we make experiments in "accidental images," and physicists will admit that there is nothing more disastrous for the sight than the prolonged contemplation of these images. Lastly, and most important of all, in M. Javel's estimation, is the continual variation of the distance of the eye from the point of fixation on the book. A simple calculation demonstrates that the accommodation of the eye to the page undergoes a distinct variation in proportion as the eye passes from the beginning to the end of each line, and that this variation is all the greater in proportion to the nearness of the book to the eye and the length of the line.

As to the rule which M. Javel inculcates in order that the injurious effects of reading may be avoided, with reference to the permanent application of the eyes, he counsels to avoid excess, to take notes in reading, to stop in order to reflect, or even roll a cigarette; but not to go on reading for hours on end without stopping. As to the contrast between the white of the paper and the black characters, various experiments have been made in the introduction of colored papers. M. Javel advises the adoption of a slightly-yellow tint. But the nature of the yellow to be used is not a matter of indifference; he would desire a yellow resulting from the absence of the blue rays, analogous to that of paper made from a wood paste, and which is often mistakenly corrected by the addition of an ultra-marine blue, which produces gray, and not white. M. Javel has been led to this conclusion both from practical observation and also theoretically from the relation which must exist between the two eyes and the colors of the spectrum.

His third advice is to give preference to small volumes which can be held in the hand, which obviates the necessity of the book being kept fixed in one place, and the fatigue resulting from accidental images. Lastly, M. Javel advises the avoidance of too long lines, and, therefore, he prefers small volumes, and for the same reason those journals which are printed in narrow columns. Of course every one knows that it is exceedingly injurious to read with insufficient light, or to read too small print, and other common rules.

HEARING AND HOW TO KEEP IT.—Lindsay & Blakiston, 25 South Sixth street, Philadelphia, have published a valuable work under the above title. The book is Vol. I. of a series of American Health Primers edited by W. W. Keen, M. D. From the mass of information contained in it we learn that the ear should not be tampered with, sweet oil and other greasy substances should never be dropped into the ear; they make it heavy, sticky and cloggy. The oil soon becomes rancid and affords a fit soil for the growth of a fungus which may entirely destroy the hearing. Poulitices should be avoided both in eye and ear, for they are apt to induce proud flesh. Care should be taken of the bodily comfort, warmth, etc., and the ears protected against cold drafts and other changes. Great care also should be taken not to pull the ears of children, or "box" their ears, a practice which may endanger the hearing in after life. If the ear should become affected through any cause a simple treatment should be adopted. If the ear runs, it should not be stopped up with cotton or any other substance. The matter must be allowed free egress, and the syringe should be gently used with lukewarm water. The great delicacy of the ear requires the gentlest manipulation, and all the nostrums advertised to drop in it, or sponges to scrub it out, must be avoided. As to the eye bright colors and pleasant objects are grateful, so to the ear sweet music, pleasant company, etc., are beneficial. Brightness of nature and cheerfulness of character have more to do with the preservation of health than is dreamed of. The above book may be found at A. L. Bancroft's.

EUCALYPTUS IN A COLD OF THE HEAD.—Prof. Strambio, in a note in an Italian medical journal, says that notwithstanding the failure of all remedies hitherto recommended for the immediate cure of a cold, he wishes to communicate to the profession the great success he has found attending a new one in his own person, and to ask them to test its efficacy. He found prolonged mastication and swallowing of a dried leaf or two of the *Eucalyptus globulus* almost immediately liberated him from all the effects of a severe cold.

## DOMESTIC ECONOMY.

## Good Recipes for the Cook.

Stewed Beef.—Take a piece of fresh sliver of beef (seven or eight pounds) and with a sharp knife make five or six incisions through it. Cut as many square pieces of bacon, fat and lean, long enough to go right through from one side of the piece of meat to the other. Roll each piece of bacon in a mixture of powdered pepper, spices and sweet herbs, and insert one into each incision; tie up the meat carefully, line the bottom of a stewpan with slices of fat bacon, put the meat on this with some onions and carrots cut in slices, some sweet herbs, a couple of bay leaves, parsley, whole pepper and salt to taste; add a pint of common claret, and half that quantity of stock; set the whole to stew gently for some hours, turning the meat occasionally. At the time of serving strain off the gravy, skim it well of fat, remove the string from the meat, pour the gravy over it, and garnish with Brussels sprouts.

Fried Chicken.—After neatly dressing and carving in pieces of proper size, parboil a half hour or longer, until tender; take out with a fork and place in a frying-pan of melted butter; fry brown by frequent turning to keep from burning. A nice gravy is made by pouring the broth in which it was boiled into the frying-pan, with a thickening of flour and any seasoning preferred. Curled parsley arranged as a garnish adds to the general effect.

Minced Veal and Eggs.—Take some remnants of roast or braised veal, trim off all brown parts, and mince it very finely; fry an onion, chopped small, in plenty of butter; when it is a light straw color, add a large pinch of flour and a little gravy, then to the minced meat, with chopped parsley, pepper, salt and a nutmeg to taste; mix well, add more if necessary, and let the mince gradually get hot by the side of the fire; lastly, add a few drops of lemon juice. Serve with sippets of bread fried in butter, round and the poached eggs on the top.

Fish Cakes.—Fish cakes are useful for turning the remains of salt fish to account. It is pulled apart when cold and thoroughly mashed and mingled with butter, mashed potato and a little pepper. This is made into cakes and lightly browned in a frying-pan with a little butter or fat. It is a useful breakfast dish. Another tasty dish is to put the flakes of a cooked fish into a stewpan with some butter and finely-minced parsley, then shake it over the fire and stir in the juice of a lemon.

Fried Bread Cakes.—Take any bits of bread you may have left after meals, soak them in milk, or milk and water, until perfectly soft; mash fine; add two eggs, pinch of soda, salt to taste, and enough flour to make them fry nicely; drop the spoonfuls into hot butter or lard. These are inexpensive and good, and a better way to use dry bread than in puddings.

Recipe for Ginger Beer.—One pound of lump sugar, ounce of bruised ginger, three-fourths ounce cream-of-tartar, two lemons sliced, boiling water one gallon. Macerate in a covered vessel, stirring frequently, when lukewarm add two ounces of yeast, the next day rack the liquor, let it work one or two days more according to the weather, then skim, or strain again, put into bottles and wire down the corks.

A Good Muffin.—One quart of milk, two eggs, one tablespoonful of butter, warmed with the milk, flour enough to make a batter that will drop rather thickly from a spoon, a teaspoonful of salt, a penny-worth of baker's, or a teacupful of home-made yeast. When very light bake in rings on a griddle.—*An Englishwoman, in Germantown Telegraph.*

BEIGNETS SOUFFLES.—Put about one pint of water into a saucepan with a few grains of salt, a piece of butter the size of an egg and as much sugar, with plenty of grated lemon peel. When the water boils throw gradually into it sufficient flour to form a thick paste; then take it off the fire, let it remain ten minutes, and work into it three or four eggs, reserving the whites of one or two, which you whisk to a froth and mix into the paste. Let it rest a couple of hours, then proceed to fry by dropping into hot lard pieces of it the size of a walnut. Serve piled on a dish with powdered sugar over, and a lemon cut into quarters, or make an incision in each beignet, and insert a small piece of jam or jelly.

SILVER CAKE.—One-half cup of butter, one and one-half cups of sugar. Beat well together; add whites of eight eggs beaten to a froth, two and a half cups of flour, dissolve one-half teaspoonful of soda in one teaspoonful of water. One teaspoonful of cream-tartar. For gold cake take the yolk of the eggs and mix the same as above.

BAKED HAMS.—Most persons boil hams. Aham is better baked if baked as follows: Soak it for an hour in clean water and wipe it dry; next spread all over with thin batter, and then put it into a deep dish with sticks under it to keep it out of the gravy. When it is fully done take off the skin and batter crusted upon the upper side, and set it away to cool.

CORN MUFFINS.—Three cupfuls of corn-meal, one cupful of flour, one egg, one-half cupful of sugar, two teaspoonfuls of cream tartar and one of soda; add a piece of butter the size of an English walnut, and enough milk to moisten. Bake quickly.





DEWEY &amp; CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 202 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line..... 25 .80 \$2.50 \$ 5.00  
Half inch (1 square)..... \$1.00 \$3.00 7.50 24.00  
One inch..... 2.00 6.00 14.00 40.00

The Scientific Press Patent Agency.

DEWEY &amp; CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, July 19, 1879.

## TABLE OF CONTENTS.

**EDITORIALS.**—The Dairy Industry; Cultivation and Absorption of Water; Saluon Disease; Agricultural Indians in Arizona; California Porcine Interests, 33 The Week; The Bankers Get an Idea; Good Seed and Thorough Cultivation; Plants Irrigating for Themselves, 40 American Honeys in England; Testing the Germination of Seeds; A Pacific Coast Harbor of Refuge, 41 **ILLUSTRATIONS.**—A Youth of the Navajo Tribe, 33. Trinidad Bay, California. Showing Lines of Proposed Breakwater for Harbor of Refuge, 41 **QUERIES AND REPLIES.**—Utilization of Bones; Alfalfa by Irrigation; Langshan Fowls, 41 **CORRESPONDENCE.**—Lumber, Mining and Tourists in Fresno County; Notes in Napa and Sonoma Valleys; The Blue Side; California Grown Insect Powder, 34. Boiler Explosions.—No. 4, 36. **THE DAIRY.**—The Santa Clara Cheese Factory, 34. **FLORICULTURE.**—Camellias and Camellia Culture, 35. **SHEEP AND WOOL.**—Origin of the Merino Sheep, 35. **THE FIELD.**—Growing Sugar Beets at Alvarado, 35. **THE SWINE YARD.**—Healthfulness of California Swine, 35. **PATRONS OF HUSBANDRY.**—Grange Notes and Suggestions; The Material Advantages of Co-operation; Keeping Silver Accounts, 36 **AGRICULTURAL NOTES** from the various counties of California, 36-37. **NEWS IN BRIEF** on page 37 and other pages. **HOME CIRCLE.**—The Old Barn's Tenantry; The Mule (poetry); Mountain-Top Letters; A Country Toilet; Loca ion of the Garden of Eden; Cultivation of Character; A Russian Baby; Frozen Kindness; Having a Home, 38. Chaff; The World in Wax; Position of the Planets for July 39. **YOUNG FOLKS' COLUMN.**—The Child-Dike; A Smart Dog; Nig's "Thank You," 39 **GOOD HEALTH.**—Sight and Reading; Hearing and How to Keep It; Eucalyptus in a Cold of the Head, 39. **DOMESTIC ECONOMY.**—Good Recipes for the Cook; Biscuits Souffles; Silver Cake; Baked Ham; Corn Muffins 39. **ENTOMOLOGICAL.**—Progress of the Coddling Moth War; Eucalyptus Wood and Insects, 40. **THE FLOUR MILL.**—The Austrian System of Milling; How to Get Rid of Flour Mill Dust, 42 **MISCELLANEOUS.**—Prices of Wheat Bags in the San Francisco Market from January, 1870 to July, 1879, 36. State Fair Premiums for Mechanical Products and Inventions, 42. They Inaugurate the Game in New York; The Eclipse of 1880; Professor Nordenskjöld; Sheep Supply of the United States; The Cow Tree; Alle Same Gopher; Lighting the Capitol by Electricity, 44.

## Business Announcements.

Washington College, Washington, Alameda Co., Cal.  
Rams for Sale, Mrs. E. McConnell-Wilson, Elk Grove, Cal.

## The Week.

Wheat is evidently doing its best to raise itself from the odious slough of depression into which nearly all farm produce has fallen. Wool took the lead, and brought cheer to the persistent shepherds who held on amid the most untoward circumstances, and now that another clip is growing the Eastern manufacturers are pushing card and loom with a zeal which has not been known for years. The wool industry is evidently entering another era of high barometer. Wine-makers are also gratified with the upward turn their industry has taken and are jolly, not with the juice, for they say doctors never take their own physic, but jolly at the distant jingle of the approaching dollars. Thus we have the tide of expectation running high in the double-yous, for wheat, wool and wine are all favoring producers. It is to be hoped that the gold which will be saved from exports by the new life in these products will go far to strangle the demon of hard times and thus lift the cloud from desponding sister products of the soil.

The days are full of excitement in political circles and, even in the haste of the harvest, people find time to respond to rallying cries and rush to the saving of the State by the upholding of policies which seem to each to be the ultimate condensations of vital truths. Strange it is that methods proposed for State saving are so opposed to each other that one must think that ruin certainly lies in one of them, but who shall say in which? It is, however, a comforting assurance that the State has in itself some inherent preservative power which will maintain its integrity whichever way the tide of suffrage turns. Let this thought bring strength and confidence to industry in the midst of distraction which excitement spreads abroad.

## The Bankers Get an Idea.

Believing as we do that agricultural credit, wisely placed, is one of the surest investments which the capitalist can make with his accumulated funds, we are pleased to learn that the idea is gaining ground. It would seem to us to need no argument to show that money loaned on staple products, in safe proportion to their value and the security properly guarded, is a risk not to be compared with the flimsy and fictitious collaterals which have been freely accepted by city bankers. And yet hitherto the farmer who has applied for loans has been subjected either to refusal or to a grant with conditions which seemed to approach the confines of robbery. A city shadow has been considered more enduring than rural substance; a city promise has been rated higher than a country pledge. This is wrong in theory and oppressive in fact. It has crippled honorable productive enterprises and fed a myriad of hollow, swindling, city-boru schemes which have sapped the strength of industry. In this way capital has often checked the prosperity of the State instead of promoting it.

The reason we conclude that wiser policies are beginning to prevail in the counsels of capitalists is because a report comes to us that certain of the rich private bankers of the State are showing considerable anxiety to place their accumulated coin in the hands of farmers, taking as security grain stored in the country warehouses in different parts of the State. This is quite a concession to the grower. For the most part hitherto an advance could only be obtained for grain shipped to the city and altogether gone from the owner's sight. This city-stored grain was often sold at one date and price and returns made at another date and price, and various smart things were done at the producer's expense and to his detriment. The new warehouse law has fostered the erection of warehouses near the grain fields and the capitalist is beginning to consider the property worth his respect and attention, and to advance the grower money for his immediate needs, the same to be repaid when he sees fit to sell the grain. Thus producers are spared the loss often occasioned by forced sales. Thus capitalists gain full rates of interest, with ample security, and whatever advantage there may be at any time in delaying sale is enjoyed by him to whom the property belongs—the producer.

It is much to the advantage of our agriculture that such accommodations should be accorded, and the fact that such grain is being highly regarded by the private bankers is a peculiar illustration of the triumph of truth. For these private bankers, in great measure, are seeking investment for their own funds and may be expected naturally to look more carefully into the safety of the investment than bank managers generally who may lack the spur of proprietorship in the funds they control. These private bankers are generally extremely conservative in their ideas and close in their scrutinies, and that they have perceived the advantage of reforming their ideas of credit to agriculturists is testimony which all capitalists should consider.

It may be truly said in this connection that there is some reason for the view of danger in agricultural credit which is generally taken, and this has resulted from at least two causes. First, the grievous discrimination which has been made against loans on farm enterprises, led capitalists to impose a rate of interest and heavy charges and bonuses besides, which have themselves impaired the security accepted, because they have placed such a heavy load upon the enterprise that it could not possibly succeed. Thus these greedy money lenders have invoked fear and made it the agent of ruin. They said to the farmer: "We are afraid to let you have this money, therefore we must charge you twice as much for it," at the same time by the act making it almost certain that the farmer must fail. Then the banks have had farming lands thrown upon their hands—lands which needed the best work of skillful farmers, and which, in the hands of bankers' incompetent agents, have fallen into unproductiveness and depreciated value, sometimes so that the original loan could not be recovered from them. Thus greed has often over-reached itself, the golden-egged bird has been strangled, and the event seems the fitting result of a most deplorable policy.

Again, there is another reason why agricultural credit has fallen into disrepute. Many times money has been obtained too easily for the purposes of carrying out some theory of agricultural improvement or production which events proved impracticable. Failure has followed, and those who advanced the money have ever since hugged the delusion that all agricultural investment was a snare. The failure and loss resulting from finely-drawn schemes should not be charged against the sure and safe industry of the farm. Sometimes the most careful farmers have lost their heads, and if money could be obtained have embarked in operations which should never have been attempted. In such cases it may have been that money was too easily obtained and confidence was too great.

It is not to such phases of agricultural credit that we refer when we express satisfaction that capitalists are getting more true ideas about advancing money upon agricultural security. It is this simply and solely. Men in various business and manufacturing operations often need loans upon work accomplished or upon estab-

lished trade. They have no trouble, if their reputations be good, in obtaining, and often they obtain it upon very easy terms and rates. Hitherto agriculture has been well-nigh debarred from accommodation of this kind and the farmer has been left at the mercy of the petty creditor, who has compelled him to sacrifice his produce and to place outrageous obligations upon his land, simply because he was in his power. General business has been comparatively free from such impositions, because of the timely favor of the banks and private capitalists. The same favor and confidence ontheld to the agriculturist, upon security even more safe, is the point which we insist is the right of the farmer as a part of the business portion of the community just as worthy as the merchant or manufacturer. That this idea is gaining ground in financial circles of this city, is a satisfactory indication. It has many minds yet to encompass before these circles are rid of prejudice and false notions on the subject.

## ENTOMOLOGICAL.

## Progress of the Coddling Moth War.

**EDITORS PRESS:**—In your issue of February 1st, 1879, and subsequent issues, you warned the fruit growers of the danger threatened by the spread of the coddling moth. Some of the orchardists in this neighborhood have been untiring in their efforts, and we can assert, have been successful in destroying the pest to a great extent. But few growers could be induced to try any experiments, because they thought, to use their own language, it was at best only a forlorn hope; but they were mistaken. All honor to the few that, by their energy and industry, have established the fact beyond dispute that the pest can be destroyed.

Mr. John Cox, of Sutterville, two miles from this city, nearly lost his entire crop last year. Last March he scraped the loose bark off his trees and washed them with the solution of sulphur and lime, as described in your issue of February 8th, 1879. He afterwards washed them twice with a solution of whale-oil soap and sulphur. We met Mr. Cox last Saturday. In answer to our inquiries (we will give his own words) he said: "I am so confident of success that I will wash my trees early this fall and twice next spring. I have saved over three-fourths of my crop this season, and I am confident I can clean my orchard of the pest altogether. By using this wash my trees have all smooth bark and look healthier and better than heretofore. My Bartlett pears are the best I have ever had. Easter Beurre, completely destroyed last year, will give a fair crop; Winter Nellis also. Apples, totally destroyed in 1877 and 1878, will be a fair crop this year. The wash is a success."

Thomas B. Flint, of Riverside, one mile from this city, had his crop destroyed in 1878. He washed his trees with the whale-oil soap and sulphur solution. In answer to our inquiry last Saturday, he said: "I have not five boxes of wormy fruit in my orchard." George D. Kellogg, of Newcastle, Placer county, used the whale-oil soap and sulphur solution, and has been successful to a great extent.

The proprietor of one of our largest orchards in this section, whose crops of 1877 and 1878 were severely damaged, has bought 100 hogs and put them in his orchard, and keeps men picking all fruit off trees showing any signs of worms and feeding it to the hogs, and in this manner destroying the second and third broods of the moth. Others are picking off the fruit and destroying it, and many others, who have been doubtful of any remedy having effect, are now convinced that by united effort the pest can be destroyed. From the present feeling we expect to be able to report to you a general attack on the pest this fall and next spring.

Generally the moth is not so numerous as at this season last year, but the second brood is coming fast to perfection, and in some cases the third. Specimens taken from trees and fruit this season and put under a glass have passed the pupa or chrysalis state in 10 days and matured five specimens of the moths, which are now in our possession.

We respectfully call the attention of fruit growers to unite in a crusade against this pest. Examine your trees carefully. Have all fruit showing any signs of larva (or so-called worm) picked off and destroyed, either by feeding to hogs or put in a pit with slacked lime. This will destroy the second and third brood of this season and will clean your orchards to a great extent, preventing the larva from lodging in trees throughout the winter. It will cost labor to do this; but remember it will pay the largest dividend on the amount invested that can be made in any improvement on the farm or orchard. Early in the fall the trees should be scraped, taking off all loose bark, and thoroughly washed with either sulphur and lime or the whale-oil soap and sulphur solution; thus destroying any larva that may be left in crevices of the trees. Fruit growers having quince trees in or around their orchards should be very careful in cleaning them, as we find the larva prefers the quince to any other tree for a nesting place. In one instance we found 400 larve in a quince tree outside of an orchard, when we could only find from one to four larve in large pear trees in the orchard.

In their war against the coddling moth, grow-

ers are much indebted to David Dunn, of the firm of Hutchings & Co., of San Francisco, who has given his assistance in perfecting the solution which is now pronounced a success.—Cook & Sox, Sacramento, July 14th, 1879.

## Eucalyptus Wood and Insects.

But according to the testimony of Prince Troubetzkoy, the eucalyptus tree can be made to subserve most useful purpose in our country in contributing to the protection of the cotton plant against the ravages of the boll-worm, caterpillar, lice and other numerous insectivorous enemies of the plant. He believes it to be a sure protection against phylloxera, a deadly enemy of the vine, though his experiments have not proved satisfactory. In all other cases the wood and the leaves have proved the most effective of insecticides. "For instance," says he, "the sleepers on the East Indian railways were ravaged by the white ant, but now that they have been replaced by others made of eucalyptus the insects have ceased to attack them." Also in Australia, where all vessels are made of this wood, the sea-worm never approaches them. In Algeria, the locusts spare the eucalyptus forests, while they eat up all other green things not within the reach of their influence. If these most ravenous of insects dread the odorous influence of this tree, we see no reason why it should not prove destructive to the multitudinous enemies of the cotton and tobacco plants, and thus prove an inestimable blessing to this country.—New York Herald.

When one speaks of the quality of the "eucalyptus tree," he stauds a good chance of being wrong in what he says, because the genus *Eucalyptus* contains more than a hundred species, many of which have widely different qualities and characteristics. Whatever insect killing power some species of eucalyptus wood may have, the species most generally introduced, the *E. globulus*, is not ruinous to all insects, for there is a boring beetle which delights in it and honey-combs it just as thoroughly as the laurel and sycamore are sometimes riddled. We have also heard that the wood of the *globulus* is not proof against sea worms. On the other hand there is a species of the tree which is said to be free. Sweeping statements about the eucalyptus as about most other subjects are quite apt to be untrue.

## GOOD SEED AND THOROUGH CULTIVATION.

Hon. G. W. Colby, of Butte county, gave us the other day a good object lesson in the advantage of good seed and thorough cultivation in wheat growing. He showed two stools of wheat from Australian seed, one of which had 85 bearing stalks, the other 53. The heads ranged from 6 to 8 inches in length and held from about 50 to 100 kernels each. And such wheat it was to be sure, heavy, plump, smooth, far beyond what is usually seen. This wheat was but a handful from a tract of 1,000 acres now ready for the reaper at Mr. Colby's ranch in Contra Costa county, close to Avon station. These 1,000 acres Mr. Colby thinks will average 50 bushels to the acre; one-half of it promises to average 60 bushels. This splendid result Mr. Colby attributes to summer-fallow, twice plowed, and to sowing dry so that all the rain of the season has been turned to account. The advantage of this method of culture in the locality named is plainly seen, for the fields cultivated by the old system of constant cropping and late plowing, make a poor show for a crop. The seed Mr. Colby used was introduced from Australia and is now in its third year. He believes in introducing fresh seed from other regions at short intervals, thinking that an opinion widely held, that seed by continued re-sowing deteriorates, is true.

## PLANTS IRRIGATING FOR THEMSELVES.

It has been shown by the experiments of the late Prof. Habberlandt, that plants sometimes irrigate on their own account and thus draw nutriment from dry soils. He undertook a series of experiments on the phenomena of vegetation of plants grown in an absolutely dry soil. For this purpose he allowed the lower portion of the roots of the plants experimented on to dip down into distilled water, while the upper portion was retained in a soil so dry that the plants would otherwise, as was practically demonstrated, inevitably be withered up. The results of these trials went to show that the portion of the roots lying in the upper dry stratum of soil rich in nutritive constituents of plant life does not remain inactive, as has been generally maintained, but is chiefly occupied in supplying the plant with the constituents of its ash. As there is no absolute want of water, this being supplied by the lower portion of the root, the upper portion is enabled to secrete a certain quantity of moisture which is taken up by the immediately surrounding soil, and dissolves its earthy constituents, which are then taken up directly by simple endosmosis.

**A HAPPY EVENT.**—We learn with pleasure that Thomas J. Davis, for several years foreman of the Press printing establishment, has concluded to change for the better, his condition in life, with the consent and connivance of Miss Grace Bartling, with whom Mr. Davis was united on the 16th instant. The columns of this paper have been indebted to Mr. Davis for their attractive appearance, and we hope his married life will be as pleasant as his efforts in that direction have been successful. We have nothing but our most earnest congratulations to offer the new couple upon their favorable venture upon the sea of matrimony.

**AMERICAN BUTTER IN ENGLAND.**—American butter seems to be following the course of American cheese in winning favor abroad. At the late meeting of the Royal Agricultural exhibition prizes were offered for American butter, one of which was awarded to John B. Murray, of Delhi, New York; another to John Stewart, Ananosa, Iowa.



## QUERIES AND REPLIES.

### Utilization of Bones.

**EDITORS PRESS:**—Will you request Prof. Hilgard to give me some information as to the best way to turn bones to account as a fertilizer. I have the promise from a couple of butchers of all their bones, consisting of shanks, heads, horns, feet, etc. Can I fit them for use myself, or had I better ship them to San Francisco and exchange them for prepared bone fertilizers? How shall I apply the material to fruit trees, etc.?—S. B. BELLEW, El Monte, Los Angeles Co.

**EDITORS PRESS:**—Inasmuch as the same question asked by Mr. Bellew in the above letter, comes to me a number of times each year, I desire to take the benefit of the publicity the answer will receive through your columns. The simplest way in which a farmer, who pays due attention to that fundamental requisite, the manure pile, can obtain the full benefit of a moderate quantity of bones, is to mix them in with the hot, fermenting manure, provided the pile is kept in a proper condition of moisture. The smaller and softer bones are thus reduced to a very efficient state of comminution within a few weeks; the larger and harder ones may be but partially softened, and will, in that case, mostly be left behind by the manure fork when the manure is hauled out: to be subjected to the same process a second time. The success of this convenient process depends materially, of course, upon a proper management of the manure pile, which must neither be kept sodden with water, nor allowed to "fire-fang."

Larger quantities of bones are very conveniently treated where wood ashes are abundant, by packing them in ashes (which may advantageously have been previously mixed with about a gallon of slaked lime per barrel); either in barrels, hogsheds, or, best of all, in iron tanks, and keeping the mass as wet as may be without leaching. In the course of from six to eight weeks, most of the bones will be found reduced to something much like putty; and this mass, with the ashes, makes a very efficacious phosphate fertilizer. Coal ashes, or any light soil, mixed with three or four pounds of common washing soda per barrel, will do instead of wood ashes. The vice of the process is that much of the bone gelatine is thus lost in the shape of ammonia gas; but the bone phosphate is left in a very active form. Where iron boilers are used in the process, a little heat can be made to accelerate the softening very much; but boiling does not pay. Note: That burning the bones for the purpose of readily crushing them, spoils them entirely for use as a fertilizer. Nothing but treatment with sulphuric acid can afterwards render them efficacious.

The latter treatment is too difficult for any farmer or other novice to indulge in. Burnt fingers and holes in the clothes is the least damage likely to befall the daring experimenter, and actual danger to life, limb and house, exists wherever the "oil of vitriol" is kept on hand outside of establishments devoted to its use.

As to the comparative advantage of working up the bones in the manner described above, at home, or exchanging them for manufactured phosphate manures, it is impossible to give any general advice, since everything depends upon circumstances of location, soil, crops, communication, reliability of manufactured products, etc. As to the latter point, I think I can confidently recommend as fully up to the standard, the steam bone-meal manufactured and sold by the two San Francisco firms now in that line of business; while the Eastern importations that have come under my notice are at least of doubtful quality, and in part unmitigated frauds. What terms the firms in question would make in the exchange, and what would be the effect of adding the cost of transportation both ways, Mr. B. can easily determine. Elsewhere the railroads convey such goods at a merely nominal freight charge, considering them as adding to their business in an indirect way, more than could be gained by charging prohibitive freights.

In my personal experience I have come to the conclusion, that where the home preparation of the bones in either of the modes described can be done in spare time (that is without employing additional help for the purpose of looking after the matter) it is very profitable to do so; whereas, if special help has to be employed, or the manure pile or ash tanks neglected for want of timely attention, it is better to pay the manufacturer for doing what he is specially prepared to do: always provided, that the fertilizer business is managed as is that of ores, the price bearing some reasonable relation to the amount of actually efficient matter present, as ascertained by assay. On any other basis, the stupendous frauds to which the farmer is exposed in buying commercial fertilizers, should dispose him to manufacture all the manure he can, at home.

As regards the manuring of fruit trees in particular, not the worst mode of utilizing bones is to simply bury them in the ground around the trees, which will gradually but surely embrace them with their rootlets and consume them completely. The pear tree, through which the bones of Roger Williams fed his descendants, is a case in point, but it does not take a couple of hundred years, under any ordinary circumstances, to accomplish the result. A tree thus manured will be sure to get all the phosphates

**AMERICAN HONEY IN ENGLAND.**—It is announced that a premium was awarded to American honey at the fair of the English Royal Agricultural Society, held last month. The honey was exhibited by a New York firm, but we are not yet informed in what State it was produced. That American honey is bound to win its way in England seems assured, for quality usually wins its way ere long. We are informed by our Ventura correspondent that Chilean honey is selling in Europe at nine cents per pound on an average. It is poor and dark, but has secured the run of the trade and can only be supplanted by spreading information of the vast superiority of the American nectar. The recent award at the Royal will do something to awaken English consumers to this fact. California will not figure largely in honey shipping this year, but the apiaries will be maintained and all efforts to develop a future market for California honey will ultimately result to the profit of our producers.

**TESTING THE GERMINATION OF SEEDS.**—Mr. Gregory of Marblehead, Mass., the well-known seedsman, does not believe in the tests of seeds by counting the percentage which germinate between wet cloths, etc. He says, if you adopt

### A Pacific Coast Harbor of Refuge.

The peculiar configuration of the Pacific coast line of Lower California, California, Oregon and Washington Territory is such that there are very few indentations affording harbor facilities in the whole length. Between San Diego, at the southern boundary of California, and the Strait of Fuca in Washington, a distance of some 1,300 miles, there are really only two good harbors accessible at all times—San Diego and San Francisco. There are a few others which are good when once inside, but they are bar harbors, difficult of access in stormy weather.

A large proportion of the landing places are mere roadsteads partially protected from the summer winds by projecting headlands, but open to the southerly gales of the winter months. Between San Francisco and San Diego most of the trade is done by steamers, and to the more important points north of this place steamer connection is made. There is, however, a very large fleet of sailing vessels in the coasting trade, carrying produce, lumber and coal. The bulk of this trade is to the north of San Francisco, to the lumber and coal regions, our northern coast line being especially rich in its lumber resources. There are 945 vessels, aggregating 243,709 tons, belonging to the port of San Francisco, and of this number, 467 are schooners engaged in the coasting trade.

Most of the northern coast trade is done at "chute" landings, as they are called, a loading system necessary from the ruggedness of the coast line. These chutes consist of a long incline of wood in the form of a shallow trough, extending from a headland or a shipping point, or from a high wharf or pier, out to a point where the water is deep enough to allow vessels to come under and load. Lumber and other articles are slid down these chutes to the vessel's deck, the vessel meantime being moored head and stern and tied up strongly to keep her in position. Some of these chutes are 400 or 500 feet long. The peculiar formation of the coast brings nearly all the chutes on the north sides of the landings. At some places even these cannot be used, owing to the roughness of the place. Then a wire rope is let down from the cliff, taken between the schooner's masts to a rock or buoy, and a steam engine on shore lowers the material down the rope to the vessel.

A great many wrecks occur in winter on this coast from the lack of harbors, as in bad weather vessels have to be at sea and take it as it comes, with no place to run to. The roadsteads are untenable and the bar harbors inaccessible. A harbor of refuge has therefore become an absolute necessity, and steps have been taken by the Government to construct one. Congress has appropriated \$150,000 for the commencement of the work, which will cost some \$8,000,000 or \$10,000,000 to complete. It will be the largest operation ever undertaken on this coast by either private corporations or the Government.

It has been decided to have this artificial harbor at some point on the coast north of San Francisco, between it and the Strait of Fuca, a distance of 700 miles; between which two points there is not a single place accessible at all times. The United States Board of Engineers, under instructions, examined Drake's bay, Mendocino City, Shelter cove, Humboldt bay, Trinidad harbor, Crescent City, Macks' arch, Port Orford, and Cape Gregory to see which place afforded the best facilities. After the examination they reported on the cost of all, giving preference to Trinidad harbor, an engraving of which we herewith present, showing the configuration of the harbor and the lines of a proposed breakwater, as designed by the board. Trinidad bay is about 17 miles above Humboldt bay and 31 miles north of Cape Mendocino. This point is preferred thus far, but another may be chosen after fuller examination.



TRINIDAD BAY, CALIFORNIA—SHOWING LINES OF PROPOSED BREAKWATER FOR HARBOR OF REFUGE.

it wants for its well-being.—E. W. HILGARD, College of Agriculture, Berkeley, Cal.

#### Alfalfa by Irrigation.

A reader of the PRESS who thinks of growing a few acres of alfalfa by irrigation from wind-mill pumping, desires to know about how many gallons of water will be required per acre on what may be regarded as pretty dry land. Some of our readers have doubtless figured on this question, and if they will send us what they regard as approximate amounts per acre for one or more irrigations, the information will be interesting. It has been determined by experiment and computation that the plants on an acre of corn fodder will take up and exhale 200,000 gallons of water while reaching a condition fit to cut. Any experience on the subject of water required for certain crops of any kind will be of value to many no doubt.

#### Langshan Fowls.

Another reader wishes to know who has Langshan fowls, and what can be said about their value. Who will respond?

THE idea of cutting a ship canal through the Isthmus of Panama is at least three and a half centuries old. Philip II., of Spain, had a route carefully surveyed by some Flemish engineers, but never pushed the matter,

that system, and carry it through, with different seeds, you will have entirely erroneous results. Take two-year-old parsnip seed, which is good for nothing, and put it in your test cloths, and you can make it all sprout. Trying it by that test, you would say it was all good; but take that same seed and plant it outside, and you will find it just about all bad. On the other hand it is very hard indeed to hit the right temperature and degree of moisture in the cloth test, and seeds that fail there may come first rate out of doors, when the temperature is just right. Again, people who are not practical seed planters, do not plant right. Each seed needs its own degree of moisture and its own depth also. The smaller seeds need a mere patting of the ground. The larger the seeds, the deeper they can go.

**A SWISS EXHIBITION.**—Switzerland has appointed the year 1881 for an international exhibition of watches, jewelry, snuff boxes and musical boxes—a display in which the ancient republic may well call the rest of the world to see what she can do. This project adds another illustration to the recent tendency of international exhibitions, especially in smaller countries, to run to specialties. This will be the first exhibition of the sort in Switzerland.



## THE FLOUR MILL.

### The Austrian System of Milling.

[From PROF. KICK'S new work on Milling.]

High milling—or, as it is also called, Vienna, Austrian, Hungarian, Prague, or Saxony milling—is that method of grinding wheat which, by a gradual reduction of the grains of wheat, aims at producing the largest quantity of middlings, which, being cleaned, reground, and again cleaned, etc., and consequently gradually reduced, is finally manufactured into flour. This system of grinding, which originated in Vienna, produces the most beautiful and the whitest, and generally the finest kinds of flour, in proportionately larger quantities. In the Austrian system of grinding, the stones are placed at such a distance from each other that the first time the grain passes through them it is only slightly rubbed and broken. In this operation the beard and parts of the cuticle would be rubbed off, if this was not done before by the hulling machine. This operation is called *ending*, (*Spitzen*), or, in case the stones grind more coarsely (*Hochschroten*), inasmuch as in this coarse grinding the grain is broken along the entire length of the furrows, so that the product therefrom is mixed with flour, branny particles, and germ that have been scraped off. The products are separated by sieves, and the result is dark flour, poor bran, and coarse middlings. The latter product is passed through stones placed more closely together, and is subjected to the first grinding, that is to say, it is further broken, and we obtain particles varying in size, flour, *dunst* (which is analogous to flour), middlings, and a still coarser commodity called *schrot*. After this product has passed through the sieves, the different sorts are graded according to their size, consequently all those branny particles, which are of equal fineness with the flour mingle with the flour, and those of the same size as the so-called *dunst*, with the *dunst*, etc. It is scarcely possible to separate from the flour the equally fine branny particles; this is done, however, as far as the middlings and *dunst* are concerned, by means of middlings purifiers.

The question now is, of which parts of the grain of wheat does the several products consist? The flour obtained from the first grinding (*Schroten*) will be better, in other words, will contain fewer branny particles than that obtained by the operation *hochschroten* above described, but it will nevertheless contain a great number, seeing that the stone exercises a breaking action upon the grain, and more or less reduces the cuticle.

*Dunst* and fine middlings are mostly composed of small fragments of the flour substances, and in the process of breaking fall from the inner as well as from the innermost part of the grain, and become polluted by the admixture of branny particles of equal fineness. If these are removed by the middlings purifier we obtain pure middlings, which in consequence of being derived from the innermost part of the grain, are called *core-middlings* (*Kerngriese*), or, because they are used for making the finest flours, *Auszugmehle* and *Auszuggrise*.

The coarser middlings (*Anförsungen*), and the still coarser *schrot*, are fragments which, the larger they are, the more certain are they to be overlaid with portions of the layer of gluten, of the skin of the germ and the grain, and are, consequently, of a much darker color than pure middlings. The coarse middlings and the coarser *schrot* are put through the purifying machine, in which they are gradually reduced. If during the preliminary grinding (*Hochschroten*) the germ get loosened from the grain, they get knocked off especially during the first grinding, and arrive in proportion to their size, for the most part uninjured, among the coarse middlings, to which they impart, by their yellow color, a speckled, yellow appearance. The product of the preliminary grinding is separated, and the middlings and finer middlings purified.

It is exceedingly difficult, nay, even impossible, to give to non-practical men anything like a clear idea of the nature and appearance of the various milling products either by description or illustration. The only way in which he can become acquainted with them is by seeing them in a well conducted mill, where high milling is practiced.

The first rough grinding is followed by a second, the second by a third, and the third by a fourth, but the number of these is not in all mills alike. We must not imagine, however, that in these successive divisions or breaking up of the grain, that in the preliminary grinding (*Hochschroten*) the grain is broken in two, and by the first grinding (*Schroten*), it is broken into four pieces, etc., on the contrary, the division when the stones are rightly placed, is so managed that at each successive operation the several parts gradually lose their polyhedron or spherical shape, and assume a lamelliferous form. In the first, second and third rough grindings, the greater part of the grain is consequently reduced to flour and middlings, and the material which undergoes fourth grinding has become so far triturated that no coarse middlings can be got from it, but only dust mixed with numerous particles of outer husk. Along with these we obtain flour as well as coarse and fine husks. There are scaly particles consisting of gluten, and the cuticle of the germ and the grain, to which a perceptible number of starch cells adhere. In many mills these scaly particles are

called stripes, in fact those remaining after the fourth and fifth grinding, *white stripes*; and after once more grinding *black stripes*. The fine and coarse roughs are in many mills ground together, in others separately. The former go also by the name of *Haspan*. By ground roughs and ground *Haspan*, we understand those scaly parts, which, by their repeated passage through the stones, are freed from the particles of flour adhering to them, which serve as fodder for cattle and horses, and are distinguished by the general name of bran.

**HOW TO GET RID OF FLOUR MILL DUST.**—A French process designed to circumvent the perils traceable to dust in flouring mills, is thus described: The stones should be surrounded as completely as possible by a movable covering of wood or sheet-iron, which should have no opening in front but what is absolutely necessary for the work. In order to avoid the choking up of the ventilating pipes, it is necessary to provide special discharge pipes for the water, according as the stones are partly below or entirely above the floor. Again, the passages intended for carrying the dust should be placed underneath the stone, and beyond the point where the work is applied, regarding the direction of motion; it should have a breadth a little greater than that of the stone, and a depth of eight inches at most, for the largest stones, a sliding door serving to close it whenever dry dust is not produced. The water discharge pipe should also have a valve, which may be closed when water is not used, and when it is desired to carry off the dust produced when the stone is turned. If there are only four or five stones in the work, a single collecting pipe will suffice, and the blower should be placed at the end; but if there are eight or ten stones in one line, a second collector, 16 inches by 12 may be placed in the middle of the length of the first, and perpendicular to its direction. If, too, there are two long parallel rows, with eight or ten stones in each, they should be connected with the second collector, or with a third, 16x20 inches, communicating with the ventilator.—*Exchange*.

### State Fair Premiums for Mechanical Products and Inventions.

#### Fourth Department.

For the most meritorious exhibition in this department the Society's gold medal.

All products of industry competing for premiums must be of California manufacture.

#### CLASS I—MANUFACTURES OF LEATHER.

Best exhibition of traveling trunks, valises and bags..... Silver Medal and \$10  
Best carpet sack..... 5  
Best set double harness..... Silver Medal and 10  
Best set single harness..... 10  
Best display of Mexican saddles..... 10  
Best display of leather..... Silver Medal and 10  
Best display of saddles and bridles..... 10  
Best display of saddletrees..... 5

#### CLASS II—WORKED METALS.

Best display of copper work..... Diploma and \$20  
Best display of brass work..... Diploma and 20  
Best display of axes..... 5  
Best display of locks..... 5  
Best display of door trimmings..... 5  
Best display of window trimmings..... 5  
Best display of window blind or shutter trimmings..... 5  
Best display of saddlers' hardware..... 10  
Best display of plumbers' goods and ware..... 10  
Best display of gas chandeliers and burners..... Diploma and 10  
Best display of lamps..... 10  
Best display of general hardware..... 20  
Best display of iron and steel..... 10  
Best display of iron fencing, including post..... 10  
Best barb wire fencing, in coil..... 5  
Best display of mechanics' tools..... 5  
Best display of table cutlery..... Silver Medal  
Best display of pocket cutlery..... 5  
Best display of silverware..... 25  
Best display of Britannia ware..... 5  
Best display of clocks..... 10  
Best display of kitchen utensils of brass or copper..... 10  
Best display of kitchen utensils of tin..... 5  
Best circular saws..... 5  
Best mill saws..... 5  
Best hand saws..... 5  
Best display of files..... 5  
Best burglar and fire-proof safe..... 20  
Best pruning shears..... 5  
Best pruning knives..... 5  
Best milk cans..... 5  
Best samples block tin pipe..... 5  
Best exhibition lead pipe..... 5  
Best exhibition anti-friction metal..... 5  
Best exhibition shot..... 5  
Best display of fire goods..... 20

#### CLASS III—STOVES, CASTINGS, ETC.

Best cooking stove, for wood..... \$5  
Best cooking stove, for coal..... 5  
Best parlor stove..... 5  
Best gas or oil stove..... 5  
Best warming furnace or other apparatus..... 5  
Best cooking range..... 10  
Best parlor grate..... 3  
Best pair ornamental iron vases..... 3  
Best specimen of marbleized iron..... 3  
Best specimen of marbleized stone..... 5  
Best specimen of marbleized wood..... 5  
Best display of hollow iron ware..... 5  
Best ornamental statuary..... 5  
Best ornamental fruit and flower stand..... 5  
Best church bells..... 20  
Best farm bell..... 5  
Best chime of bells..... 5  
Best farmers' cauldrons or steamers..... 5  
Best portable range..... 5  
Best laundry stove..... 5  
Best assortment of Japanese ware..... 20  
Best gas and water pipes..... Diploma  
Best water and steam gates..... Diploma  
Best asphaltum pipes..... Diploma  
Best assortment of bathing tubs..... Diploma

#### CLASS IV—MUSICAL INSTRUMENTS, CABINET WARE, (CALIFORNIA MANUFACTURE.)

Best grand or semi-grand pianoforte..... \$20  
Best boudoir piano..... 20  
Best square piano..... 20  
Best parlor piano..... 10  
Best dressing bureau..... 10  
Best sofa..... 10  
Best lounge..... 5  
Best extension table..... 5

Best office chair..... 5  
Best set of parlor chairs..... 10  
Best center table..... 5  
Best pair of side tables..... 5  
Best set of parlor furniture..... 20  
Best display of furniture..... 20  
Best display of mattresses..... 5  
Best writing desk..... 5  
Best bookcase..... 5  
Best wardrobe..... 10  
Best sick chair or couch..... 5  
Best school furniture..... 10  
Best spring bed..... 5  
Best set of bedroom furniture..... 10  
Best billiard table..... 10  
Best display of upholstery..... 10  
Best office desk..... 5

#### CLASS V—WOODEN WARE (CAL. MANUFACTURE.)

Best display of cedar ware..... \$5  
Best display of pine ware..... 5  
Best display of oak ware..... 5  
Best display of window shades..... 5  
Best display of window blinds..... 5  
Best display of willow ware..... 10  
Best display of splitwood baskets..... 3  
Best display of pine, oak or walnut doors..... 10  
Best display of turning lathe work..... 5  
Best display of osier willow..... 5  
Best display of wooden ware..... 25  
Best exhibition of broom corn, brooms and brushes..... 10  
Best assortment of hair brushes..... 5  
Best gilt frames..... 5  
Best sample of twist mouldings..... 5  
Best display of fancy mouldings and scroll sawing..... 5  
Best wood carpeting..... 5  
Best assortment of coopers' wares..... 15

#### CLASS VI—PHILOSOPHICAL, SPORTING, SURGICAL, DENTAL, DRAWING, PAINTING, SURVEYING AND LEVELING INSTRUMENTS AND APPARATUS, ETC., OF FINE WORKMANSHIP, EXHIBITED BY MAKER (AMERICAN MANUFACTURE.)

Best surgical implements..... Diploma  
Best set of optical instruments..... Diploma  
Best dentists' instruments..... Diploma  
Best set of mathematical and philosophical instruments..... Diploma  
Best specimens dentistry..... Diploma  
Best theodolite..... Diploma  
Best level..... Diploma  
Best surveyors' compass..... Diploma  
Best achromatic telescope..... Diploma  
Best reflecting telescope..... Diploma  
Best optical apparatus..... Diploma  
Best balance..... Diploma  
Best thermometer..... Diploma  
Best barometer..... Diploma  
Best electro-magnetic apparatus..... Diploma  
Best electric telegraph..... Diploma  
Best electric machine..... Diploma  
Best galvanic battery and apparatus..... Diploma  
Best set of drawing instruments..... Diploma  
Best chronometer..... Diploma  
Best clock (eight-day)..... Diploma  
Best specimens Argentine or Britannia ware..... Diploma  
Best turned and cast Britannia..... Diploma  
Best double-barrel shotgun (California make)..... \$5  
Best sporting rifle (Cal. make)..... 5  
Best breech-loading shotgun (Cal. make)..... 5  
Best game bag (Cal. make)..... 3  
Best and largest display of firearms (Cal. make)..... Silver Medal

#### CLASS VII—CHEMICALS (CALIFORNIA MANUFACTURE.)

Best Prussian Blue..... \$5  
Best copal varnish..... 5  
Best glue..... 5  
Best prussiate of potash..... 5  
Best linseed oil, five gallons..... 10  
Best white lead..... 5  
Best display of soap..... Silver Medal  
Best display of candles (California make)..... 10  
Best specimen of lard oil..... 5  
Best five gallons castor oil..... 10  
Best display of potash, saleratus, pearlash and other alkalis..... 5  
Best yeast powder..... 5  
Best display of writing fluid..... 2  
Best display of blacking..... 3  
Best display of lubricating petroleum..... 5  
Best display of illuminating petroleum..... 5  
Best samples of paint (California manufacture)..... 5  
Best hair restorer, to be tested..... 5  
Best stove polish..... 5  
Best bleaching soap..... Diploma

#### CLASS VIII—GLASS, CROCKERY, STONEWARE, BRICKS, AND TILES (AMERICAN MANUFACTURE.)

Best specimen Rockingham ware..... Diploma  
Best stoneware..... Diploma  
Best specimen ground glass..... Diploma  
Best specimen stained glass..... Diploma  
Best water pipe for water line..... Diploma  
Best sample drain tile..... \$5  
Best roofing tile..... 5  
Best flooring..... 5  
Best looking glass..... Diploma  
Best plate glass..... Diploma  
Best window glass..... Diploma  
Best flint glass..... Diploma  
Best bottle glass..... Diploma  
Best vials, green glass..... Diploma  
Best tincture and other stoppered bottles and vials..... Diploma  
Best demijohns..... Diploma  
Best display of confectionery..... \$10  
Best carboys..... Diploma  
Best terra cotta..... Diploma  
Best fire bricks..... \$3  
Best pressed bricks..... Diploma  
Best pottery, various kinds..... Silver Medal  
Best display of stoneware..... \$10  
Best display of glassware..... 19  
Best display of queensware..... 5  
Best dressed stone..... 5  
Best mill stone..... 5  
Best barrel common salt..... 3  
Best sack table salt..... 3  
Best barrel lime..... 5  
Best hydraulic cement..... 5  
Best samples stained glass..... 5  
Best samples of ground and cut glass..... 5  
Best display of California marble..... 20

#### CLASS IX—MINERALS, FOSSILS, BIRDS, FISHES, ETC.

Best set of useful minerals of California, including coals of California, iron ores of California, marbles of California, sandstones of California, muds of California, peats of California, soils of California, salt waters of California, minerals of California, potter's clay of California, fire clay of California, burr stones of California, gypsium of California..... \$20  
Best suit of fossils of California..... Silver Medal  
Best collection of minerals illustrating the geology of California..... Silver Medal  
Best collection illustrating the ornithology of California..... Silver Medal  
Best collection of natural fishes, living or dead..... Silver Medal  
Best suit of crystallized minerals of California..... Silver Medal  
Best suit of the vegetable kingdom, including the woods, and most useful plants, and native grasses of California..... Silver Medal  
Best suit of the animal kingdom, including insects injurious to farmers..... Silver Medal  
CLASS X—CALIFORNIA DRAWINGS AND DESIGNS BY MINORS AND APPRENTICES.  
Best original design of an engine or machinery of any kind, accompanied by complete detail working drawings, from which the same might be constructed, first premium..... Gold Medal  
Second best do..... Silver Medal  
For the best original mechanical drawing of any kind..... \$10 and Silver Medal  
For second best do..... Diploma

## Lands for Sale and to Let.

### LOMPOC

## Temperance Colony.

45,654 49-100 ACRES.

## Cheap and Desirable Homes.

TERMS OF SALE.—25% cash, and the remainder in eight equal annual installments with interest at 10% per annum, or full payment and Deed immediately.

### Rich Soil and Healthful Climate.

Located in the Western part of Santa Barbara County, California, embracing 10,000 acres of the Finest Bean Land in the State; as high as 3,700 lbs. of Beans to the acre have been raised the present year, while 3,000 lbs. to the acre is not an uncommon yield.

### DAILY MAIL

And Telegraphic Communication with all parts of the State. The Telegraph Stage Co.'s Coaches now run daily, each way, directly through the town of

### LOMPOC.

E. H. HEACOCK, President.

IRVING P. HENNING, Secretary.

November 6th, 1878.

## A Good Farm For Sale.

The undersigned offers for sale a Farm of 450 acres of fine loamy grain land in a high state of cultivation, 400 acres being well fenced, with house, barn, outbuildings, water tank, house and windmill, orchard, vineyard and garden sufficient for family use. The water is excellent. It is situated 1½ miles north of Arbuckle Station, on the Northern Railway, in Colusa County.

### THE TITLE IS COMPLETE.

A Schoolhouse is adjoining this farm, and everything desirable for a

### Nice and Comfortable Home.

Can be bought for part Cash and part Credit, or payments in installments to suit purchasers. Address

FREDERICK SPRENGER,

Arbuckle P. O., Colusa Co., Cal.

## Farm For Sale.

Yields an Income of \$4,000 a Year.

Price, \$10,500.

My Farm and Poultry Business yield over \$4,000 a year. The place—116 acres—with orchard, vineyard and improvements, has cost me \$15,000. The good will of the business is worth fully \$8,000. I will sell the business and farm for \$10,500, half cash, or exchange for San Francisco property. It is a bargain such as is seldom offered.

M. EYRE, Napa, Cal.

Law Office in San Francisco, No. 636 Clay St., Room 25.

271 am In Napa each Saturday and Sunday; other days in San Francisco.

## FOR SALE.

700 Acres. The Finest Stock and Grain Farm in Northern California.

Price, \$25,000, including Farming implements. The whole under fence.

The Stock upon this farm, all thoroughbred and graded, embracing some of the finest in the State, will be sold at private sale. Among the stock is some that has been awarded different premiums at State and County Fairs.

This is one of the finest opportunities for a man of means in the State. For full particulars apply to

D. B. HAYS,

Real Estate Agent, Oroville, Cal.

## Flour Mill for Sale or Rent.

A good water power flour mill, with two runs of 4-feet wheel stones, one middling and one feed stone, all in good order, situated in southern California, with a good wheat crop near the mill, can be bought cheap, or a part interest can be purchased by a good, reliable mill man, or the property can be leased; mill is running, and has a good reputation. Want of experience, and other business, induces the owners to offer a good trade. Apply to J. WAGNER & CO., 105 and 107 Mission street, S. F.

## C. C. RODGERS, CALIFORNIA LAND AGENCY,

Office, 276 First St., San Jose, Cal.

## GENERAL LAND, REAL ESTATE, U. S. PENSION AND BOUNTY AGENT.

Will buy and sell Land Warrants; Locate and Survey Public Government Land, Pre-emption Homesteads, Soldier's and Sailor's Homesteads, Timber and Wood Lands, Desert Lands, Etc.

## FARMING LAND

For Sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No drouths, had floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

## EVERYBODY KNOWS

That Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her.



**BREEDERS' DIRECTORY.**

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

**CATTLE.**

**PETER SAXE & SON**, 520 Bush St., S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

**W. L. OVERHISER**, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

**PAGE BROTHERS**, 323 Front street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

**SHEEP AND GOATS.**

**E. W. WOOLSEY**, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

**L. U. SHIPPEE**, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

**POULTRY.**

**WILLIAM NILES**, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magie Poland-China Swine.

**MRS. L. J. WATKINS**, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

**A. O. RIX**, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

**ALBERT BURBANK**, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Doves, etc. Eggs for hatching. Send for price list.

**SWINE.**

**ALFRED PARKER**, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine, Agent for Dana's Cattle, Hog and Sheep Labels.

**T. C. STARR**, San Bernardino, Cal. Thoroughbred Berkshire and Poland-China Swine. Light Brahma and Black Cochon Chickens for sale.

**JOHN RIDER**, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

**BEES.**

**JOS. E. ENAS**, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

**Grangers' Bank of California,**  
42 California Street,  
SAN FRANCISCO, CAL.

Authorized Capital - \$2,500,000,  
In 25,000 Shares of \$100 each.  
Capital Paid up in Gold Coin, \$405,000.

**OFFICERS:**

PRESIDENT.....G. W. COLBY.  
MANAGER AND CASHIER,  
ALBERT MONTELLIER.  
SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the **Importers' and Traders' National Bank of N. Y.**, we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

**Grangers' Co-operative Business Association,**  
of Sacramento Valley.

Location: K & 10th Sts., Sacramento, Cal.  
Dealers in GENERAL PRODUCE, RETAIL GROCERIES, and sale of FRUITS. Desire the co-operation and trade of farmers in general. Pay the highest market rates for all produce, and sell for the smallest profit. Our orders are CASH on delivery. Goods shipped; marked C. O. D. **W. H. HEVENER**, Manager.

**GENERAL INSURANCE**

— AND —

**Commission Agent.****FERDINAND K. RULE,**

310 Pine Street, Room 31, San Francisco.

Special attention to Fire, Marine and Life Insurance business.

Insurance placed in none but first-class Companies.

**ROOMS TO RENT.**

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. **STEVENS BROS.**, Northford, Conn.

**PIANOS****FOR EVERYBODY!**

WE WILL SELL THE

CELEBRATED

**FISCHER PIANO**

At Prices that Nobody can beat!

**THE "FISCHER"**

Is one of the leading Pianos, and  
has been before the Public  
For Forty Years.

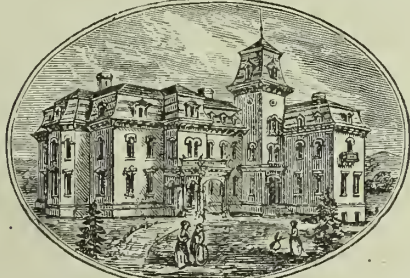
We Sell no Bogus Instruments.

SEND FOR CATALOGUE AND TERMS TO

**KOHLER & CHASE,**

Post Street, near Dupont,

SAN FRANCISCO.

**Educational.****GOLDEN GATE ACADEMY.**

A first-class Boarding and Day School. Location unsurpassed; methods most approved; health preserved and physical development secured by daily gymnastic and brief military drill. Preparatory department for lads in successful operation. Attention invited to methods and terms. Address for particulars.

**H. E. JEWETT, A. M., Principal,**  
Oakland, California.

N. B.—The next school year will commence July 29th, 1879

**HEALD'S BUSINESS COLLEGE,**  
24 Post Street,  
Near Kearny,  
San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

**LADIES' DEPARTMENT.**—Ladies will be admitted for instruction in all the Departments of the College.

**TELEGRAPHIC DEPARTMENT.**—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post street, or address for circulars, **E. P. HEALD**

President Business College, San Francisco, Cal.

E. CHAMBERLAIN, JR.

THOS. A. ROBINSON.

**PACIFIC Business College,**  
320 POST ST.  
SAN FRANCISCO.

SEND FOR CIRCULAR



**BARLOW J. SMITH, M. D.**, announces to his friends and former patrons that he has resumed hygienic medical practice at the Smithsonian Medical and Phrenological Institute, 635 California street. The institute provides all forms of Electro-Medical baths and Hygienic boarding. Terms reasonable. Phreno-Physiological examinations in regard to health free. During the past 30 years Dr. Smith has developed a System of Phreno-Physiology that shows the relations that exist between the brain and body and claims that the organs of the brain show the strength of the spine, heart, lungs, stomach, bowels, liver and kidneys, also the reproductive organs, and the tendency of each and all to disease. The most powerful Electroized Magnet ever used in the treatment of nervous and chronic diseases is employed in this Health Institute. Mrs. Dr. Smith has charge of the Female Bathing Department Phrenological examinations daily.

**Contents of Pamphlet on Public Lands of California, U. S. Land Laws, Map of California and Nevada, Etc.**

**Map of California and Nevada:** The Public Lands; The Land Districts; Table of Rainfall in California; Counties and Their Products; Statistics of the State at Large.

**Instructions of the U. S. Land Commissioners.**—Different Classes of Public Lands; How Lands may be Acquired; Fees of Land Office at Location; Agricultural College Scrip; Pre-emptions; Extending the Homestead Privilege; But One Homestead Allowed; Proof of Actual Settlement Necessary; Adjoining Farm Homesteads; Lands for Soldiers and Sailors; Lands for Indians; Fees of Land Office and Commissions; Lands for Promote Timber Culture; Concerning Appeals; Returns of the Register and Receiver; Concerning Mining Claims; Second Pre-emption Benefit.

**Abstract from the U. S. Statutes.**—The Law Concerning Pre-emption; Concerning Homesteads; Amending Act Concerning Timber; Miscellaneous Provisions; Additional Surveys; Land for Pre-emption; List of California Post Offices. Price, post paid, 50 cts.

Published and sold by **DEWEY & CO., S F**

**Seedsman.****R. J. TRUMBULL & CO.,**

SUCCESSORS TO

**R. J. TRUMBULL,**

Growers, Importers, Wholesale and Retail  
Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGS, GARDEN HARDWARE.

Comprising the Most Complete Stock  
EVER OFFERED ON THE PACIFIC COAST.  
Prices Unusually Low.

\*"Guide to the Vegetable and Flower Garden" will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

**R. J. TRUMBULL & CO.,**  
419 and 421 Sansome Street, S. F.

**SEEDS. TREES. SEEDS.**

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

**B. F. WELLINGTON,**

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco

**B. K. BLISS & SONS,**

Importers, Growers and dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address

**B. K. BLISS & SONS, 34 Barclay Street, N. Y.**

**FENCING—CHAPPARAL SEED.**

Parties wishing to experiment in the cultivation of Chapparal as an economical and valuable substitute for fencing, can obtain the seed in 50 Cts. and \$1 packages, at **W. R. STRONG'S**, Sacramento. Sent by mail.

**EXOTIC GARDENS.**

**F. A. MILLER & CO.,** Mission St., opposite Woodward's Gardens. Send for Catalogue and Price List.

**Nurserymen.****Blackberry and Cranberry Plants.**

100,000 Plants of new varieties of BLACKBERRY Plants—the Early Cluster and Vina Seedling, Missouri Mammoth and Deering Seedling, the earliest and the most productive of all. I will give satisfactory proof that these berries have realized \$750 per acre. It paid more than double the amount as the old late varieties. Price by mail, \$2 per dozen, \$8 per hundred, and \$80 per thousand. Send for Catalogue. Cherry Cranberry plants for \$150 per acre, planted, not less than 10 acres in one order. We will sell to responsible parties, large orders out time, part cash.

**H. NYLAND**, Bouldin Island, San Joaquin Co., Cal.

**The "California Legal Record."**

The ONLY WEEKLY containing all the decisions of the Supreme Court of California.

(The ONLY COMPLETE continuation of the S. F. Law Journal.)

Published every Saturday, in 8 vo. size—like the California Reports—contains EVERY DECISION of the Supreme Court, as fast as rendered, with a syllabus and statement of facts, and other important legal matter. The volumes commence on the first of October and April each, and have a full index for reference and binding.

REDUCED PRICE, only \$5.50 per year, or \$3 per volume of six months. Remit by Postal Order or Registered Letter, specifying what date or number to commence. Back numbers furnished. Sample numbers sent free. Address,

**F. A. SCOFFIELD & CO.,** Publishers and Prop'rs.  
No. 529 California street, San Francisco, Cal.

**California Inventors**

Should consult **DEWEY & CO., AMERICAN AND FOREIGN PATENT SOLICITORS.** Established in 1860. Their long experience as journalists and large practice as patent attorneys enables them to offer Pacific Coast inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING and SCIENTIFIC PRESS and PACIFIC RURAL PRESS, No. 202 Sansome St., San Francisco.

**Picturesque Arizona.**

By **E. CONKLIN**, Representative of the National Associated Press, and artist and correspondent of Frank Leslie's publications. Being the result of Travels and Observations in Arizona during the fall and winter of 1877. Fully illustrated. Sent by mail, post-paid, for \$2. Address **DEWEY & CO.,** 202 Sansome Street, S. F.

60 Chromo, perfumed, Snowflake & Lace cards, name on all 10c. Game Authors, 15c. Lyman & Co., Clintonville, Ct

50 CHROMO, Gold Border, etc., 10c., no 2 alike, or 20 Cupid Cards, 10c. J. B. HUSTED, Nassau, N. Y.

60 Elegant Perfumed Cards, Chromo, Motto, Lilly, Etc., 15c. Gift with each pack. H. M. SMITH, Clintonville, Ct



## PATENTS AND INVENTIONS.

### List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS TO DEWEY & CO.'S MINING AND SCIENTIFIC PRESS PATENT AGENCY.]

By Special Dispatch from Washington, D. C.

FOR THE WEEK ENDING JUNE 24TH, 1879.

216,842.—FIRE ARM—S. T. Harrison, San Jose, Cal.  
216,749.—COFFIN—R. E. McAllister, S. F.  
7,432.—COFFEE—Trademark—E. Guittard & Co., S. F.  
FOR THE WEEK ENDING JULY 1ST, 1879.  
217,075.—CRUSHING AND PULVERIZING MILL—J. T. Davis, San Francisco.  
217,096.—GRIPPING DEVICE FOR WIRE-ROPE RAILWAYS—J. Hansen, S. F.  
216,950.—VEHICLE SPRING—F. A. Hill, San Leandro, Cal.  
217,157.—COMBINED COLLAR AND HAMMOCK—A. Rutherford, Walla Walla, W. T.  
217,157.—HORSESHOE—H. G. Yates, S. F.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

### They Inaugurate the Game in New York.

Through all channels of intelligence we are advised of a growing interest in mining affairs at the East. This information, announced first by telegraph, receives later confirmation through private letters and newspapers coming to hand from that quarter. The *New York Times*, of recent date, remarks that the evidences of a growing disposition to speculate in mining shares are too numerous and palpable to be mistaken. In anticipation of increased activity in this class of securities, the price of seats in the mining stock board of that city has recently advanced several hundred per cent. Brokers, who before carefully eschewed this class of paper, are now operating in it extensively. Numerous mining companies, with flaming circulars and officered by prominent politicians, are being formed there, who, immediately they are organized, proceed to widely advertise their properties, purposes and prospects. Every little exchange shop down town has its freshly written placard announcing all kinds of mining stocks bought and sold within. Claim owners, agents, experts, middlemen and promoters of every description fill the hotels and swarm about the business centers, the inevitable "process man" being also present with his clever methods for extracting the precious metals, from the most obdurate ores, closely, quickly and cheaply. Many of the knowing ones, men early to perceive the tendencies of the times and accustomed to forestall the coming market, have gone, or are about to go, West for the purpose of buying, bonding or otherwise securing control of mining properties; being desirous of seeing for themselves and saving the commissions of go-betweens.

Observing these things, the *Times* justly concludes that they indicate a growing excitement about mining matters, which, if suffered to go on unchecked, will be very likely to lead to widespread and ruinous speculation. We think there is a danger of this. Even at this distance it looks to us that way. These are the symptoms that usually precede an unhealthy activity in the mining share market. This gathering of mining sharps and adventurers in Eastern cities; this multiplication of "bucket shops" there; these numerous, respectably headed and well advertised mining companies, with such great appreciation in the price of seats in the stock board, are the sure forerunners of a big gamble in this class of securities. This is the sort of machinery manipulators employ for enticing the masses and popularizing the shares of these mining companies. When we see recourse had to these methods of procedure, with their exhibition and blare, we know what it means: It means gain to the few and loss to the many. It means seeming and short-lived prosperity to be followed by general distress and injury to every branch of legitimate business, including mining itself, which latter is harmed more perhaps than any other industry by these seasons of undue inflation and reckless investment.

Stock manipulators find it necessary to use fresh bait or angle in other waters. In this extremity those in interest are seeking to transfer the business to a more appreciative constituency and a more genial soil. Californians having been milked to the strappings, it is meet that the milking machine be taken hence to perform a like service where the lacteous fluid remains still abundant. As it may suit these Orientals to stake their money on this sort of a layout, we shall not object to the removal. They are welcome to the gambling arm of the business so long as the mines and their legitimate proceeds are left to us. The game, though not wholly new, may serve to slightly diversify their old methods and make them more attractive. We wish them a happy experience with their new acquisition, hoping they will find delectation in it while it lasts, and have happy riddance of the institution when they have had enough of it. They have already establishments in the great Eastern metropolis akin to these stock exchanges. To discriminate widely between the operating methods employed in the mining bourse and those in use at the place of the man Morrissey involves distinctions too nice for our unschooled casuistry.—*Mining and Scientific Press.*

### The Eclipse of 1880.

California, amidst all of its golden blessings, is to receive the full benefit of the grand total eclipse of the sun which will occur on the 11th of January next. All of its sublimity is to be bestowed upon our State, and this fact may excite the laudable jealousy of other States to provide a similar exhibition in the near future. The field is open and the moon and sun not controlled by any human monopoly. Scientific men and amateurs are already making preparations to visit us, and we should be prepared to receive them, with moderation as to pecuniary expectations. State character is as good and valuable as individual character, and besides the world at large holds to the doctrine of Montesquieu, that when the State possesses a bad disposition it is because the people who compose it are wrongly disposed.

Inyo county lies almost exactly upon the central line of totality, and this county, as shown by the *Independent*, offers advantages unequalled by any other county in this State or any other kingdom. First, clouds, even in winter, especially in January, rarely obscure the heavens; and, second, we have the highest and yet most accessible peaks (and many of them) in the United States. The highest of them is Mount Whitney, 15,200 feet above the sea level, to the very top of which observers can ride on horseback—barring an accidental snow storm to prevent. But in any event, the snow-belt is never but a few miles in width at any time, since it is but a few miles from the mountain summit to the valley, where snow never, or "hardly ever," falls. There are dozens of other peaks in sight, some much easier of access, and several nearly as tall as Mount Whitney. But in view of the risks of clouds on the high Sierras, the surest place for good observation is from the summit of the Inyo range, say 20 miles eastward of the high peaks of the Sierras, therefore not far enough from the central line of totality to be of consequence. The towns of Darwin and Cerro Gordo, and the Indian Queen mill, a hundred miles to the northward, are all in this range, and all well suited for points of observation. There are fewer cloudy days or hours to intercept a heavenly view from that range than from any other in this State. Its peaks reach an altitude of about 9,000 feet. The atmosphere on this range is, as before intimated, almost universally perfectly clear, even when the summits of the Sierras, but a few miles distant and the lands west thereof, are all buried in haze or clouds.

Of course San Francisco would be the rendezvous for all parties, and other localities selected. So let us be prepared to do our share in the scientific features accompanying a total eclipse. Scientific men of this State are acquiring a world-wide reputation, and they should maintain it. We have capital, and to spare, for improvements, and more of it might be devoted to scientific pursuits with profit to the capitalist and benefit to humanity.

### Professor Nordenskjöld.

In the latter part of May last, dispatches were received in San Francisco from Berlin, via New York, to the effect that Prof. Nordenskjöld, the Swedish explorer, had escaped from the Arctic ocean by the way of Behring's straits, and was on his way home, in the *Vega*, via Suez canal. Since that time no confirmatory reports have come to hand of his arrival in Japan, and many people have concluded that he was not seen upon the Siberian coast near the point the Esquimaux claim to have had a sight of his vessel. Late Stockholm papers, received at the office of the Alaska Fur Co., in this city, make clear what has heretofore been shrouded in mystery. The first dispatch is from Governor Schammarin, of Siberia, to a gentleman in St. Petersburg, dated at Iakintsk stating that he has letters from Nordenskjöld to the effect that on the 16th of September, 1878 he was caught in the ice in latitude 67° 3' north, longitude 171° 33' west, quite near to the shore, and that, as it was so early in the season, "he had hopes of getting through Behring straits, and reaching home, via Suez canal, before spring." This telegram has never been correctly given before, and in translating it what the Professor gives as a "hope," is rendered as a fact. The very latest in regard to the whereabouts of the *Vega* comes in the columns of a St. Petersburg paper. It is a dispatch from Governor Schammarin, dated Iakintsk, May 26th, stating he had a letter from Prof. Nordenskjöld, informing him that he had drifted down the coast some distance, and was, at the time of dispatching the messenger, located about 120 miles to the westward of East Cape. He had plenty of provisions and fuel, and had no fear but that he should work his way out safely with the breaking up of the ice this spring. This situation of the *Vega* confirmed the report brought to this port by Capt. Campbell, of the whaling bark *Norman*, which left St. Lawrence Bay on the 22d of October, who stated that a party of natives had just come in who said they had seen the spars of a ship near the shore at that point. It is a little singular that such a misconception of Governor Schammarin's first dispatch, as has been pointed out, should have misled the entire press. The probability is that the *Vega* will have worked her way out before the *Jeannette* arrives in the Arctic; and even now she may be on her way to Japan.—*Call.*

### Sheep Supply of the United States.

The *Economist* gives a letter from Joseph Walworth, in answer to some inquiries from England relative to the sheep supply of the United States, from which we take the following table showing the number of sheep and the yield of wool, as estimated by the Agricultural Department at Washington, and by James Lynch:

Year.	No. of Sheep.	Pounds Wool, Agr. Dept. est.	Pounds Wool, J. Lynch's est.
1840.....	19,311,374	.....	.....
1850.....	21,327,220	.....	.....
1861.....	21,500,000	55,000,000	.....
1862.....	24,000,000	67,500,000	.....
1863.....	28,000,000	82,500,000	.....
1864.....	31,000,000	95,000,000	.....
1865.....	35,000,000	115,000,000	.....
1866.....	38,000,000	135,000,000	.....
1867.....	42,000,000	147,000,000	.....
1868.....	41,000,000	155,000,000	177,000,000
1869.....	37,000,000	143,000,000	162,250,000
1870.....	34,000,000	135,000,000	163,000,000
1871.....	32,000,000	125,000,000	146,000,000
1872.....	.....	.....	130,000,000
1873.....	.....	.....	174,700,000
1874.....	.....	.....	178,000,000
1875.....	.....	.....	198,000,000
1876.....	.....	.....	198,000,000
1877.....	.....	.....	208,250,000
1878.....	35,739,900	.....	211,000,000

Mr. Walworth says: "You will notice that in 1867 we reached our maximum of sheep—42,000,000. These are estimated to produce 147,000,000 pounds of wool, and now in 1878, with 35,739,900 sheep, we are estimated to produce 211,000,000 pounds of wool. This apparent contradiction needs explaining. During the war, say in 1863, there was introduced into the principal wool growing States, such as Ohio, New York and others, what we called the 'Black Spanish Vermont buck.' This caused a great increase in the weight of fleece per sheep; some claim that it actually increased the production of scoured wool per sheep. This may be true to some extent, but one thing I know, that it increased the grease and waste in wool very much indeed. I have always refused to buy it on account of its shrinkage."

THE COW TREE.—It seems that the "Cow Tree" about which so much has been written since it was shown at the Paris exposition, is no new thing to tree growers, and on account of a proposed introduction of it to England more than 50 years ago, which we find in a New Zealand paper, is both interesting and amusing. Half a century ago the idea was prevalent in England that every household might have a cow tree in its family; but the wrong plant was introduced, and the experiment failed. It is true the juice of this tree excels cow's milk. Another species produces nuts, which are roasted and eaten as bread; so that by having a tree of each sort, one may have bread and milk in the garden all the year round; the two best articles of diet we have. The cow tree is a native of South America. The plants introduced to England 50 years ago were placed in Colville's nursery, King's Road, Chelsea, London. There being little demand, and the plants being so badly packed, they all died except one or two, which were sent to Kew Gardens, and turned out to be plants of the *Sapota* family, and proved the mistake of the importer, who introduced 1,000, and expected to make a haul, but made the mistake instead.

ALL THE SAME GOPHER.—The *Scientific American* has an article urging young people to invent gopher traps, in which this sentence occurs: "The California ground squirrel, commonly known as the gopher, is a most industrious and audacious forager." Now, the California ground squirrel is not a gopher either in appearance, habits or anatomy. The California ground squirrel is known to naturalists as *Spermophilus grammurus*; variety, *Beecheyi*. The gopher is *Thomomys talpoides buliverus*. This hint of nomenclature will enable our contemporary to read up the characteristics of each of these pests. Our readers are too familiar with the subject to warrant us in going into descriptions. By a little study of Dr. Coues "North American Rodentia," it will appear even to those at a distance that different appliances are required to trap these animals, and that one is not "commonly called" the other.

LIGHTING THE CAPITOL BY ELECTRICITY.—The arrangements for lighting the capitol building at Washington with a new electric light are nearly completed. The experiment has already been made in the Hall of the House of Representatives, and a single light placed on the front row of the reporters' gallery and over the Speaker's chair made the whole hall so light that print could be easily read at the points furthest from the burner. The plan is to place four lights in the hall, and it is now believed that they will be a very great improvement upon the present arrangement of gas burners. Three electric machines have been purchased under the appropriations for lighting the interior of the building, and it is in contemplation to place another in position for the purpose of supplying a light of vast power upon the top of the dome. It is claimed by the inventors that a burner can be constructed there which shall have a very appreciable effect upon a large area of the city. It is claimed that with the steam power of the heating and ventilating apparatus in each wing of the building, a dynamo-electric machine of 175,000 candle power can be run.

A BURIED FOREST.—It has been recently discovered that an oak forest lies buried in the valley of the Fulda, near Rosenberg, Hesse Cassel, Germany, at a depth of from six to nine feet below the surface. The wood flourished at a very remote period. The greater number of the trees discovered were in good preservation; but, owing to the action of the water through unnumbered ages, they have become thoroughly black in color; they have also become very hard and close, so that they would be good material for carving and ornamental cabinet work. Some of the trees are of great size; one taken out of a gravelly portion of the bed opposite the village of Baumbach, and since sent to the Geological Museum at Berlin, was 59 feet long, nearly five feet in diameter near the root, and about 38 inches at the top. Even larger specimens have been found. It is reported that the furniture and fittings of the Geological Museum at Marburg are to be made from this long buried timber. It is not yet decided whether these buried oaks belong to a species still existing or to an extinct one.

FLAVORING MEAT ON FOOT.—M. Monclar, a noted agriculturist in France, advocates the flavoring of meat on foot, by appropriate feeding. He says that by flavoring the food of cattle, sheep, pigs and poultry, their flesh may be rendered much more agreeable to the palate than it often is. He is substantially right, for reasoning by contraries, we know that rabbits, quail, deer, etc., which feed and browse upon the artemisia and bitter seeds have a disagreeable flavor when eaten. Any flavor may be given the meat—mint, anise, thyme, etc., and several tastes may be given the meat, or a compound flavor be added by a variety of flavors of any selection. For invalids particularly, or for epicurean palates, the common meaty flavor can be modified in flavor to suit the palate, and the aversion to healthy, nutritious meat be overcome by a delicious conglomeration of sweet flavors. We hope to see the experiment tried in our State.

LITERARY NOTES.—Pacific Rural Handbook, by Chas. H. Shinn. This little book upon horticulture and gardening in California, covers a ground never before attempted. Writers upon these subjects have probably been deterred by the difficulty of adapting a single volume, of reasonable size, to the great number of special conditions in the different localities in the State. There are, however, many points of general interest, and of wide application. These, chiefly, our author has taken for the material of his work. There is much in it which will be read with profit by the professional gardener or nurseryman; but for the non-professional farmer, fruit-grower or florist, and even for everyone who has a half-road of ground upon which to plant a tree or a flower, it is full of valuable suggestions. We especially commend the chapters upon "Improving the Soil" and "Irrigation" to our farmers. Of course our praise is given with the understanding that the work professes to be only what its name indicates, a hand-book, not an elaborate treatise. But to say that it is full of reliable information is only half the truth. Its chief value to many readers lies in a different direction. It is a collection of essays so admirably written, with such wealth and beauty of language, and such an evident love for, and conception of the spiritual meaning of all beautiful things in nature, that we think it will be welcome to every home. To the seeker for knowledge for love's sake, it will speak a familiar tongue, while to the unappreciative, to whom nature has hitherto been a book in an unknown language, it will be a new revelation.—*Washington Corner's Reporter.*

The "PACIFIC RURAL HANDBOOK," written by Chas. H. Shinn for the publishers of the PACIFIC RURAL PRESS, will be sent, post-paid, in substantial cloth binding for \$1; in full leather, \$1.50; in cloth, interleaved with fine ruled paper for memoranda, \$1.50. Address

DEWEY & CO., PUBLISHERS,  
No. 202 Sansome Street, San Francisco.

### Books on Agriculture, Etc.

The following among other books will be sent post-paid on receipt of publishers' prices, annexed:—Tobacco, its culture, manufacture and use, 500 pages, \$1.50.—The Patrons of Husbandry, 500 pages, \$3.75.—The Women of the Bible, 77 engravings, \$4.—Wells' Every Man His Own Lawyer, 612 pages, \$2.75.—American Husbandry, 2 vols., \$1.50.—Gray's Agricultural Essays, \$1.—Langstroth's Honey Bee, \$1.50.—Randall's Sheep Husbandry, \$1.50.—Agricultural Engineering, \$1.50.—New Bee-Keepers' Text Book, \$1.—Pacific Rural Handbook, \$1.—Ropp's Easy Calculator, \$1.—U. S. Land Law, 50 Cts.—Woodward's Graperies, Etc., \$1.—Sugar from Melons, 25 Cts.—Strawberry Culture, 50 Cts.—Lays' Belles Lettres, \$1.—Holt's Map of California and Nevada, to subscribers, \$1.—Back Volumes PACIFIC RURAL PRESS (bound) \$5; unbound, \$3.—Picturesque Arizona, \$2. Address DEWEY & CO., Publishers, 202 Sansome St., S. F.

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

SETTLERS and others wishing good farming lands for sure crops, are referred to Mr. Edward Frisbie, of Anderson, Shasta County, Cal., who has some 15,000 acres for sale in the Upper Sacramento valley. His advertisement appears from time to time in this paper.

HOW TO STOP THIS PAPER.—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate the copy sent.

EXTRA COPIES can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.

For information in music matters send a postal to Kohler & Chase.

SEND to the Great Music House of Kohler & Chase for anything in the music line. 137 and 139 Post street, S. F.



## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, July 16th, 1879.

The Produce markets are full of bustle, but there is general complaint of the low prices which prevail. Supplies of all kinds are very large, and the market favors buyers, although holders of Grain are firm and expectant. Foreign advices still favor the realization of good prices for the surplus we shall have for shipment this year. The cable has shown an advancing disposition, as may be seen by the following:

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday....	8s	9d	9s	6d	9s	3d	9s	9d
Friday.....	8s	10d	9s	6d	9s	4d	9s	9d
Saturday....	8s	10d	9s	7d	9s	4d	9s	9d
Monday.....	8s	10d	9s	7d	9s	4d	9s	9d
Tuesday....	8s	10d	9s	7d	9s	6d	9s	9d
Wednesday..	8s	10d	9s	7d	9s	6d	9s	9d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1877.....	12s	2d	12s	5d	12s	5d	12s	—
1878.....	10s	—	10s	4d	10s	4d	10s	9d
1879.....	8s	10d	9s	7d	9s	6d	9s	9d

## The Foreign Review.

LONDON, July 15.—The *Mark Lane Express* says: In consequence of the continuance of the rain, the Wheat has made little, if any, progress. The ears have scarcely begun to appear. The bulk of the Hay remains uncut, or in cases where it has been cut, it has been left lying to rot. In Scotland the crops are fully three weeks behind hand. The pastures are mostly well covered. Potatoes are looking fairly. On the whole the agricultural prospects there, though far from promising, are less gloomy than in England. The Grain trade has not been so animated since the spring of 1877. The falling off in the deliveries of English Wheat having once started an upward movement, buyers respond with readiness, which proves that they are fully aware of the existence of conditions tending to create a rise. Fine samples of home-grown Wheat are now becoming so very scarce, that, in many instances, holders have refused to accept the rise of 25d per quarter, which has been readily obtained at Mark Lane and in the country markets, and now hold for 35d to 45d per quarter advance. There have been extensive imports and transactions in foreign Wheat during the week, the imports being principally from American Atlantic ports. There has been no lack of speculation. The milling demand has assumed large proportions. These conditions caused an improvement of from 1s to 25d per quarter. The inquiry has been chiefly for American and Russian descriptions, but any variety of sound Wheat has sold easily, owing to the scarcity of fine English. There has been much demand for choice qualities of foreign fit to replace it, such as Dantzic and New Zealand. These are held for very full prices. The recently published official return of stocks of Grain in London, July 21st, was, notwithstanding the heavy imports of the last six months, nearly 134,000 quarters less than at the corresponding time last year, showing a large extent of purchases made by millers to arrive. Barley, Maize and Oats also show considerable diminution; Flour advanced a shilling per sack and barrel in sympathy with Wheat. All descriptions of Feeding Corn favored sellers. The sales of English Wheat last week were 27,727 quarters at 43s 4d per quarter, against 15,681 quarters at 44s 8d for the corresponding period of the previous year. The imports into the United Kingdom for the week ending July 5th were 962,250 cwt of Wheat and 144,914 cwt of Flour. In today's (Monday) market the unsettled weather has a decided influence. All choice lots of home-grown Wheat met with a ready sale at an advance of two shillings per quarter. The foreign arrivals have been unusually heavy, but American realized an advance of one shilling per quarter. Russian was steady. Flour was in good request at an advance of 1s per sack, and from 6d to 9d per barrel; Barley was steady at last Monday's extreme prices; Maize quieter, and a shade weaker in consequence of very heavy imports.

## Freights and Charters.

The ship *M. P. Grace*, 1,923 tons, has been chartered for Wheat and Merchandise to Liverpool at £2 2s 6d. The chartered Wheat fleet in port numbers 21 vessels of a registered tonnage of 20,170, with a carrying capacity of 45,000 short tons, or 900,000 cents. Disengaged tonnage in port, 25,000; on the way, 169,000.

## Eastern Grain Markets.

NEW YORK, July 15.—The Merchandise markets remain quiet. Flour is in moderate demand, 5¢10c higher. Wheat is quiet, steady. Pork is steady, quiet. Lard is dull, firm.

CHICAGO, July 12.—On the Board of Trade the week has been marked by wide-spread fluctuations in prices on account of unfavorable reports from European crops, local storms in the Northwest and light receipts of Grain. The Wheat market was advanced early in the week from 99¢ to \$1.04 for July options. Reports during the past three days of yellow fever in the South caused a heavy decline in Provisions. Wheat, in sympathy with the Provision market, suffered a decline of nearly 6¢, selling at 98¢, but afterwards a hotter feeling prevailed, and the market closed firm to-day at \$1 for July, 99¢ for August, 97¢ for September, and 96¢ for October. The demand for Corn has been a trifle better, and the market has ruled firmer, closing at 37¢ for cash. Oats, 32¢. July Rye, 52¢.

## Eastern Wheat Returns.

WASHINGTON, July 15.—Returns to the Department of Agriculture give the average condition of Spring Wheat at 91, against 106 July 1, 1878. The northern New England States range nearly up to the average. A few counties in northern New York average 89. Texas, the only Southern State producing it to any extent, reports but 61. In the Northwest, Spring Wheat States range from 92 to 96, but Iowa falls to 83. The Spring Wheat crop of Kansas is but 63. On the Pacific coast, most of the California crop is returned as Spring Wheat, and averages 92. The small Spring Wheat crop of Oregon is a full average. The condition of the crop in the Southwest and Northwest was largely affected by drouth. In some sections the Heesian fly was very injurious. In the Northwest local storms were more or less destructive. July returns show an average condition of Winter Wheat of 91, against 101 in July, 1878. The New England States average 89. The crop there is small and late, but promising. Middle States, 86. There are complaints of drouth, mildew, Heesian fly and local storms. South Atlantic States, 95; thinned by winter killing and growth stunted by drouth in many northern counties, but farther down the coast the condition is greatly improved. Southern inland States, 98; grain of remarkably fair quality generally. States north of the

Ohio river, 101; straw short, but grain plump and heads heavy; greatly improved by recent rains. States west of the Mississippi, 89; injuries by chinch bugs in the southern parts and by storms in the northern portion.

## Eastern Wool Markets.

NEW YORK, July 15.—Wool has relapsed into something of the monotonous tone ruling before the late flurry set in. The demand is not over active or anxious beyond immediate wants.

PHILADELPHIA, July 15.—Wool is quiet, steady. Colorado washed, 18¢25¢; unwashed, 15¢13¢; extra and Merino pulled, 35¢37¢; No. 1 and super pulled, 33¢30¢.

BOSTON, July 11.—The Wool market was comparatively quiet during the past week. Receipts continue very large, being for the past three weeks more than double those of the same time last year. More active movements are expected in a short time, as manufacturers are now fully employed, consuming more Wool than for some previous years. In unwashed Wools there is a fair business doing, sales comprising 444,000 lbs, mostly medium grades. It is difficult to give reliable quotations for Wools, as sales indicate a wide range in prices—the principal owners not being disposed to sell the best quality under 40¢; but it would be hard to realize over 37¢38¢ for X, XX and above, and 35¢40¢ for medium and No. 1. Sales comprise Ohio and Pennsylvania fleeces X, XX and No. 1, at 36¢41¢; Michigan X and No. 1, at 36¢37¢; New York X and medium, 35¢37¢; Wisconsin, 35¢; Combing and Delaine, 42¢44¢; unwashed and unnumbered fleeces, 17¢31¢; Missouri, 26¢31¢; Texas, 23¢30¢; Georgia, 34¢35¢; Colorado, 25¢; scoured, 45¢60¢; tub washed, 39¢43¢; super and X pulled, 38¢45¢. California Wool is in fair demand. Sales of 349,000 lbs Spring, at 20¢32¢, most at 25¢31¢. Total sales of the week: Domestic, 1,525,900 lbs; foreign, 71,000 lbs.

## Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon to-day as compared with the receipts of previous weeks:

ARTICLES.	WEEK.	WEEK.	WEEK.	WEEK.
	June 25.	July 1.	July 9.	July 16.
Flour, quarter sacks..	31,244	95,216	16,672	25,864
Wheat, centals.....	79,849	50,729	113,061	120,468
Barley, centals.....	32,166	46,085	25,432	20,036
Beans, sacks.....	8,756	1,223	521	855
Corn, centals.....	5,260	5,524	4,058	777
Oats, centals.....	4,609	9,250	5,742	4,096
Potatoes, sacks.....	13,421	8,063	9,276	15,219
Onions, sacks.....	1,525	1,256	1,923	1,535
Wool, bales.....	3,608	3,036	4,523	6,145
Hops, bales.....	—	184	41	89
Hay, bales.....	1,866	1,370	729	1,142

BAGS.—The combination which holders of Bags are agitating still hangs fire, and Bags are therefore still selling at low rates. Sales this week have been at very low marks, the terms accepted by some dealers being 6c for Standard Grain Bags, with 60 days credit; and cash sales are at 8¢10¢. About 10,000 Wheat Bags (Calcutta) were sold at auction Tuesday for \$3.40 per 100. The *Call* of Wednesday says: "The *Naturalist*, with 2,000,000 on board, is now out from Calcutta 162 days, and it is feared that she is lost. At 12 o'clock to-night all contracts on her cargo will expire, if she does not arrive."

BARLEY.—Prices are unchanged, although there is a firm feeling among holders, and desirable lots are in request. The first sale of new Chevalier of which we hear is 75 tons at \$1.50 per cwt.

BEANS.—There is no change reported.

CORN.—Prices rule about as last week. We note sale of 150 sks Large White at 75¢ per cwt.

DAIRY PRODUCE.—There is no change. The supply is still large and prices within the former low range.

EGGS.—Fresh California Eggs are firm and have improved in price. Some fancy lots have reached 24c, and 21¢23¢ is the general range.

FEED.—Ground Feed prices are unchanged. Hay is still dropping, the best price now quotable being \$1.50 for choice Wheat. We note a sale of 35 tons Stable Hay at \$7.50.

FRESH MEAT.—Fresh Meats are abundant and low. Hogs have declined from the effect of large arrivals. Beef and Mutton continue to arrive freely and in such quantities as to preclude the liability of an advance.

FRUIT.—The crop of earliest Peaches seems to have been nearly disposed of and the early Yellow Crawfords are beginning to appear. Prices to-day are about 25¢40¢ per basket higher than last week. California Oranges are now quite scarce, but the trade is supplied with Tabiti and prices are not materially changed.

HOPS.—Unchanged. The New York market for the week ending July 3d is reported by Emmet Wells, as follows:

Although crop reports come in a little more encouraging this week, the price is fully one cent better than a week ago on all descriptions. The continued heavy receipts into New York indicate a disposition on the part of farmers to consign and take advantage of the present activity in trade, which is not likely to keep up many weeks longer, it now being so near the time for New Hops to come in. Many of our large brewers, who, within the last few years have acquired the habit of using Old Hops, have bought quite freely of late. The crop in England, according to late mail advices, is not doing well; on the Continent, however, a good yield is anticipated.

OATS.—Prices are sustained at the recent advance. Choice Surprise bring \$1.55¢1.65 per cwt. We note sales of 230 sks good Humboldt Feed at \$1.47, and 350 sks good California at \$1.40 per cwt.

ONIONS.—The price is unchanged, except for choice Silver Skins, which range 5¢ higher per cwt.

POTATOES.—The Potato market has made an effort to reassert itself, and higher rates were reached, but the supply now in dealers' hands is too great for immediate improvement. Reports from several growing regions say that the fields are being left undug.

POULTRY AND GAME.—The trade is quiet and demand rather light. Roosters and Broilers are a little lower. Live Turkeys have advanced about 2¢ per lb.

PROVISIONS.—The market for Meat products is unchanged and fairly active. Eastern Hams are firm; other articles very low and weak at quotations, on account of low prices of raw product.

VEGETABLES.—There are numerous variations in price, which will be found in our list, but the trade does not close notable features.

WHEAT.—Wheat prices have advanced about 2¢ per cwt for choice lots of Shipping, and the trade is quite strong in view of reports of probable European requirements. Sales are few at present.

WOOL.—Receipts are going into store, being mostly choice Northern held for advance. Present sales are very few.

## DOMESTIC PRODUCE.

(WHOLESALE.)

WEDNESDAY M., July 16, 1879.

BEANS & PEAS. Beans, 12¢14; Peanuts, 4¢6; Filberts, 15¢16.

ONIONS. Onions, 12¢14; Union City, 12¢14; San Leandro, 12¢14; Stockton, 12¢14; Sacramento River, 12¢14; Salt Lake, 12¢14; Oregon, 12¢14; Red, 12¢14; White, 12¢14.

POTATOES. Potatoes, 12¢14; Humboldt, 12¢14; Brokers, 12¢14; Early Rose, 12¢14; Early M'n Bay, new, 12¢14; Kidney, 12¢14; Sweet, 12¢14.

POULTRY & GAME. Hens, 5¢07¢700; Roosters, 5¢09¢650; Ducks, 5¢09¢600; Geese, 12¢14; Wild Gray, 12¢14; White, 12¢14; Turkeys, 18¢22; Do, Dressed, 18¢22; Suckling, 50¢75; Quail, 50¢75; Rabbits, 12¢14; Hare, 12¢14.

PROVISIONS. Cal. Bacon, 12¢14; Medium, 12¢14; Light, 12¢14; Cal. Smoked Beef, 12¢14; Shoulders, 12¢14; Hams, 12¢14; Dressed, 12¢14; None Such, 12¢14; Boy's, 12¢14; Whitaker, 12¢14; Royal, 12¢14; Reliable, 12¢14; Clough's, 12¢14.

SEEDS. Alfalfa, 5¢12; Canary, 4¢5; Clover, 4¢5; Cotton, 5¢10; Flaxseed, 2¢3; Hemp, 8¢; Italian Rye Grass, 35¢; Perennial, 35¢; Millet, 10¢12; Mustard, 10¢12; Rape, 3¢8; Rye, 17¢20; 2d quality, 16¢18; Sweet V Grass, 10¢20; Orchard, 20¢25; Red Top, 13¢15; White, 13¢15; Mesquite, 7¢8; Timothy, 7¢8.

TALLOW. Crude, 5¢6; Refined, 7¢8.

WOOL ETC. San Joaquin & S. Coast, 12¢13; Burry, 12¢13; Free (dusty), 14¢16; Free (choice), 15¢20; Northern, 22¢27; Burry, 22¢27; Oregon, 19¢21; do, Valley, 21¢26.

## FRUITS AND VEGETABLES.

(WHOLESALE.)

WEDNESDAY M., July 16, 1879.

FRUIT MARKET. Apples, 20¢35; do, box, 20¢35; Apricots, 25¢125; Bananas, 20¢600; Blackberries, 25¢300; Cherries, 25¢300; Citrus, 100¢; Cocoanuts, 100¢100; Currants, 25¢300; Figs, 50¢75; Gooseberries, 50¢75; Limes, 80¢1200; do, Cal, box, 40¢500; Lemons, 80¢1000; Oranges, 80¢1000; do, small, 40¢800; do, Tahiti, 180¢2000; Peaches, 30¢75; do, box, 25¢75; Pears, 40¢60; Pineapples, 40¢60; Plums, 40¢60; Quinces, 40¢60; Raspberries, 50¢700; St. cherries, 50¢800.

DRIED FRUIT. Apples, 4¢6; do, quartered, 4¢6; Blackberries, 12¢15; Citron, 23¢24; Dates, 9¢10; Figs, 3¢4; White, 6¢8.

VEGETABLES. Asparagus, 12¢150; Beets, 12¢150; Beans, String, 12¢150; Canteloupes, 20¢300; Carrots, 30¢40; Cauliflower, 20¢30; Chile Peppers, 20¢30; Cucumbers, 12¢15; Egg Plants, 12¢15; Garlic, 12¢15; Green Corn, 12¢150; Green Peas, 12¢150; Lettuce, 10¢20; Parsnips, 14¢15; Horseradish, 12¢15; Rhubarb, 12¢15; Squash, Marrow, 12¢150; Summer, 12¢150; Tomato, 12¢150; Turnips, 12¢150; White, 12¢150.

## LEATHER.

(WHOLESALE.)

WEDNESDAY M., July 16, 1879.

Sole Leather, heavy, 22¢29; Light, 20¢24; Jodot, 8 Kil, 20¢24; 11 to 13 Kil, 20¢24; 14 to 19 Kil, 20¢24; Second Choice, 11 to 16 Kil, 20¢24; Cornelian, 12 to 16 Kil, 20¢24; Females, 12 to 13 Kil, 20¢24; 14 to 16 Kil, 20¢24; Simon Ullmo, Females, 12 to 13 Kil, 20¢24; 14 to 15 Kil, 20¢24; 16 to 17 Kil, 20¢24; Simon, 18 Kil, 20¢24; 20 Kil, 20¢24; 24 Kil, 20¢24; Robert Calif, 7 and 9 Kil, 20¢24; Kips, French, 12 Kil, 20¢24; Cal, doz, 20¢24; French Sheep, all colors, 20¢24; Eastern Calif for Backs, 12 Kil, 20¢24; Sheep Rouns for Toppling, all colors, 20¢24; For Linings, 20¢24; al. Russot Sheep Linings, 20¢24; ovt Lugs, French Calif, pair, 20¢24; BGood French Calif, 20¢24; Best Jodot Calif, 20¢24; Leather Harness, 20¢24; Fair Bridle, doz, 20¢24; Skirting, 12 Kil, 20¢24; Welt, doz, 20¢24; Buff, ft, 20¢24; Wax Side, 20¢24.

## GENERAL MERCHANDISE.

(WHOLESALE.)

WEDNESDAY M., July 16, 1879.

CANDLES. do, No. 2, 130¢40; Baker's A. A., 125¢40; Olive, Flagniol, 5¢75; Pencil, 4¢75; Palm, 9¢; Linsed, Raw, 78¢; Boiled, 80¢; Cocoa nut, 55¢; China nut, 65¢; Spermaceti, 40¢; Coast Whales, 35¢; Lard, 20¢; Oleophine, 22¢24; Devote's Brift, 17¢18; Photolite, 31¢42; Nouriel, 31¢42; Eureka, 20¢32; Barrel Kerosene, 20¢35; Downer Ker., 35¢; Elaine, 37¢.

CANNED GOODS. Assorted Pie Fruits, 2¢25¢; Table do, 3¢50¢; Jams and Jellies, 3¢75¢; Pickles, 1¢gal; Sardines, qd, 1¢67¢130; Hf Boxes, 2¢50¢275; Preserved Beef, 2¢lb; do Beef, 4¢doz; 6¢50¢; Preserved Mutton, 2¢lb; Beef Tongue, 4¢60¢; Preserved Ham, 2¢lb; do doz, 6¢50¢; Deviled Ham, 1¢lb; do Ham, 4¢doz; 3¢00¢.

COAL-JOBING. Australian, 600¢650; Coos Bay, 500¢550; Bellingham Bay, 500¢550; Seattle, 500¢550; Chemung, 1200¢1500; Mt Diablo, 4¢75¢600; Lehigh, 1100¢1250; Liverpool, 600¢650; West Hartley, 800¢800; Scotch, 800¢800; Scranton, 800¢800; Vancouver Id., 600¢600; Charcoal, sack, 75¢; Coke, hush, 60¢.

PAINTS. Pure White Lead, 8¢84; Whiting, 14¢; Putty, 14¢; China White, 21¢; Ochre, 31¢; Venetian Red, 31¢; Averil Mixed Paint, gal, 200¢240; White & Blue, 300¢350; Green, 300¢350; Light Red, 300¢350; Metallic Red, 300¢350.

SOAP. Castile, 8¢15; Common brands, 4¢6; Fancy brands, 7¢8.

SPICES. Cloves, 45¢; Cassia, 19¢20; Nutmegs, 35¢87¢; Pepper Grain, 19¢20; Mustard, Cal, 1¢lb glass, 21¢25.

SUGAR, ETC. Cal. Cane, 10¢10; Fld refined, 10¢10; Fine crushed, 10¢10; Granulated, 10¢10; Golden C, 8¢84; Cal. Syrup, 70¢; Hawaiian Molasses, 26¢30.

TEA. Young Hyson, 51¢; Moynie, etc., 51¢; Country pek'd Imperial, 42¢; Hyson, 30¢34¢; Foochow O, 35¢; Japan, 1st quality, 40¢; 2d quality, 20¢25.

COFFEE. Sandwich Id, 16¢17; Costa Rica, 16¢17; Guatemala, 16¢17; Java, 25¢25; Manila, 17¢17; Ground, in c, 25¢.

FISH. Sacto Dry Cod, 4¢4; do in cases, 5¢6; Eastern Cod, 7¢7; Salmon, 800¢900; Hf hbls, 500¢550; 1 lb cans, 10¢112; Pickl Cod, hbl, 22¢00; Hf hbls, 110¢00; Mackerel, No. 1, 950¢1000; Hf Bbls, 950¢1000; In Kits, 185¢210; Ex Mess, 325¢30; Fld Herring, 300¢350; Boston Smoked, 70¢.

PLASTER, ETC. Plaster, Golden, 300¢325; Gate Mills, 300¢325; Lead Plaster, 1000¢1250; Lime, Sta Cruz, 125¢150; hbl, 125¢150; Cement, Rosen, 200¢225; Portland, 400¢450.

NAILES. Ass'd sizes, 2¢70¢275; Pacific Blue Co's, Neatsfoot, No. 1, 100¢90; Castor, No. 1, 135¢.

## LUMBER.

WEDNESDAY M., July 16, 1879.

CARGO PRICES OF OREGON SOUND PINE. REDWOOD. Rough, M., 1300¢1800; Refuse, 900¢; Clear, 2300¢; Clear Refuse, 2300¢; Rustic, 2300¢; Refuse, 1800¢; Surfaced, 2000¢; Refuse, 1400¢; Flooring, 2000¢; Refuse, 1200¢; Beaded Flooring, 2300¢; Refuse, 1300¢; Half-inch Siding, 1600¢; Refuse, 1400¢; Half-inch Surfaced, 2000¢; Refuse, 1400¢; Half-inch Battens, 1600¢; Pickets, Rough, 1100¢; Rough, Pointed, 1250¢; Fancy, Pointed, 1800¢; Shingles, 175¢.

ROUGH, M., 1300¢1800; Refuse, 900¢; Clear, 2300¢; Clear Refuse, 2300¢; Rustic, 2300¢; Refuse, 1800¢; Surfaced, 2000¢; Refuse, 1400¢; Flooring, 2000¢; Refuse, 1200¢; Beaded Flooring, 2300¢; Refuse, 1300¢; Half-inch Siding, 1600¢; Refuse, 1400¢; Half-inch Surfaced, 2000¢; Refuse, 1400¢; Half-inch Battens, 1600¢; Pickets, Rough, 1100¢; Rough, Pointed, 1250¢; Fancy, Pointed, 1800¢; Shingles, 175¢.

ROUGH, M., 1300¢1800; Refuse, 900¢; Clear, 2300¢; Clear Refuse, 2300¢; Rustic, 2300¢; Refuse, 1800¢; Surfaced, 2000¢; Refuse, 1400¢; Flooring, 2000¢; Refuse, 1200¢; Beaded Flooring, 2300¢; Refuse, 1300¢; Half-inch Siding, 1600¢; Refuse, 1400¢; Half-inch Surfaced, 2000¢; Refuse, 1400¢; Half-inch Battens, 1600¢; Pickets, Rough, 1100¢; Rough, Pointed, 1250¢; Fancy, Pointed, 1800¢; Shingles, 175¢.

ROUGH, M., 1300¢1800; Refuse, 900¢; Clear, 2300¢; Clear Refuse, 2300¢; Rustic, 2300¢; Refuse, 1800¢; Surfaced, 2000¢; Refuse, 1400¢; Flooring, 2000¢; Refuse, 1200¢; Beaded Flooring, 2300¢; Refuse, 1300¢; Half-inch Siding, 1600¢; Refuse, 1400¢; Half-inch Surfaced, 2000¢; Refuse, 1400¢; Half-inch Battens, 1600¢; Pickets, Rough, 1100¢; Rough, Pointed, 1250¢; Fancy, Pointed, 1800¢; Shingles, 175¢.

ROUGH, M., 1300¢1800; Refuse, 900¢; Clear, 2300¢; Clear Refuse, 2300¢; Rustic, 2300¢; Refuse, 1800¢; Surfaced, 2000¢; Refuse, 1400¢; Flooring, 2000¢; Refuse, 1200¢; Beaded Flooring, 2300¢; Refuse, 1300¢; Half-inch Siding, 1600¢; Refuse, 1400¢; Half-inch Surfaced, 2000¢; Refuse, 1400¢; Half-inch Battens, 1600¢; Pickets, Rough, 1100¢; Rough, Pointed, 1250¢; Fancy, Pointed, 1800¢; Shingles, 175¢.

ROUGH, M., 1300¢1800; Refuse, 900¢; Clear, 2300¢; Clear Refuse, 2300¢; Rustic, 2300¢; Refuse, 1800¢; Surfaced, 2000¢; Refuse, 1400¢; Flooring, 2000¢; Refuse, 1200¢; Beaded Flooring, 2300¢; Refuse, 1300¢; Half-inch Siding, 1600¢; Refuse, 1400¢; Half-inch Surfaced, 2000¢; Refuse, 1400¢; Half-inch Battens, 1600¢; Pickets, Rough, 1100¢; Rough, Pointed, 1250¢; Fancy, Pointed, 1800¢; Shingles, 175¢.

ROUGH, M., 1300¢1800; Refuse, 900¢; Clear, 2300¢; Clear Refuse, 2300¢; Rustic, 2300¢; Refuse, 1800¢; Surfaced, 2000¢; Refuse, 1400¢; Flooring, 2000¢; Refuse, 1200¢; Beaded Flooring, 2300¢; Refuse, 1300¢; Half-inch Siding, 1600¢; Refuse, 1400¢; Half-inch Surfaced, 2000¢; Refuse, 1400¢; Half-inch Battens, 16

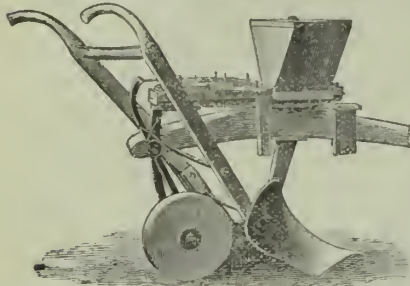


## Agricultural Articles.

## UNIVERSAL FAVORITE.

## Easterday's Improved California Planter

For 1879 is now ready for the Market.



This is a No. 1 dropper for Corn, Beans, Peas, and other Seed that may be planted as the ground is plowed, and by its regularity greatly increases the yield, besides the seed and labor saved. Valuable improvements have been made within the past year, and no effort has been spared to make this Machine just what it should be. A large number of these Machines have been sold within the past two years. Our improved Machines have been constructed in the most durable manner, all wearing parts being made of iron. They are easily attached to either single or Gang Plows, and can be thrown in and out of gear conveniently without leaving the driver's seat. When only every second or third furrow is desired to be planted, the lever for the purpose need only be moved backward or forward to stop or start the Machine to operating. Distance of drop, from one to six feet, and easily regulated for amount and distance. Being attached to the Plow Beam by a bar of spring steel, they pass easily over obstructions without in the least interfering with the working of the Plow, while at the same time the Machine is caused to move firmly in the furrow. Price of the improved Machine, \$20. All parts duplicated. Full instructions with each Machine. When ordering call for the Improved Machine.

We also have on hand some of our last year's style Machines, of which the cut here shown is an excellent representation, which we will sell at reduced rates. These are good Machines, and warranted to work perfect. All orders promptly attended to.

## BREWINGTON &amp; EASTERDAY,

Manufacturers, Watsonville, Santa Cruz County, Cal.  
BAKER & HAMILTON, Gen'l Agts., San Francisco.  
This patent for sale by State Rights, or if desired the whole is offered on reasonable terms.

## The Famous "Enterprise,"

PERKINS' PATENT  
Self Regulating  
WINDMILLS,  
Pumps & Fixtures.

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in habitted boxes.

Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs.

All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

## HORTON &amp; KENNEDY,

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.  
San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

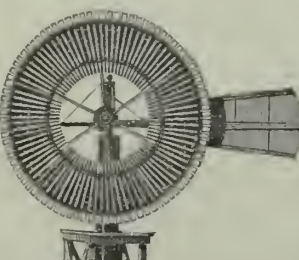
This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,  
STOCKTON, CAL.

\$50.

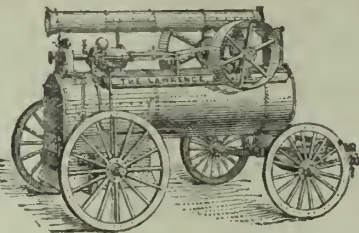
The New  
Worthington

Windmill

Manufactured  
by

W. D. PARSON,  
1364 San Pablo Avenue, Oakland, Cal.  
Also, maker of the "Colorado Wind Engine," Wind Grist Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern of Deep Well and Artesian Lift Pump Cylinders. Circulars free.

## The LAWRENCE ENGINE.



## The Best Farm Engine in the World.

## AUTOMATIC CUT-OFF,

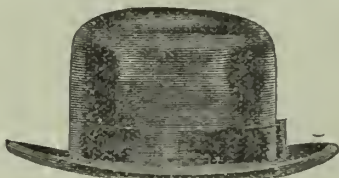
Less Fuel, Less Water, Less Repairs than any other Portable Engine.  
No Commission to Agents! Bottom Price to Purchasers! Engines for all purposes, with and without Wagons. You can save money by buying direct of us. Order early for next season's use. Send for Illustrated Catalogue and Price List.

## ARMINGTON &amp; SIMS, Lawrence, Mass.

ARMINGTON &amp; SIMS were lately with the J. C. Hoadley Co

## HERRMANN'S HATS

## ARE THE BEST!



Try one and you will Wear no other.

## Spring and Summer Styles,

— AT —

336 Kearny St., bet. Bush and Pine,

— AND —

910 Market St., above Stockton.

Send for Illustrated Spring Style Catalogue.

## ST. DAVID'S.

A FIRST-CLASS LODGING HOUSE.  
CONTAINS 113 ROOMS.

715 Howard St., near Third, San Francisco.

This House is especially designed as a comfortable home for gentlemen and ladies visiting the city from the interior. No dark rooms. Gas and running water in each room. The floors are covered with body Brussels carpet, and all of the furniture is made of solid black walnut. Each bed has a spring mattress, with an additional hair top mattress, making them the most luxurious and healthy beds in the world. Ladies wishing to cook for themselves or families, are allowed the free use of a large public kitchen and dining room, with dishes. Servants wash the dishes and keep up a constant fire from 6 A. M. to 7 P. M. Hot and cold baths, a large parlor and reading room, containing a Grand Piano—all free to guests. Price single rooms per night, 50 cts.; per week, from \$2.50 upwards.

R. HUGHES, Proprietor.

At Market Street Ferry, take Omnibus line of street cars to corner Third and Howard.

ARTESIAN  
AND  
SURFACE  
Well-Boring  
TOOLS.

Manufactured by the  
Rust Well Auger  
COMPANY,  
OF MACON, MO.

AUGERS and DRILLS from best wrought iron and steel. Shafting is 3-inch gas pipe. Couplings are round plugs fitted inside the pipe. Drills fitted for rope or pole. All tools warranted, and sold for less money than can be got elsewhere.

Send for Circular.

O. RUST, Macon, Mo

SEND FOR THE  
\$1.50

## Homœopathic Medicine Case.

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address BOERICKE & TAFEL,  
Homœopathic Pharmacy, San Francisco.

## New Dusters.

## DEARBORN DUSTERS,

Taking the place of all Feather and other Dusters. Made in six sizes, retailed from 35 Cents to \$1. The best, most durable Duster now known. Trade supplied. Address DEARBORN DUSTER CO.,  
No. 12 California St., San Francisco.

ASK YOUR PLUMBER FOR

## SPIDER HOSE.

The best Rubber Hose in market. Every foot guaranteed.

H. P. GREGORY &amp; CO.,

General Agents, San Francisco, California.

50 Perfumed, Snowflake, Chromo, Motto Cards, name in gold and jet 10c. G. A. SPRING, E. Wallingford, Ct.

## Stock Notices.



## SPANISH MERINO SHEEP.

Choice stock of thoroughbred Bucks and Ewes, guaranteed free from disease. Purchasers are invited to examine. About 10 minutes' walk from the Railroad terminus, adjoining State University.

E. W. WOOLSEY,  
Berkeley, Alameda County, Cal.

NEW IMPORTATION  
FROM FRANCE.

CONSISTING OF

## 40 Head of Horses,

Will arrive about Sept. 1st, 1879.

M. W. DUNHAM'S  
OAKLAWN STUD OF  
PERCHERON-NORMAN  
HORSES.

WINNERS OF THE

Grand Prizes in Europe and America,

Awarded Grand Medals by the French Government, and also Grand Medal, Diploma and Special Report at the CENTENNIAL EXHIBITION, 1876.

The largest and most complete Establishment of the kind in America.

My Catalogue, with history of the breed, sent free.

M. W. DUNHAM,

Wayne, DuPage County, Illinois.

## THAD STEVENS' COLTS,

## Thoroughbred Mares,

## TROTTER-BRED HORSES,

## And JERSEY CATTLE.

Some of all the above for sale. For particulars address the undersigned,

R. P. CLEMENT,  
San Francisco, Cal.

## ANGORAS AT THE FAIRS.

The undersigned would announce to those interested in ANGORA GOATS, and the public generally, that he will have a lot of

## Choice Angora Bucks

On Exhibition at the State and District Fairs

This fall, namely: At the State Fair at Sacramento, the Golden Gate Fair at Oakland, the Nevada State Fair at Reno, and the Oregon State Fair at Salem.

These Bucks will be sold at fair rates.

JOHN S. HARRIS,

Hollister, San Benito Co., Cal

## BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

18th and A Streets, Sacramento City, Cal

## Thoroughbred Spanish Merino Sheep

## FOR SALE.



Wool Growers and Sheep Breeders desirous of improvement are invited to examine the Banner and Premium flock of the State. All 1st Premiums taken at State Fair in 1878, with strong competition. No sheep superior in the world.

100 head yearling and 20 head 2-year old Rams for sale, large sized carcasses free from wrinkles. Heavy shearers, long staple of white glossy wool. A few young Ewes also for sale. All Sheep warranted free from Disease. Send for circular and price list or come and see us at once. Laurel Ranch, Haywards, Alameda County, Cal. One mile from depot on C. P. R. R.

J. H. STROBRIDGE.

## JOHN ROGERS &amp; SONS,

## GENERAL STOCK AND SALE YARD,

Corner Market and 5th Sts., San Francisco.

HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN.  
Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

ARITHMETIC MADE EASY  
BY ROPPS

## Easy Calculator.

This valuable work is used by thousands of farmers, mechanics and business men, and is highly recommended for its practical utility and convenience.

It embodies an entirely new system of calculation, by which a vast amount of figures and mental labor—required by the ordinary methods—and intricacies with their complexities, are absolutely avoided.

It is so simple and easily comprehended that even the most illiterate is enabled, in a few minutes, to reckon with absolute accuracy and speed; while its original and rapid methods, benefit and delight the most scholarly.

It shows at a glance the accurate value of wheat, corn, rye, oats, barley, cattle, hogs, hay, coal, lumber and merchandise, from one pound to a car load, and for any price the market is likely to reach.

It gives the interest, simple and compound, on any sum, or any time, at six, seven, eight, and ten per cent.; the exact measurement of boards, scantlings, timbers, saw logs, cisterns, tanks, wells, granaries, bins, wagon beds, corn cribs, etc., the wages at various rates, for hours, days, weeks and months; besides numerous other important methods, rules and tables.

It is printed on fine tinted paper, is well and elegantly bound in pocket-book shape, and accompanied by a silicate slate, pocket for papers, and memorandum, which can be replenished in the two latter styles.

It answers the purpose of a pocket book and diary, and costs no more, although it was gotten up at great expense and labor, and is unquestionably one of the most useful publications ever issued from the press.

Price, bound in Fine English Cloth, \$1.00.

Sent direct from the Eastern publisher, postpaid, on receipt of price, by P. O. order, registered letter or receipted by express. Address

DEWEY &amp; CO., San Francisco.

THE WILSON ADJUSTABLE CHAIR,  
With 30 Changes of Position.

Patented in the United States and Foreign Countries.  
BEST CHAIR IN THE WORLD.

Parlor,	Combining
LIBRARY,	Beauty,
Invalid Chair	Lightness,
Rocker,	Strength,
BED or	Simplicity
LOUNGE.	and
	Comfort.

Same Chair in Can. design, very desirable for summer. Manufactured of the best of wrought iron and rivets. Castors made purposely for the Chair. Everything to an exact science. **2<sup>d</sup> WILL LAST A LIFE-TIME.**

Has been awarded Medals, Prizes and Diplomas for its superiority and merit which never it has been exhibited. Orders by mail promptly attended to. Goods shipped to any address. C. O. D. Send for Illustrated Circular.

Address the WILSON ADJUSTABLE CHAIR MFG CO.,  
335 Washington St., Boston.

## THE PERPETUAL WICK

Makes no smoke or smell, breaks no chimneys, gives a beautiful soft and clear light, never requires trimming, never burns out. The wicks are made of felt, chemically prepared with ANACONDA, which is non-combustible, thereby rendering the wick Perpetual. A single wick was burned in the Patent Office at Washington, by the officers of that department, for 140 days and nights (without burning out), before a patent would be granted. Sample by mail, free; 3 for 50c; 6 for 1.00. Agents wanted. Address

A. S. SPENCE & CO.,  
24 Ceary St., San Francisco.

## DIVIDEND NOTICE.

## The German Savings and Loan Society.

For the half year ending this date, the Board of Directors of the GERMAN SAVINGS and LOAN SOCIETY has declared a Dividend on Term Deposits at the rate of seven and one-fifth (7 1/5) per cent. per annum, and on Ordinary Deposits at the rate of six (6) per cent. per annum, free from Federal Taxes, and payable on and after the 15th day of July, 1879. By order.

GEO. LETTE, Secretary.  
San Francisco, June 30th, 1879.

## TRADE MARK.



## LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price, \$2 per gallon. For directions and testimonials, apply to FALKNER, BELL & CO.,  
Sole Agents, 430 California Street, S. F.

## 507 Mechanical Movements.

Every mechanic Should have a copy of Brown's 507 Mechanical Movements, illustrated and described. Inventors, model makers and amateur mechanics and students, will find the work valuable far beyond its cost. Sold by DEWEY & Co., Patent Agents and publishers of MINING and SCIENTIFIC PAPERS, San Francisco. Price, \$1, (post paid).



## THE CELEBRATED GROOVE RING JAR.



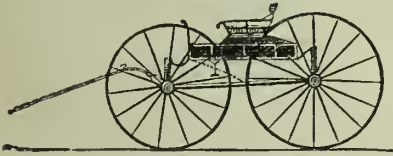
This Jar is extensively used in the Eastern States. It is the most popular, cheapest, and without doubt the simplest and most effective Fruit Jar now in use. It is by far preferable to any Patent Self-Sealing Jar, and are as cheap as the poisonous tin cans.

ASK YOUR STORE KEEPER FOR

## THE GROOVE RING JAR.

San Francisco and Pacific Glass Works,  
SAN FRANCISCO, CAL.

## H. J. HASKELL,



MANUFACTURER OF

## CARRIAGES, BUGGIES,

— AND —

## SPRING WAGONS,

At the Lowest Rates.

Corner of Alameda and White Streets,  
SAN JOSE, CAL.

## Anderson's Springs, LAKE COUNTY, CAL.

Nineteen miles from Calistoga, five miles from Middletown, and ten miles from the Great Geysers; between which and Anderson's Springs there is a good stage road.

### HOT SULPHUR WATER

For Rheumatism, Paralysis, etc.; Cold Sulphur for Dyspepsia, Diseases of the Stomach and Bowels. Scenery unsurpassed. Climate mild and equable. Consumptives generally improve in health, and asthmatics are invariably relieved.

### TROUT FISHING ON THE GROUNDS.

Deer Hunting in the Immediate Vicinity.

Accommodations and Cookery good. Board from \$10 to \$12 by the week.

ANDERSON & PATRIQUIN, Prop's.

## PLEASANT SUMMER READING.

### THE NEW PENELOPE

— AND —

## Stories of California Life.

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. For sale by

## A. L. BANCROFT & CO.

PRICE, \$2 00.

## A Card to Grangers and Farmers.

HAY, GRAIN, HORSES and CATTLE.

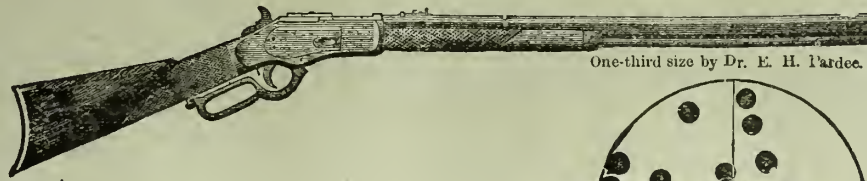
The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nos. 11 and 13 Bluxome St., San Francisco.

## The New Beekeepers' Text Book.

By N. H. and H. A. KING. The latest work on the Apian, embodying accounts of all the newest methods and appliances. Fully illustrated. Sent by mail, post-paid, for \$1. DEWEY & CO., 202 Sansome Street, S. F.

# Winchester Repeating Rifle,

MODEL 1873.



The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder,

JOHN SKINKER, No. 115 Pine Street, San Francisco

SOLE AGENT FOR THE PACIFIC COAST.

— OFFICE OF THE —

## BLACK POINT PACKING AND SLAUGHTER HOUSE.

MERRY, FAULL & CO., Proprietors.

## TO OWNERS OF LIVE STOCK!

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

### SQUARE DEAL and FULL MARKET PRICES

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices.

Please address our

Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.

In consequence of spurious imitations of

## LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

## Mission Rock Dock & Grain Warehouses,

SAN FRANCISCO, CAL.

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

Grain received and weighed in free of expense. Wheat Cleaned and Graded. Deep Water Berths for the largest ships. Insurance and storage at the lowest rates. Loans effected on wheat stored in Warehouse at lowest rates. Apply to

CHAS. H. SINCLAIR, Superintendent,

Or to the California Dry Dock Co., Office, No. 318 California Street, San Francisco.

### WANTED—100 FARMERS.

We will give the use of 50 acres or more of choice land, rent free, for one year, with the privilege of purchasing at a low price thereafter; crops of all kinds may be planted nine months of the year. Apply to

J. F. GREENMAN,

Room 10, No. 320 Sansome Street, San Francisco.

### MONEY TO LOAN

AT LOWEST RATES,

ON FIRST-CLASS COUNTRY REAL ESTATE AND OTHER APPROVED SECURITIES,

McAFEE BROS., Real Estate and Loan Brokers

202 Sansome Street, San Francisco.



Pyrethrum Cinerariae Folium—A California Production.

THE MOST WONDERFUL DISCOVERY OF THE NINETEENTH CENTURY.

This wonderful Insect Powder will exterminate Flies, Weevils, Caterpillars, Mosquitoes, Midges, Crickets, Cockroaches, Spiders, Tarantulas, Scorpions, Ants, Hawk-bugs, Phylloxera, Plant Lice, Moths, Beetles, Grasshoppers, Locusts, Bed-bugs, Fleas, and every species of Insects. Remember that none is genuine unless my Trade-Mark is attached to every package.

Put up in eight pound cans at \$10 per can, wholesale. Ask your druggists and grocers for it, and take no other to rid yourself of Insects. Sold at \$1.50 per pound or 12 1/2 cents per ounce, retail. Agents wanted everywhere.

\$100 WILL BE PAID IF IT FAILS TO KILL ANY INSECT. Endorsed by Prof. E. W. Hilgard, of the University of California, and by Prof. C. V. Riley, Chief Entomological Commissioner at Washington, D. C., and pronounced superior to any imported article, and perfectly harmless to man and beast.

G. N. MILCO,

Patentee and Sole Manufacturer, Stockton, Cal.

## The Voice of Worship, FOR CHOIRS,

Conventions and Singing Schools,  
BY L. O. EMERSON.

This splendid new book is nearly through the press, and will be in great demand. Full collection of the best Hymn Tunes and Anthems for Choirs, numerous Gleees for Social and Class singing, and a good Singing School course. Its attractive contents, with the low price (\$1, or \$9 per dozen,) should make it the most popular of Church Music Books.

THE TEMPLE. For Singing Schools, Conventions and Choirs. By W. O. PERRINS. Will be ready in a few days. First-class book for Singing Schools, with large collection of Gleees and plenty of Hymn Tunes and Anthems. Price, \$1, or \$9 per dozen. Although Singing Classes are especially provided for, both the Secular and Sacred Music render it one of the best Convention and Choir books.

FATINITZA. The new and very favorite opera, is now ready, with words in three languages, all the Music and Libretto complete. Price, \$2 paper, \$2.25 boards.

PINAFORE. Price reduced to 50 cts. The same elegant edition heretofore sold for a dollar. Complete words, Libretto and Music. All ready for the stage.

Any book mailed for retail price.

OLIVER DITSON & CO., BOSTON.

C. H. Ditson & Co., 843 Broadway, N. Y.

## IMPORTANT!

We wish to open correspondence immediately with one or more enterprising parties in each township upon the Coast to

### Establish an Agency

Of our valuable publications, among which are the "Pictorial History of the World," Stanley's "Through the Dark Continent," "Chase's Improved Recipes," the Farmer's Account Book, and many others. Ministers, teachers, farmers and others will find this profitable. Ladies especially are successful. Address for full particulars,

A. L. BANCROFT & CO.,

No. 721 Market Street, San Francisco, Cal.

M. COOKE.

R. J. COOKE

## PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,

AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREGORY.

J. P. JONES.

J. THOMPSON.

## JONES & THOMPSON,

Wholesale and Retail Dealers in

## Hay, Grain and Feed.

Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,

1535 Mission St., San Francisco.

## AGENTS, READ THIS

We will pay Agents a Salary of \$100 per month and expenses, or allow a large commission, to sell our new and wonderful inventions. We mean what we say. Send free. Address SHERMAN & CO., Marshall, Mich.



**DEWEY & CO'S**  
SCIENTIFIC PRESS  
**Patent Agency.**

PATENTS  
OBTAINED  
IN ALL  
CIVILIZED  
COUNTRIES

SCIENTIFIC PRESS—Mining and Mechanical.  
PACIFIC RURAL PRESS—Agricultural.

THE MINING AND SCIENTIFIC PRESS PATENT AGENCY was established in 1860—the first west of the Rocky Mountains. It has kept step with the rapid march of mechanical improvements. The records in its archives, its constantly increasing library, the accumulation of information of special importance to our home inventors, and the experience of its proprietors in an extensive and long continued personal practice in patent business, affords them combined advantages greater than any other agents can possibly offer to Pacific Coast inventors. Circulars of advice, free.

Address,

**DEWEY & CO.,**  
202 Sansome St., N. E. Cor. Pine,  
San Francisco.

#### Pocket Map of California and Nevada.

Compiled from the latest authentic sources, by Chas. Drayton Gibbs, C. E. This map comprises information obtained from the U. S. Coast and Land, Whitney's State Geological, and Railroad Surveys; and from the results of explorations made by R. S. Williamson, C. S. A., Henry Degroot, C. D. Gibbs and others. The scale is 18 miles to 1 inch. It gives the Judicial and U. S. Land Districts. It distinguishes the Townships and their subdivisions; the County Seats; the Military Posts; the Railroads built and proposed, and the limits of some of them; the occurrence of gold, silver, copper, quicksilver, tin, coal and oil. It has a section showing the heights of the principal mountains. The boundaries are clear and unmistakable, and the print good. 1878. Sold by DEWEY & CO. Price, postpaid, \$2; to subscribers of this journal, until further notice, \$1.

#### RAMS FOR SALE.



400 THOROUGHbred  
And Graded  
**SPANISH MERINO**

Rams For Sale.

Bred from the first importation of Spanish Merino Sheep to California, in 1859. Prices to suit the times. Residence, one mile north of McConnell's Station, Western Pacific Division C. P. R. R. P. O. address, MRS. E. MCCONNELL-WILSON, Elk Grove, Sacramento Co., Cal.

#### MONEY TO LOAN

AT LOWEST RATES

On Country Real Estate and Grain in Warehouse.

McAFEE BROTHERS,

202 Sansome Street, San Francisco.

#### Engraving.

Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the Mining and Scientific Press, San Francisco, at favorable rates. Send stamp for our circular and samples.

50 Perfumed, gilt edge & chromo Cards, elegant cases, name in gold, 10c. ATLANTIC CARD CO., E. Wallingford, Ct.

**E. DETRICK & CO.**  
**MANUFACTURERS**  
**BAGS**  
SOLE PROPRIETORS AND MANUFACTURERS  
OF THE  
**Celebrated Detrick "E W" 22x36 Grain Bag.**

CALCUTTA, DUNDEE and PACIFIC JUTE HAND-SEWED BAGS always on hand. OUR No. 1, No. 2 and No. 3 SECOND HAND GRAIN BAGS selected and graded with care.

**TWINES.** 3, 4 and 5-ply for Grain Bags, 6 and 8-ply for Potato Gunnies, 3-ply EXTRA FINE for Flour Bags, made expressly for our trade and QUALITY GUARANTEED.

FLOUR BAGS Printed to Order WITHOUT EXTRA CHARGE. POTATO GUNNIES, Wool, Bean, Ore and Salt and Seamless Cotton Bags.

#### Tents, Awnings and Hydraulic Hose.

ORDERS PROMPTLY FILLED AT LOWEST MARKET RATES.

119, 121 and 123 Clay St., and 118 and 120 Commercial St., San Francisco.

#### READING RANCH,

Shasta Co., Cal.

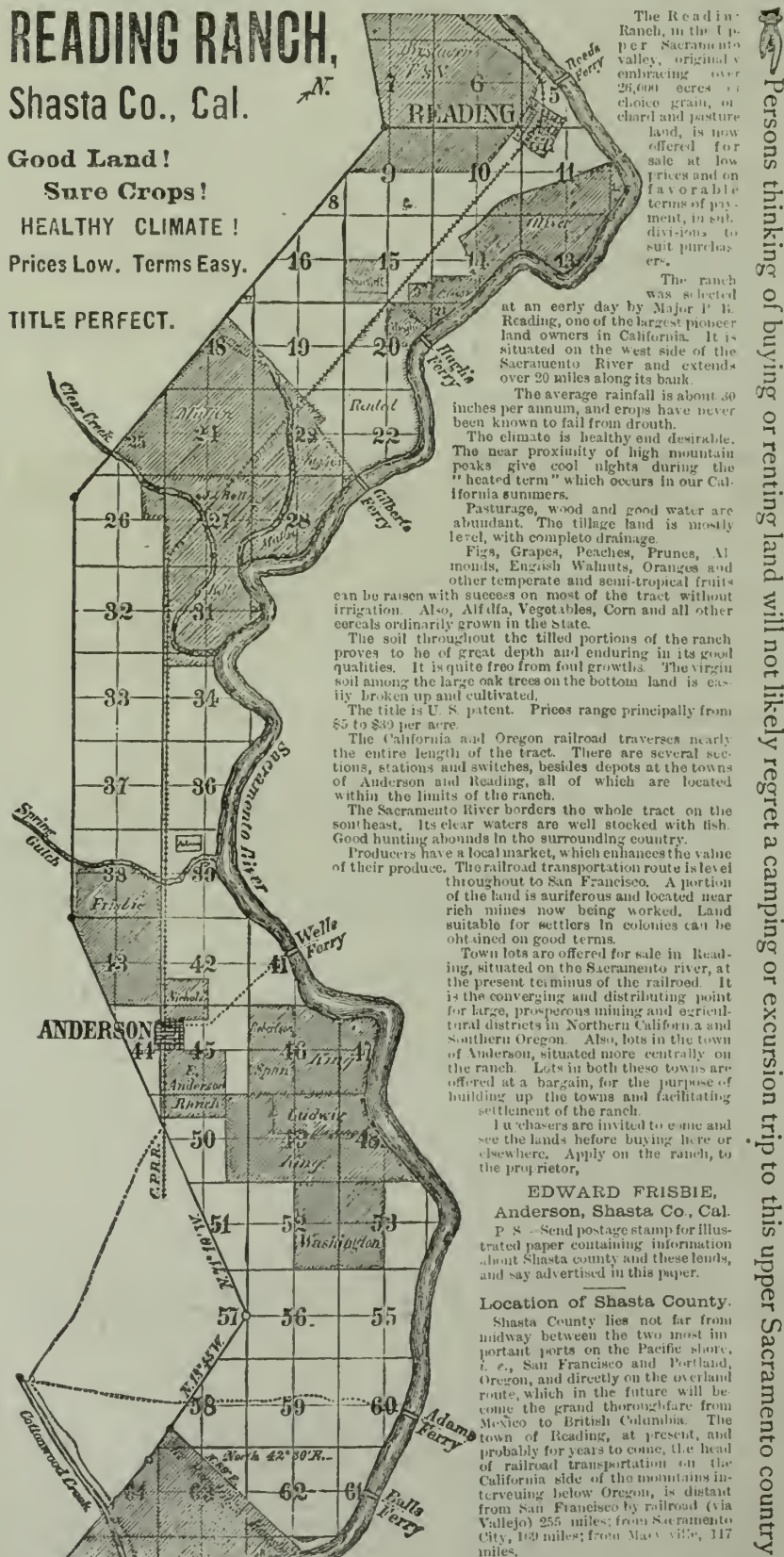
Good Land!

Sure Crops!

HEALTHY CLIMATE!

Prices Low. Terms Easy.

TITLE PERFECT.



The Reading Ranch, in the Upper Sacramento valley, original tract embracing over 26,000 acres of choice grain, orchard and pasture land, is now offered for sale at low prices and on favorable terms of payment, in subdivisions to suit purchasers.

The ranch was selected at an early day by Major P. H. Reading, one of the largest pioneer land owners in California. It is situated on the west side of the Sacramento River and extends over 20 miles along its bank.

The average rainfall is about 30 inches per annum, and crops have never been known to fail from drouth.

The climate is healthy and desirable. The near proximity of high mountain peaks give cool nights during the "heated term" which occurs in our California summers.

Pasture, wood and good water are abundant. The tillage land is mostly level, with complete drainage.

Figs, Grapes, Peaches, Prunes, Almonds, English Walnuts, Oranges and other temperate and semi-tropical fruits can be raised with success on most of the tract without irrigation. Also, Alfalfa, Vegetables, Corn and all other cereals ordinarily grown in the State.

The soil throughout the tilled portions of the ranch proves to be of great depth and enduring in its good qualities. It is quite free from foul growths. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

The title is U. S. patent. Prices range principally from \$5 to \$30 per acre.

The California and Oregon railroad traverses nearly the entire length of the tract. There are several sections, stations and switches, besides depots at the towns of Anderson and Reading, all of which are located within the limits of the ranch.

The Sacramento River borders the whole tract on the southeast. Its clear waters are well stocked with fish. Good hunting abounds in the surrounding country.

Produce have a local market, which enhances the value of their produce. The railroad transportation route is level throughout to San Francisco. A portion of the land is auriferous and located near rich mines now being worked. Land suitable for settlers in colonies can be obtained on good terms.

Town lots are offered for sale in Reading, situated on the Sacramento river, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

Purchasers are invited to come and see the lands before buying here or elsewhere. Apply on the ranch, to the proprietor.

**EDWARD FRISBIE,**  
Anderson, Shasta Co., Cal.  
P. S.—Send postage stamp for illustrated paper containing information about Shasta county and these lands, and say advertised in this paper.

**Location of Shasta County.**  
Shasta County lies not far from midway between the two most important ports on the Pacific shore, i. e., San Francisco and Portland, Oregon, and directly on the overland route, which in the future will become the grand thoroughfare from Mexico to British Columbia. The town of Reading, at present, and probably for years to come, the head of railroad transportation on the California side of the mountains intervening below Oregon, is distant from San Francisco by railroad (via Vallejo) 255 miles; from Sacramento City, 169 miles; from Marysville, 117 miles.

#### LAND FOR SALE OR RENT IN SUB-DIVISIONS.

Patents

OBTAINED IN U. S. AND FOREIGN COUNTRIES; trademarks, labels and copyrights registered through DEWEY & CO.'S MINING AND SCIENTIFIC PRESS Patent Agency, San Francisco. Send for free circular

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y.

#### Commission Merchants.

**DAVIS & SUTTON,**

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCE.—Traders National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

**BRYANT & COOK,**

Commission Merchants,

AND DEALERS IN

GRAIN, FLOUR, ETC.

No. 8 Davis St., near Market, San Francisco.

CHARLES NAUMAN. FRANK NAUMAN.

**C. & F. NAUMAN & CO.,**

Wholesale Commission Merchants

AND DEALERS IN—

GRAIN, POTATOES, FRUIT, BUTTER, POULTRY, EGGS, GAME, ETC.

227 & 229 Washington St., San Francisco.

Consignments Solicited.

**H. M. COVERT,**

Commission Merchant,

AND PURCHASING AGENT.

General Agent for the CALIFORNIA SACK HOLDER.

306 Davis St., San Francisco.

Liberal advances made on Consignments.

**A. GALLI & CO.,**

General Commission Merchants,

AND WHOLESALE DEALERS IN

Tropical, California and Oregon Fruits, Nuts, Produce, Butter, Cheese, Poultry, Eggs, Honey, Hides, Potatoes, Grain, Wool, Etc.

516 and 518 Sansome St., San Francisco.

Cash can be drawn for immediately upon receipt of account of sales.

**Baling  
Fencing  
Telegraph  
Telephone  
Galvanized**

**WIRE**

#### Barbed Fence Wire.

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the

Trademark.



**A. S. HALLIDIE**

Wire Mills.

Office, No. 6 California St.

SAN FRANCISCO.

**WIRE ROPE and CORDAGE**

Of every kind on hand or Made to Order.

#### Washington College.

The Fifteenth Semi-Annual Term of this Institution will commence on

Thursday, July 31st, 1879.

Catalogues can be had at Bancroft & Co.'s Bookstore, San Francisco, and at Hardy's Bookstore, Oakland.

For further information address

**S. S. HARMON,**

Washington, Alameda County, Cal.

#### CHEAPER YET!

#### Tension Sewing Machines!

A large number of nearly new genuine SINGER, WHEELER & WILSON, HOWE, WOOD, WILSON, GROVER & BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or NO TENSION MACHINE.

**Wilcox & Gibbs' S. M. Co.,**

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.



# PACIFIC RURAL PRESS

Volume XVIII.]

SAN FRANCISCO, SATURDAY, JULY 26, 1879.

Number 4.

## Curing Rooms for Cheese.

Oftentimes there has been loss occasioned to our California cheese producers because of inadequate accommodation for the proper curing and storage of cheese. In former years much more money could have been realized if the cheese maker could have held his product at home for two or three months, but lacking conveniences for this he has been obliged to ship to the city when the market was overstocked, and has realized very low prices in consequence. Last year and this year so far there seems to have been an excess of cheese, although greater amounts have been held back in the country than ever before, and country curing and storage facilities have been greatly improved. However, the possession of a good curing and storage room is a necessity to good cheese dairying, and when the business revives, a little investment will be wise in this direction. To show how highly such accommodations are valued by the leading Eastern producers, we quote from the *Utica Herald*, a brief description of a new curing room just completed by Dr. L. L. Wight, one of the most progressive New York dairymen. He has a separate building, 30x104 feet in size, and two stories in height. As originally built the walls of this building were plastered, then furred out an inch and plastered again, thus giving two air chambers between the clapboards and the inner coats of plaster. This, of itself, made a room of quite even temperature; but the doctor thought it could be improved. Accordingly last spring he again furred, not only the side walls but the floor and ceiling, and this time lined the entire lower room with planed boards about five inches wide. This gives an air chamber both in the floor and ceiling, and three of them in the side walls. The windows also are double, which gives one large air chamber between the outside and inside sash. In the second story the walls are plastered twice, with an interval between. The ceiling also is boarded and a floor laid in the attic, upon which is laid some six inches of sand. This protects the room from the heat of the roof. At night the windows of the whole establishment are left open in warm weather for the circulation of the cool night air. Early in the morning they are closed, and the shutters also, and thus a wonderfully even temperature is maintained. On the day when we visited there the sun was 86° outside. On examining the thermometer in the lower room it was just 70°, while in the upper room, which is not so well protected and would naturally be warmer, it was only 76°. Steam pipes run all through the house, and in cold weather the temperature can be controlled to perfection.

We have not in most parts of the State as violent extremes of heat and cold to guard against as they have in New York, consequently so thorough a deadening of walls, etc., is not essential. And yet even in the coast regions a partial application of the method would be an advantage. As dairying is pushing its way into the lower and warmer regions of the State there should be the better regard paid to arrangements for curing, and the New York method of circumventing heat would be worthy of introduction. Cheesemakers by fully availing themselves of arrangements for controlling temperature will find that the quality of their cheese is greatly improved, and they are, to a certain extent, masters of the situation, being able to place their goods on the market when the trade calls for them.

**THE BRITISH CROPS.**—The *London Farmer* of June 30th has this expressive comment upon the grain outlook: "To bring up the harvest of the United Kingdom to an average yield is now a feat beyond the ability of any weather to perform."

**HONEY EAST AND WEST.**—The great reduction in the honey yield of our southern counties this year will doubtless give our Eastern apiarians a chance to realize higher figures for their surplus. The *Beekeepers' Magazine* also announces that "the widespread destruction of the bees in all the Northern and Western States during the winter and early spring, cannot help having a healthful influence on the market for the crop of next autumn, and we venture to predict that the prices which will be paid will nearly double those of last year." It will be well if our producers can maintain the foundation of their stocks, for next year may make them all prosperous again, because of the clearing out of honey which will occur with this year's short crop. Even the low prices for the last crop are regarded by our contemporary as liable to work good results in the future, "for when delicious honey came down almost on par with New Orleans molasses, thousands commenced using it who had never hardly tasted honey before, but have now acquired a liking for it which they will not soon forget, and so the army of consumers is greatly enlarged." This is as it should be. The American people know

## One-Horse Ranches.

One of our correspondents recently remarked forcibly upon the advantage to the State of numerous one-horse ranches, the inference being that by multiplying the number of small farmers our State could be strongly built up in prosperous and home-loving citizenship. The idea is not new, but very true, and the realization of it would compass the cure of many of the evils which now exist. There are various ways in which the salutary condition may be promoted. The agriculturists of Georgia have hit upon one which is certainly worthy of attention. The North Georgia fair association offers a premium of \$50 for the best single one-horse farm, being "for the largest and best display, in merit and variety, of sample products from the field, garden, orchard, dairy, apiary, etc., the contribution of a single one-horse farm." Some of the conditions of the award are that one horse only shall be employed to do all the work for which a horse is used; and one regular hand the year through. All extra help in the

## Notes on Geysers.

Intimately connected with volcanic phenomena and in fact forming subordinate volcanic phenomena, geysers command the attention and study of the scientist, as well as excite the wonder of the ordinary beholder. Caused for some important purpose in the economy of nature, we should say vent holes for the relief of overburdened mother earth, the true geyser should not be mistaken for the fumaroles, the so-called geysers of California. The true geyser is found only in Iceland, in the Yellowstone Park of the United States and in New Zealand. Iceland is an essentially volcanic plateau, elevated about 2,000 feet above the sea level, with only a narrow marginal habitable region sloping gently to the sea. Upon this elevated plateau exists every sort of volcanic action, viz.: lava eruptions, solfataras, mud volcanoes, hot springs and geysers. These last exist in great numbers; more than 100 are found in a circle of two miles diameter. One of these, the Great Geyser, is well known to our readers.

In magnificence of geyser displays, Iceland is far surpassed by the geyser basin of Fire-Hole river, in the Yellowstone region. This basin is only about three miles wide. Around it are abundant evidences of prodigious volcanic activity in former times, and secondary volcanic phenomena are developed at the present day on a stupendous scale, and of every variety. More than 10,000 vents of all kinds are found in this vicinity. On Gardiner's river, the hot springs are mostly lime depositing; on Fire-Hole river the geysers deposit silica, containing an enormous quantity of diatomaceous formations, some of them of a marine species mixed with all the varieties usually common to fresh water.

The geysers are generally surrounded by hive-like elevations, ornamented in some cases in the most exquisite manner by a snowy deposit from the hot geyser waters, in the form of scalloped embroidery set with pearly tubercles. The illustration in Fig. 1 will show the appearance of these surrounding deposits.

In some places the silica is deposited in large quantities, three or four inches deep, in a gelatinous condition like starch paste. Trunks and branches of trees immersed in these waters are speedily petrified. The water of geysers is simple spring water, and they are true springs and not volcanoes. Mackenzie supposes that the eruptions are caused by the condensed steam of heated water seeking a vent and forcing the water up through the geyser pipe, as in Fig. 2; a shows the opening into the geyser; b, the chamber in which the steam condenses. As the steam accumulates it forces the column, c, up through the opening or vent at d, with greater or less force, according as the supply of steam is greater or less, and then when the steam has escaped, the geyser returns to its quiescent state until another accumulation occurs. This theory, however, seems to be untenable on the ground that it is inconceivable that all of the many thousands of geysers should have a separate cone and conduits so peculiarly constructed. According to Bunsen, the geyser does not possess a cave or even a perpendicular tube, ready made, but, like volcanoes, makes its own tube.

Fig. 3 is an imaginary section of a geyser mound, showing the manner in which, according to Bunsen's view, it is formed.

The irregular line, b, a, c, is the original surface, and a the position of a hot spring. If the spring be not alkaline, it will remain an ordinary hot spring; but if it be alkaline, it will hold silica in solution, and it will be deposited about the spring. Thus the mound and tube are gradually built up. For a long time the spring will be boiling, but not eruptive. But as the tube becomes longer, and the circulation more and more impeded, the difference in tem-

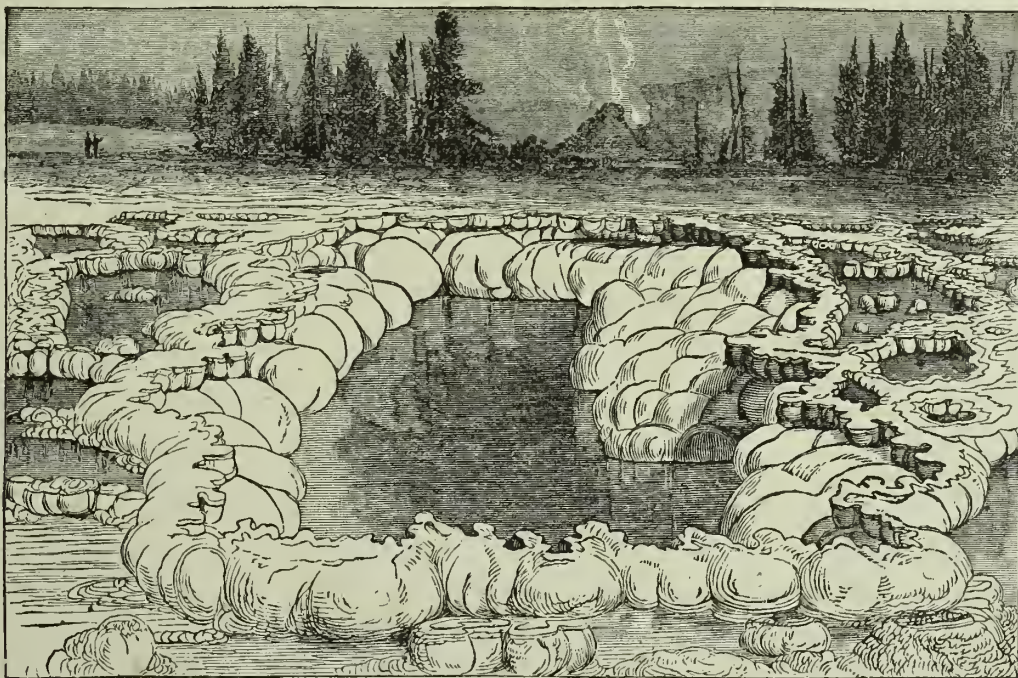


FIG. 1. GEYSER, SHOWING ORNAMENTAL CHARACTER OF BORDER.

very little of the desirability of honey for food, and the sooner they get educated in this line, the better.

**DOUBTFUL STATEMENTS ABOUT RENNET.**—The able editor of one of our esteemed Boston exchanges must have printed one of his French correspondent's letters without reading it or he never would have permitted such a statement as this to pass without comment: "The different varieties of cheese do not ferment at the same temperature, nor under the influence of the same organisms, as fermentation cannot exist without the presence of animalcules; for each variety of cheese a different species of animalcule is necessary." We know that something like this was long claimed, but the closest investigation failed to disclose the "little animals." Afterward the fermentation was attributed to plant growth reproducing itself as in the case of the yeast plant. Later still the coagulation of milk has come to be regarded as the work of an unorganized ferment. The means of action of rennet in milk is one of the obscure things which still baffle the investigator, and dogmatic statements like that we quote should not be printed without stating that they rest wholly upon theoretical grounds.

**LORD BEACONSFIELD** has declared that it is generally unwise to press foreign governments too strongly on the carrying out of treaties; it must be left to moral influence.

growing season and in harvesting the crop shall not exceed the labor of one additional field hand, so that all the labor on the farm during the year shall be equivalent to not more than two field hands. In addition to this display at the fair we think the English system of awarding a premium for the condition of the farm itself might be introduced to advantage. A small committee of competent and disinterested examiners examine the different farms entered for competition and prepare accurate reports of the points on which their judgment of superiority rests. Thus the practice on the best small farms is published for the public benefit and many get hints for the improvement of their own enterprises. The subject is worthy the attention of our State Board of Agriculture.

**EARLY GRAPES.**—Unless we lost sight of earlier shipments, the first grapes reached the San Francisco market this year about July 10th—considerably later than usual. St. Louis, therefore, led us by about 12 days, for she received Alabama grapes, Ives and Hartford varieties, June 28th. They arrived in nice order, being packed in three-pound boxes, eight to the case, and sold at \$3 per case, which, according to the *Rural World*, is much lower than early receipts usually bring.

LARGE quantities of fruits and vegetables, particularly potatoes, are being shipped at a profit from San Francisco to Denver, Colorado.

Continued on page 57.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—E.D.S.

### Agriculture on the Humboldt River.

EDITORS PRESS:—Slowly, steadily we plodded our weary way down the Humboldt in '49, wondering what the vast, dry, desolate, rugged region was ever made for. Now the problem is partly solved, though more and more of the truth for ages will be unfolding. A highway of the world is built through the desert, and the commerce of nations is passing along it. The mountains are yielding up their untold, inexhaustible resources of wealth in gold and silver, increasing the circulating medium—the very life-blood of the world's body of business. Its great, quickened heart-throbs are felt through all the habitable earth, and the results for good thousands of generations in the future may experience.

Of the dried up, worthless, sagebrush valley of this river, large extents are being easily reclaimed by irrigation and made to blossom as the rose. The whole length of the Humboldt is becoming lined on each side with enclosed, grassy, wild meadows, or cultivated fields, green with barley, wheat, rye, oats, potatoes, and all the vegetables of the East. Groves of trees are beginning to be grown, hedges to be set out, good roads surveyed, pleasant buildings put up, school houses erected, and lots of children are seen sporting in the play grounds or making unnumbered homes happy by their presence and their prattle.

From Wadsworth, on the Truckee, to the head of Humboldt lake for 60 miles the region is dry and desolate with alkali. But immediately above the lake fine lands commence, irrigated by nature and by art. The Big meadows, we judge, may be 20 miles in length and on an average, three miles wide, all of which is, or can be, easily supplied with water from the river to ensure excellent crops. Lovelocks is the railroad depot and growing place of business for all this region. Did space permit, we should like to particularize the improvements of this section and mention the fine farms of Lawson, Trembly, Craig, Carr, Tulley and Smith, with others, all of whom are taking the RURAL PRESS, but the country is too large and too grand to stop long in description of each place.

Above here the railroad mostly leaves the river and passes over the dry, sagebrush portion, yet the river is everywhere claimed, and the adjoining plain generally fenced in for stock, with occasional cultivated fields to Winnemucca, a distance of 70 miles.

#### Winnemucca

Is the county seat of Humboldt county, with fine grassy flats above and below it, used almost entirely for pasture and hay. We were told that for 14 miles above this place a wandering ox could not find access to the river for drink, all being fenced by claimants. The town itself is next to the largest on the river: is pleasantly built and gradually growing—sure to be a permanent and prosperous point of business. Its population must be 700, with a fine court-house, good school, and one church. The Winnemucca hotel is worthy of especial mention as first-class for Nevada State; well conducted, quiet and neat, with every convenience.

At this point Little Humboldt comes in from the north. Taking the stage, or better, on horseback, with a good animal from Montana's stable, a splendid ride of 45 miles takes one to Paradise City, in the center of a very fine, rich, productive valley of the same name.

#### Paradise Valley,

As reported by the Assessor, has 14,000 acres of tilled or plowed land, with more than twice as much in wild or cultivated grass. The valley has great facilities for irrigation from many mountain streams coming down into it on three sides, and is being improved in an admirable manner. The only failure is that no common fruit can be raised, because of late frosts. This must everywhere be true in Nevada State, with possibly few rare exceptions, as all the valleys are from 4,000 to over 7,000 feet above the level of the ocean. This Paradise valley is nearly 6,000 feet, still wheat, barley, rye and oats grow very luxuriously. The wheat in the whole region sown is, so far as we have heard, the variety called Australian.

Here, too, we should like to specify the beautiful farms and residences of a dozen or so all enjoying the RURAL PRESS, if only time permitted, as those of Abel, Burge, Riley, Nichols, Lamance, Pierce, Hinkey, Bradshaw, Sperry, etc. But space and time forbid more.

The excellent silver mines now opening in the vicinity, promising very permanent and good returns, we regard as assured, and to be all and some more than they have been reported to be. As yet they are proved by the working of only one mill of ten stamps, while another good one is being built. Rich as the mines seem to be, also those over the western range at Willow creek, the greater richness of this region we think to be in the agricultural wealth of the splendid valley. But this wealth is not yet one-sixth developed.

#### Golconda.

Returning to Winnemucca we took the cars for another 20 miles to Golconda. Here the Lay Bros. are developing a large, very fine farm of splendid grain and every variety of excellent

vegetables. One of the largest hot springs of the State is on this farm at Golconda, and the water is brought to the hotel for medical bathing.

Mr. Cusick has a fine stock farm a little lower on the river. Forty-five miles more and one comes to

#### Battle Mountain,

The third town in size on the Humboldt, a town with not much of farming near it, the river with its grassy flats being some distance north. Yet the place has a beautiful irrigated 10-acre lot—a perfect gem of a tract—connected with the fine hotel of Mr. Huntsman. From this point lines of stages run to different mining localities, to Galena, to Lewis and to Tustin on the south, to Tuscarora and other places on into Idaho on the north. They have a good schoolhouse, about 45 children attending, and, with all, the place is steadily developing in a good, American, civilized manner as one for permanent homes. From here there is nothing more like a farming town for near a hundred miles to Elko, though the river banks are yet mostly claimed for stock. Still we are sure that by windmills, pumps, dams and ditches this great valley of the Humboldt, so level, dry and covered with sage, may be made to glow with all that is beautiful on farms, except in the larger fruits, forty-fold beyond anything yet realized in it. The soil, with water, is as rich and productive as almost any valley within the national limits. Every part of it will be needed in less than 200 years, when our population must be between one and two thousand millions. We ought, by every possible governmental measure, to retain all our territorial lands for those of our own race, with no dangerous distracting elements to our children.

S. V. B.

### Characteristics of Santa Cruz County.

EDITORS PRESS:—As you have many readers who are writing to me for information concerning the chance to make "pleasant homes" in Santa Cruz county, without too great an outlay, I would ask the privilege of answering such inquiries through the PRESS, for the benefit of such inquirers.

Santa Cruz county is pretty equally divided into mountains, foothills and level bottom land—nearly all rich and well adapted to the growth of wheat, barley, oats, corn and vegetables; and especially to the growth of a great variety of choice fruits—a greater variety perhaps than any other locality in America, being remarkably free from extremes of heat and cold, and not troubled with drouth, or excessive rains or storms. These never occur; our coast is truly "pacific." The mountains are not very high, and are covered principally with redwood and tanbark oak; and consequently there is a good deal of lumber and leather manufactured, both being of superior quality. There are also vast quantities of excellent lime made here, and shipped to San Francisco and other places; for we have cheap transportation, both by sea and rail, and have no trouble in going to market. Besides, in consequence of the manufacturing interests, and the great influx of visitors in summer, we have a home market for our agricultural and most of our horticultural productions.

The county is well watered, and lumber and fire-wood are handy and cheap. There are good roads all over the county, so that you can travel in any direction with ease.

The land is all good, and the title is good. You can buy land in quantities from one acre to thousands, cultivated or uncultivated, from \$5 to \$500 per acre. There are many pleasant homes to be had at from \$30 to \$50 per acre, and a good many for less, on wild land. But there are three things that make this county particularly desirable for homes: the pleasant climate, the certainty of crops, both grain and fruit, and the advantages of a market. As for society, it may be called good in comparison to that of other localities or of other States. Our educational facilities are good, and there are churches enough to accommodate all that wish to go, and places of amusement for those who are that way inclined. The people are generally peaceable, industrious and moral. The population consists principally of New Englanders—mostly from Maine.

With regard to the location of Soquel, I will state that it is on the Soquel creek four miles east of Santa Cruz (the county seat) and 16 west of Watsonville. It is a mile from the bay, where is located the much frequented camping and bathing place called "Camp Capitola," a place visited by thousands every summer for health and amusement. Here you will find assembled on the sand beach hundreds of the best citizens in the State, of all ages and both sexes, bent on fun and amusement, on the sand and in the water. "False modesty" is laid aside, and genteel women and pretty girls will drop the "pull-back" and make their way from the "dressing tent" straight to the bay, in their picturesque bathing suits, and then look out for fun.

My place is one and a half miles back from Soquel, in the foothills, and I am engaged in growing fruit, and I can show as healthy trees and fruit as can be found anywhere; and what is still better, is that with proper care the fruit crop is a sure thing and finds a good market, and my location is no exception.

M. P. OWEN.

Soquel, Cal.

## SHEEP AND WOOL.

### Constitution in Sheep.

R. M. Bell, a leading Missouri sheep breeder, gives the *Journal of Agriculture* his ideas of constitution in sheep. We quote as follows:

Dr. Randall once said if he were asked the first point essential in a sheep he would say constitution. And the second point would be constitution, and the third would have to be constitution. The fact has been generally fixed in the minds of all that constitution is all important in a sheep as well as any other animal.

We are at a loss though to understand the term in all its varied usings. It becomes a relative term. If for a Short Horn it means aptitude to mature early and grow rapidly and maintain good health under the most abundant and liberal treatment. In a buffalo it means to travel and endure hardships and find a precarious living on the plains. The two animals are so similar in bulkiness and so unlike in form to judge either by the other would be no criterion at all. A Short Horn is judged by roundness and width of heart region. A buffalo by the depth of chest, the same as a race horse, or deer, or greyhound or jack rabbit. These have constitution to travel, while a Short Horn, or Norman-Percheron horse, or a Berkshire hog, or Cotswold sheep or Southdown has constitution for laying on flesh and early maturity under high treatment. Constitution in a Merino sheep will admit of all these meanings of the term and still lack what we claim as the essential purposes a sheep is kept for. A sheep must produce a fleece and a carcass. The two must be in harmony and unanimity. If it has constitution to grow more wool than carcass it will be a failure. If carcass and a light fleece it will be unprofitable to its owner. If for the pastoral regions to run in the natural way with the flock it must be constitutionally fitted to travel, do service and secure a living on the range. If for the purposes of breeding on a flock in the hands of the average farmer or breeder, the broad back and well-sprung ribs are sought for. They are found to be the better feeders and best to lay on flesh and grow large and heavy carcasses, and, by some it is claimed, heavy fleeces. The claim is not so well sustained for fleeces as for carcasses.

A Spanish Merino sheep that has a perfect constitution, for the purposes for which a sheep is kept, will have constitution written all over it from top to bottom. It will show it in every fiber of its fleece, in its bone muscle, in its stand up and bright shapely appearance. In a Merino the fineness of the fiber usually tells its constitutional vigor and stamina. The Saxons were tender and feeble under some climatic influences and systems of treatment. So are some of the finer fibered families of the American Merinos. The stronger fleeced families are the heaviest shearers and most rugged, robust, healthy, long-lived of sheep. They withstand hardships, travel, bad treatment, unequaled by any sheep known as thoroughbred. The Cotswolds, Leicesters and Downs are constituted for an especial purpose and fill it with perfect promptness and fitness. In them the indices of vigor are as plain, as sure, as in Merinos. The fineness of fiber may be less distinct in vital forces than in the Merino, but doubtless follow the same rules one as the other.

When a breeder says he breeds for constitution, he ought to say for what purpose, so that we may know just what good thing he means. If he says to grow wool, we would like to know if they grow too much wool to be healthy and vigorous with good treatment. If they are vigorous from fullness of constitutional vigor, we would like to know how much they will shear in 365 days—an almanac year, not a sheep shearing year for breeders who would show big fleeces. One of the handsomest samples of wool we ever received came from a ram who had taken prizes at a Western fair. I showed the sample to a judge of wool and told him where it came from. He said he saw the ram and that he was no account to any man for he had no constitution at all. That he saw him at their last fair, and he stood up all the time and slept with his ears hanging down like a sick mule. In this case there was constitution to grow handsome, long-fibered fleeces, and not get up enough to lay down to sleep. We have seen some vigorous, bounding, pounding, thundering rams without fleeces, at least too little to use in a vigorous flock of ewes. These had vigorous, physical constitutions, but not of character to grow wool.

There has to be a proper combination of vital forces to make up what is desirable in constitutional endowment. I once asked my family physician what he would call constitution in an animal. He said an animal's constitution was in its belly. He said constitution meant stock with its capabilities of digesting and assimilating food to the various wants and purposes of the animal.

We think this true, but have seen a sheep with stomach-vigor enough to insure health, large symmetrical carcasses, but its skin so ill-fitted for growing wool that for that purpose might as well have been an imbecile serm.

Constitution is the creation of a fostering system of treatment, and not as claimed by some who are ignorant of all laws of physical development, and think neglect and hard treatment hardens and toughens young animals. As if snuffing and shivering could possibly aid in securing a perfectly full physical contour. Queer hygienic treatment for a feeble man or

woman to put them out of doors in the cold, stormy nights to toughen up. Under such a system the frailest ones die and the hardier ones survive, and the flock may appear more vigorous, but what a shame would come to any really intelligent man to think what a cruelty he had been guilty of in securing the death of his feebly constituted animals. It's as mean as turning the faithful, honest old horse into the road to find a living or die of hunger or thirst.

## POULTRY YARD.

### Extracting Gape Worms.

A reader lately asked for a method of ridding fowls of gape worms, and treatment was described by Col. Eyre. We find in the *Rural New Yorker* a method described by Henry Hales, a leading poultry writer at the East. This method, it is said, is very difficult to apply successfully and almost impossible to learn unless one sees it done, and yet we give the description in case some careful operators may succeed with it, for it is exceedingly simple when the skill is acquired:

Take a low seat, hold the chick's feet tightly between your knees, with its head to your right hand; open its mouth, and with your right thumb and finger take hold of its tongue and draw it forward so as to bring the entrance to the wind-pipe so far forward that you can see the entrance plainly and get at it easily; pass your left hand on the off side of the patient, and place your left thumb on its tongue to keep it forward. The back part of the tongue forms a shoulder; placing the thumb on this enables the operator to hold it still, with the left forefinger under its lower mandible; the unoccupied fingers of the left hand can be placed behind the bird's head to prevent its pulling back. Have a stiff feather—a secondary quill of a hen will do for chicks six or eight weeks old—regulated according to the size of the patient, but just stiff enough to prevent its doubling while it is being inserted. It must be stripped to within one-half or three-quarters of an inch of its end. To cut off the barbs close to the stem with the scissors is the best way, as the stem often tears through if stripped by hand. Wet the tip end and twist it so that it forms a sharp point, and brush back the remaining barbs so as to form an arrow-head with the feathers.

When the chicken is held as described, you can see the wind-pipe opening and shutting; catch the opportunity while the wind-pipe is open and run down the feather as far as it will go without too much force, keeping the chick's head up and its throat extended up straight, so that the feather passes readily down. Make sure the feather is in the wind-pipe and not in the throat. When quite down commence to twist it sharply and draw it up slowly, and it generally brings the worm or worms the first time.

Sometimes it is necessary to insert the feather a second time, but not often, as it disturbs the worms, so that the patient often coughs them out. The points to be remembered in this operation are: The preparation of the feather, the size to suit that of the chick, and the holding of the patient's tongue tightly, with the entrance to wind-pipe well forward and its head up, and neck up straight, to facilitate the operating of the feather.

### Langshan Fowls.

We called last week for experience with the Langshan fowls. While our California readers who have these birds are preparing articles for us on what they think of the breed, we will print a paragraph from the *London Agricultural Gazette*: The Langshan fowls are now occupying considerable attention in English poultry circles. The writer says he is convinced from examination that whatever affinity they may have to the Cochins race, they possess sufficient characteristics to entitle them to the possession of a claim as a separate class from Cochins. It appears to him also that they are well adapted for farmers' poultry, and that few breeds are more suitable for farmyards. These fowls are remarkable as winter layers, at a time other hens are idle. Beginning in the autumn, they will lay from 90 to 100 of fair and rather over the average size of eggs. They are careful mothers. The male birds weigh from 8 to 12 pounds, the hens from 7 to 10 pounds. They make weight rapidly on ordinary fare, averaging something like a pound a month for the first six months. The writer has not tested them as table birds, but is informed that they rank only second to game for the flavor of the flesh. Thus, they are hardy, fertile, and possess plenty of weight for the table—three most essential qualities for the farmyard. There were some beautifully feathered birds among the flock examined, so level and smooth as they, and the neck and wing feathers a beautiful beetle green, shine and scintillate in the sun in a variety of hues. They also possess the pink skin between the toes, which is not found in the Cochins, and the tails and other contour of the Langshans are dissimilar from Cochins. The gentleman who is raising them extensively in England says that so long as they are supplied with green food occasionally in the form of a sod of grass, they thrive and lay almost equally as well as those which have the range of the farm. The hen chickens begin to lay at five months old.



## PISCICULTURE.

## Pacific Coast Halibut.

At the last meeting of the California Academy of Sciences a paper was read by W. N. Lockington on new and rare fishes of the Pacific coast. We shall print these notes in sections as space will allow. This week we give notes about Pacific coast halibut:

I have lately been occupied in studying the flat-fishes or Pleuronectidae of this coast. Since the date of my last paper on the subject, I have been fortunate enough to find another new species, and also to verify the occurrence in our markets of a species of a halibut (*Hippoglossus*), which is probably identical with the European species. It will be as well, therefore, to commence the present paper by recording some additional information respecting this group of fishes. Prof. Theo. Gill, of the Smithsonian Institute, writing in 1864, enumerates 16 species of Pleuronectidae from the Pacific coast of North America. Not that Prof. Gill had seen all these species; the list was a literary enumeration of species described by various authors. Among them were two species described by the old Russian naturalist, Pallas, and inhabiting the seas between Kamtschatka and North America. These two species have not yet been, with certainty, identified, and, as descriptions of that date were very short, giving but few characters of the animal described, it is not unlikely that one or both of them may be identical with species now known under other names. Two of the species enumerated were characterized by Dr. Gunther, of the British Museum; two or three by Dr. W. O. Ayres, formerly of this city, and one by Prof. Gill himself. Most of the others had been described by Girard in the "Pac. Rail. Rep.," vol. X.; but one of these, the common flounder, with rough scales and striped fins, had been proved by Dr. Gunther to have been first noticed by Pallas. In the following year, Prof. Gill added another species to the list, making 17 in all. I am thus particular in giving the number because I wish to prove to you this evening how it is that, although I have found three new forms, the distinctness of which I could prove in five minutes to the satisfaction of any person who would take the trouble to look at them, I am yet in a position to confidently assert that the distinct species yet known on this coast are fewer than 17, the number to be found in Prof. Gill's memoirs.

Let us begin by leaving out the two unidentified and perhaps more northern forms described by Pallas, and the northern *Pleuronectes glacialis*, of Richardson. We ought then to have 14 species upon this part of the coast, without counting the three I have lately found. But there are really only ten species, excluding the three just found. It may not be amiss to show how these "nominal" species were made, especially as in so doing it will be made evident that the most learned and acute men, working from a few specimens preserved in alcohol, or, worse still, dried or skinned, may fall into errors which those who describe from quite fresh specimens are not likely to fall into. Girard's descriptions were incomplete and too often taken from young, immature specimens, or from a single specimen. From this insufficiency of the descriptions of Girard it came about that Gunther and Gill, from specimens forwarded to them, redescribed the same fishes that were described by Girard as so many new species, not recognizing the identity of their specimens with Girard's.

One of our common flounders was thus made into three species, for one of which Dr. Gunther is responsible, for the other, Prof. Gill. The latter authority doubted the former's species, but added another, describing it in terms which are but a better description than Girard's, of Girard's species. Our "Turbot" was so indistinctly characterized by Girard that when Dr. Gunther received several specimens of it, he thought it another species, and placed it in another genus. Prof. Gill doubted the distinctness of the two, but in the absence of material, could not prove their identity. These errors were all of a nature which no naturalist, unless he have before him a series of fresh specimens, can avoid falling into; but so much cannot be said for another of Gill's species, founded on a sun-dried specimen of a flounder sent him by Dr. J. G. Cooper, from San Diego. The description of this fish, a very full and complete one, most unmistakably applies to a form very common in our markets, and first described, but incompletely, by Girard. The character on which Prof. Gill's new species and genus were founded are simply those due to the rough way in which the fish was preserved, and I cannot but wonder that Prof. Gill did not perceive the identity of his specimen with Girard's species.

Again, I have lately been able to prove that one of the species described by Dr. Ayres, viz: *Hippoglossus californicus*, the California or Monterey halibut, is identical with a species previously described by Girard. Girard's name, *Paralichthys maculosus*, has precedence of Ayres' name, and must be retained as the scientific name of the species.

I will now give a few notes upon the species of Pleuronectidae not mentioned in my last paper. *Hippoglossus vulgaris*.—A true halibut, very nearly related to, and possibly identical with,

the halibut of the Atlantic, is occasionally brought to this market, but as yet I have only seen one specimen, or rather part of one, since the central portion had been sold away before I saw it. Its rarity may be inferred from its price, which was 50 cents per pound, but I am told that as the season advances it may probably become more abundant. The first to bring the occurrence of this fish on our coast to the notice of naturalists was our Dr. Ayres. (Proc. Cal. Ac. Sci., vol. I, p 40, 1855). "Another species, in which the eyes are on the right side, is occasionally taken near the Farallones, opposite the mouth of the bay, which I do not feel warranted in separating from *H. vulgaris*, without direct comparison." Fin-rays, D. 102, H. 73, p. 16, v. 6.

Dr. Ayres, though he suspects the identity of this fish with the European form, does not prove it; and as this point has never been proved, I am most anxious to procure a specimen for this Museum, so that it can be examined at leisure, and its characters compared with the European form.

The only notes I could take were as follows: Eyes far apart, the distance between them equalling or exceeding their longitudinal diameter; teeth numerous, in a double row along both sides of both jaws, with some irregular teeth not in the exact line of the rows, but between them; branchios tegals (the bones supporting the gill-membrane) seven in number. About twenty caudal rays, the principal ones several times bifurcate, posterior margin nearly straight.

The specimen weighed between 40 and 50 pounds, but this fish attains a far greater size and weight. It is said to be common upon the more northern parts of our coast, also on the coast of British Columbia and Vancouver's island.

Note.—Since writing the above, I have been informed that Prof. B. Goode, of the Smithsonian Institute, says that the Alaska halibut is identical with the European form.

About June 12th, a schooner load of this species, brought, packed in ice, from Vancouver's island, for once glutted the market with halibut. One of these fishes that I measured was 5 feet 11 inches in total length, and one weighed 220 pounds.

## Carp Culture in San Bernardino County.

The Colton *Semi-Tropic* gives an interesting account of carp growing in that vicinity, from which we quote as follows: We recently paid a visit to the carp-breeding ponds of Mr. J. H. Pettit, on Colton avenue. Mr. Pettit is one of the pioneers in this branch of industry in this county, and is enthusiastically devoted to it. He has undoubtedly mastered the difficulties which beset one at the commencement of new enterprises and has an assured success within his grasp.

He has two ponds at present, and expects soon to add more. His two ponds are connected by a large gateway and are, for all ordinary purposes, converted into one by raising the water a foot or so higher than the separating embankment. The water for the ponds is furnished from two sources; first, from an artesian well on the place adjoining, and second, from several fine springs that were uncovered when making the excavations for the ponds. There are waste weirs, as well as sluiceways, for completely drawing both ponds.

The area covered by the two ponds is about two-thirds of an acre, the depth of water ranging from 18 inches to eight feet. There are no sides nor bottom to them but the native earth, the carp being a native of muddy waters, and delighting to bury itself in the mud at the bottom. This fact renders the making of ponds an easy matter, as the growth of grasses in them is an aid rather than a detriment to the fish. For the same reason the ponds need no cleaning if no putrefying matters are allowed to foul the water.

Extraordinary stories are told of the enormous growth and fecundity of carp. Mr. Pettit's own experience leads him to think that these stories are not fabrications, but facts. He says the young fish will grow an inch a week, and that they fatten as easily as pigs. He had only a few fish last year, while this year he has over 2,000, and more coming all the time. As they do not eat one another, but live on vegetable food, the losses from any cause are small. The best time to sell carp for table use is when they are four or five years old. The Germans have from five to seven ponds connected together. One is used for a breeding pond and one of the others sold out every year.

Mr. Pettit will have several thousand fish to sell this fall and next year expects to be able to supply all who come. The importance of this industry cannot be overrated and we shall allude to the subject again and again until the public is fully aroused to the importance of securing so valuable an addition to the tables of our people.

DYED COCOONS.—A Spanish silk spinner has hit upon the ingenious idea of adding dyes to the warm water which is used for detaching the silk fibers from the cocoon, and thus to dye the fiber as it is being forced into thread. His object is to obtain a dyed thread which is to contain all the natural gum and luster, and which, on that account, will retain the color more easily and readily.

## HORTICULTURE.

## Apple vs. Citrus Fruits.

A writer in the *Climate Cure*, a new venture in New York journalism, writes concerning the apple and the fruits of the citrus family, in which the former is rated by far too low. However the comparison is an interesting one to fruit growers, and we quote the leading paragraphs:

I find the apple designated as the "Prince of fruits." Now I wish to expostulate, and enter my "bill of exceptions" (as the lawyers say) against this (with us) long exploded delusion.

The apple contains three constituent parts which can readily be recognized by the non-scientific. Malic acid, sugar and a spongy indigestible pulp, the latter you must either swallow or get rid of by turning your mouth into a miniature cider mill, to separate the juice from the pulp, in any case the only palatable part of the apple is the juice, which is made up of more or less sugar (generally less), malic acid and water. The malic acid is not recognized in the "materia medica" as possessing any curative properties whatever, but is considered exceedingly injurious if taken alone, and it seems that the less of it swallowed the better, hence the saccharine part of the fruit is its only valuable component.

The pear, who no doubt was at one time nearly related to the apple, is a wholesome, palatable and digestible fruit, and so much superior in the social scale of fruits to the apple, that the latter should never be mentioned on the same day. But neither have any claims on royalty, the true and reigning family is the citrus, and it is so known and admitted by all enlightened people (where less than 20 inches of snow fall at a time) in every part of the world. The sweet orange is the "crowned head," the tangerine is "royal consort," and so on in the order of their excellence to the lime, which is the most intensely sour, and might be called the "little joker at court."

But my dear (old time) lady friend at my elbow, says, "you can't make anything of oranges but to slice them with sugar." Now I can pardon her, as she never lived in the tropics, and knows only one life, while I have lived two lives, one under King Boreas, and another of many years under the gentle dominion of King Sol; so my judgment is certainly of more value than my friend's, because having heard both sides, I can judge understandingly between the claims of the contestants for the crown. Although in my youth I was brought up to support the "pretender," simple, plebeian Mr. "Apple," who, in his humble sphere, furnishing "hard cider," and dyspepsia-breeding "apple pies," is useful enough—to the doctors—nevertheless one-third of my life spent in a land where he does not find a place in the humblest garden, has convinced me that in my youth I knew nothing of heraldry in fruits. You know as well as I, that we make puddings, pies, preserves, marmalades, jellies, wines and ambrosia from the "royal" citrus tribe. They are all rich in "citric acid" (the most wholesome and medicinal of all chemicals, a tonic and antiscorbutic), and most of them contain a large proportion of sugar, besides possessing no deleterious properties whatever. The sour, unripe specimens of the citrus family which find their way to New York, furnish no criterion. In a year's residence in this city, I have seen but two oranges that were fit to eat, and they came from somewhere in the South. The imported fruit is gathered green, and tastes precisely as our "wind falls" do, when they lie two months on the ground, and turn yellow in the first stage of decay.

## THE FIELD.

## Quality of Wheat and Time of Cutting.

In a leisure hour, if such a thing should come in harvest time, some reader may be interested in some notes on the quality of wheat for flour as influenced by the time of cutting. We take such suggestions from a paper prepared by Prof. N. H. Townshend of the Ohio State University, for the *Farm and Fireside*:

For the purpose of human food, the most valuable constituents of a grain of wheat are starch and gluten. Starch forms on the average about 60% of the kernel; it is one of the commonest and most important articles of food. Gluten is even more nutritious than starch, its composition being more nearly that of animal substances, but it is found in the wheat kernel in much less quantity than the starch; in Ohio, wheat it may amount to 10% or possibly to 15%, while in drier climates the proportion is greater. In addition to the value of gluten as food, it has properties which make it especially valuable in combination with starch for making bread. It forms with water a most tenacious paste, and when fermentation, or chemical action, is set up in dough, this paste forms a thin pellicle about the bubbles of carbonic acid gas as they are produced, and retains them. This retention of the gas causes the dough to expand, or rise, so that when baked in this condition the bread comes from the oven thoroughly viscid or light. A flour exclusively of starch, or containing insufficient gluten, will not retain the gas, and consequently does not rise; the more gluten there is in flour, the more perfectly the dough made of it rises, and the lighter

and better the bread. Flour from soft wheat, which contain abundance of starch but are deficient in gluten, command but a low price for bakers' use in Eastern cities, while flour from flinty wheat, which is more glutinous, and strong enough to raise itself not only, but possibly a mixture of cheaper flour and a good quantity of water, is in good demand and at higher prices.

A question which may help to fix the proper time for cutting grain, here presents itself. Are the starch and the gluten deposited in the wheat kernel at the same time, or does the deposition of either precede that of the other? One means to determine this is by the use of the microscope, and accordingly, observations were made almost daily through the month of June and July. The method pursued is very simple; a thin slice across a kernel of wheat was put on a slide and wet with a drop of water, then a little tincture of iodine was added; the iodine turns the starch granules blue, and leaves the gluten uncolored. Using a two-third or one-half inch oblique, it could be seen that while the kernel is "in the milk," starch grains are formed and begin to be deposited, while not until the kernel has passed into the doughy stage can gluten be seen. When first visible the gluten cells form a layer next the bran; they are circular or irregular in form, some distance apart, and manifestly not filled; later in the season they fill and crowd each other into square form, and when quite full the rows of gluten cells appear much like the ends of bricks in an arch. Numerous observations will warrant the conclusion that the starch begins to be deposited in the kernel before the gluten, and also that the starch cells may be well filled while the grain is still soft; that the deposit of gluten begins later than the starch, and that the gluten cells are not thoroughly filled until the kernel begins to be hard. In hard and flinty varieties of wheat the gluten was found to form earlier than in soft wheat, such as Clawson; with the latter the gluten continued to increase to the time when circulation was arrested by the drying of the straw.

There is then no reason to doubt that early cut wheat makes the whitest flour and bread. The real issue, however, is not one of color, but of quantity. If the flour of early cut wheat is white from the absence of the usual percentage of gluten, and the presence of disproportionate amount of starch, such flour will be weak, will not rise, or stay up as well, and in short, will not make equally light, tough, moist and sweet bread. The wheat of dry, inland regions is more flinty and glutinous than that of moister climates, and makes a better flour.

## THE DAIRY.

## Parsnips as Dairy Feed.

The London *Farmer* translates from a French exchange the following account of a new variety of parsnips and its value as dairy feed: "At the last meeting of the administrative council of the Societe des Agriculteurs de France it was decided that a gold medal should be awarded to M. Le Bian, in recognition of his indefatigable zeal of growing the *parais fourager* of Brittany, to whose merits we have before called attention in our columns, and his generous gratuitous distribution of the seed to his brother agriculturists in all quarters. During the course of last year, M. Le Bian forwarded packages of seed to 1,250 different applicants, and by the end of the first month of the present year he had already received 770 requests for a supply for the season. From reports sent in from various departments, it appears that the yield has been everywhere from 40,000 to 60,000 kilogrammes per hectare, and sometimes even more considerable. Farmers are unanimous in stating that cows show a marked preference for these roots over other foods, and that it notably increases the quantity and improves the quality of their milk. It has also given excellent results when employed for fattening pigs, and horses fed upon it are maintained in excellent condition. On the Maury estate, in the Haute-Vienne, the property of M. Paulin Palahot, the yield last year was at the rate of nearly 27 tons per English acre, and equally favorable reports have been sent in from various other quarters. An analysis undertaken by the society has established beyond a doubt its superiority, from a chemical point of view, over the ordinary parsnip, its proportion over dry material being 17.28%, as against 11% in the common variety. These solids contain 7.94% of nitrogenous matter, 1.80% of fatty matter, 64.99% of starch and aromatic substances, 11.57% of crystallizable sugar, 8.70% of cellulose, and 5% of ash. It is by its sugar, starch and aromatic constituents, therefore, that the Brittany *parais fourager* is chiefly distinguished from the ordinary parsnip, and the results of the analysis fully justify and explain its superiority as a feeding stuff in practical agriculture. These results accord pretty closely with those of MM. Corenwinder and Contamine, already recorded in our columns, though in their analysis the proportion of dry material was sometimes found to be as high as 20 or 21%."

LIME WATER.—Agitate an ounce of pure caustic lime in a pint bottle nearly filled with water, and after the lime has subsided decant the clear supernatant liquid. It must be kept in well stoppered bottles.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### The Model Grange.

What constitutes a model Grange is a question on which there might be a wide difference of opinion. To sum up the whole in a single word, we would say—progress. This does not involve necessarily a fine hall with extravagant appointments; nor a large membership; nor an over-flowing treasury. The model Grange may meet in the log cabin; a dozen members may carry out the purposes of the Order as effectively as a hundred; its coffers may be innocent of cash. Yet actuated by the true spirit, it will be as essentially progressive as though possessing all the accompaniments of a large and wealthy Grange. The tendency will be to secure these. The inquiry arises, what are the distinctive features which characterize the subordinate Grange pressing on to the front rank? The first is the percentage of attendance. This is the touchstone of a true interest. It must be actively concerned in the distinctive Grange work. What this shall be, is clearly enunciated in the platform of principles, published to the world. The ends sought are—to promote the individual thrift—to stimulate a higher and better scholarship—to build up a truer and more perfect manhood. These are the logical results of the Grange principles. The processes by which they shall be attained are for the subordinate Grange to determine. But they involve another characteristic of the model Grange in the recognition and accurate performance of the work. This is a point in which there is much vagueness and indifference. Every officer should know not only his place, but his part, and be skilled in his especial work. This involves also on the part of the members zealous endeavors to carry out the plans and purposes agreed upon. To sum up the whole there will be a large per centum of attendance; the business will be entered upon promptly; officers in their places, and skilled in their allotted duties; work marked out in advance and something for all to do, with due attention to amusement, literary culture, and general profit. That all this is within the reach of every subordinate Grange can hardly be called in question. That it involves progress and salutary influence both within and without the Grange, is a necessary result of a faithful adherence to principles and laws. How or in what way these grand results may be secured is left largely to the discretion and enterprise of the individual Grange. The benefits to be attained will amply reward the effort. These may not be immediately seen, but will surely give illustration of the proverb, "Cast thy bread upon the waters, and thou shalt find it after many days."—*Grange Bulletin*.

### Making all Property Shoulder its Burdens.

EDITORS PRESS:—In the PACIFIC RURAL PRESS of July 5th, 1879, on page 8 of that number, is a piece with the heading of "Tubs on their own Bottoms," well worthy of perusal and consideration. I ask every one who takes that excellent paper to reread it, for I suppose every one preserves the paper for future reference.

What I add is a way to carry out the leading thought into practical effect with the aid of appropriate legislation. Sec. 1 of Article 13 of the new Constitution provides that all property in the State (not exempt) shall be taxed in proportion to its value, to be ascertained as provided by law.

Here is the need for proper legislation. What is more just than to tax in proportion to the value? Again, it is a well-defined rule for assessment; a guide to the assessor, in which the old Constitution was deficient, perhaps, though continuous usage of any chattel as property under it would seem to have been sufficient to have identified the property beyond question.

The word "property," as used in this article and section, is defined to include "moneys, credits, bonds, stocks, dues, franchises, and all other matters and things, real, personal and mixed, capable of private ownership;" thus, I believe, virtually overruling the bank case that relieved much property from taxation that had been assessed, prior to that judgment, under the old Constitution.

It is well that the people have thus declared what constitutes property in this State, as a guide to assessments and to avoid in the future questionable cases being brought before the courts to relieve capitalists from taxes, and leaving it to the residue of the taxed to pay their own and make up the deficiency of the former.

Sec. 8 of the same article provides that "the Legislature shall, by law, require each taxpayer in this State to make and deliver to the County Assessor, annually, a statement, under oath, setting forth specifically all the real and personal property owned by such taxpayer, or in his possession, or under his control, at 12

o'clock meridian on the first Monday of March." This requirement is just what is needed to impart efficiency to the taxation and revenue provision included in said Article 13. Shall we have the requisite legislation? That is the important question near at hand.

My view of the most effectual method, and, indeed, the only one to enforce the assessment of all the taxable property, is to do substantially as New Hampshire has done under a late law of that State, which is the same as our own, requiring the oath of the taxpayer to a class of printed interrogatories, comprehending the whole matter of taxable property. There is also a printed pamphlet, being an annual report of the town or city officers, containing the name of every taxable inhabitant, including poll assessments and those of all kinds of property and the valuation with the amount of the tax to each name. Thus every one may see what his neighbor is assessed for, the items and the amount of tax, as well as of his own.

I have such a printed pamphlet report for the year 1879, ending in March last, of the town of Bedford, Hillsborough county, N. H., a town containing 1,221 inhabitants. This was the first year of the operation of their new tax law. My correspondent wrote me that the putting the new law in execution in that town unearthed \$80,000 of interest money that had before escaped assessment. And from what purported to be an official report, I read ten millions were in like manner unearthed in the State, and that, as a consequence, the taxes were at a much lower rate to those who had paid all the taxes.

Probably the capitalists of that town and of the State would have been ashamed to have asked for the assistance of their less wealthy neighbors to pay their taxes for them. To do it, would be reviewed in the light of pauperism. Oh, no! but they took the aid, and what's the difference? But it appeared all was not discovered in towns under the domination of the rich; the law of discovery being opposed by that class. These delinquents were to be seen to.

If such a showing can be made in New Hampshire, with a population of 318,300 inhabitants, by virtue of disclosure of the property under oath and the printed pamphlet showing the assessment and tax by school districts in towns and wards in cities in the hands of every taxpayer, familiar in every household as a family almanac, what could be made to appear with like arrangement in California with its resources? It is caution to every officer and taxpayer under oath with the means at hand for detection.

(CHARLES AIKEN.)

Highland Precinct, Santa Cruz Co., July 18th.

### The Insurance Company Suit and Assessment.

We continue to receive letters asking information concerning the suit against the California Farmers' Mutual Insurance Company and the assessment which the managers are now endeavoring to collect from the policy-holders. Messrs. Fox & Kellogg, 530 California street, attorneys for G. W. T. Carter, in the suit against the company, inform us that the motion for leave to file an amended complaint and for an injunction to restrain the company from collecting the assessment, was heard on Saturday last and submitted to the court. The matter will of course rest with the court until the decision is rendered.

Messrs. Fox & Kellogg authorize the statement that there is hardly a reasonable doubt that the motion will be granted, and they assert that it would be advisable for all parties interested to withhold payment of any and all assessments until the final decision of the court. As before stated by us it is definitely understood that this suit is brought for the benefit of all policy-holders who may choose to come into the suit hereafter and pay their proportion of the costs.

### Items from the "Patron."

W. H. Cunningham, Secretary, writes: "The members of Magnolia Grange, Grass Valley, have decided to have a grand celebration of their anniversary day, August 11th, 1879, and lasting three consecutive days. The programme will consist of various exercises, suitable to the occasion. All Grangers are cordially invited to come and camp with us and be sociable."

There will be a reunion of Grangers at Martinez, on Friday and Saturday, August 22d and 23d, 1879. Grangers from San Mateo, Alameda, Sacramento and Contra Costa, have signified their intention to attend. Delegations from San Joaquin, Solano, Napa, and other counties are expected. A general invitation is given to Grangers from any part of the State to attend.

The next annual meeting of the California State Grange will be held in the city of Oakland on Tuesday, Oct. 7th, 1879, at which the election of officers of the State Grange will take place. Granges, to be entitled to representation at the meeting of the State Grange, must not be more than one quarter in arrear for dues.

A WASHOUT, Ogallala station, 30 miles west of Omaha, on the U. P. R. R., delayed trains 12 hours on the 21st.

It is reported that Madame Elizabeth Patterson-Bonaparte is to have a \$4,000-tomb at Greenwood cemetery.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### FRESNO.

SPREADING ALFALFA.—*Expositor*, July 16: So popular has this vigorous forage plant become in this county that no farm, where water can be procured for irrigating, is considered complete without an alfalfa field. Almost the first thing that a new settler in either of the colonies does is to level off two or three acres of land and plant it in alfalfa. It is safe to say that there are over 20,000 acres of alfalfa growing in the county at present, and this acreage will be largely increased, if not doubled in the next 12 months.

#### LOS ANGELES.

BEES AND FRUIT.—N. Gray in *Anaheim Gazette*: I see in your issue of this morning a small paragraph regarding the manifest injury done to the grape and fruit crops of Anaheim by the busy bee. I would say in reply that at the last Paris exhibition there was an international concourse of bee entomologists, and they decided that the bee did no injury whatever to vegetation or fruit, of any kind. The great wine growing countries, France and Italy, have made laws protecting bees and bee culture, and it was understood in the concourse of bee entomologists at Paris that such laws should be passed by every country in Europe. And now some of the wise men of Anaheim step to the front, in spite of men who have devoted their lives to study and experimenting, and say that the bees are injuring the grapes and fruit!

#### MENDOCINO.

SEASON'S RAINFALL AT POMO.—*Editors Press*:—The rainfall for this place is as follows: July 1st, 1878, to Jan. 1st, 1879, 6.72 inches; for Jan., 4.57; for Feb., 5.55; for March, 14.75; for April, 2.86; for May, 1.13; for June, —; total, 35.58 inches.—Z. W. BRANSFORD.

#### MODOC.

GOOSE LAKE VALLEY.—*Independent*: The grain fields look exceedingly well, and the farmers are expecting a heavy crop. The haying season will begin the first of next week and a large amount of hay will be harvested. Although there are about 500 acres of growing grain in this extreme southern end of Goose Lake valley, yet the main interest is in stock raising and dairying. About \$6,000 worth of beef cattle were sold during the month of June. Berry & Standlee, Wm. Page, J. H. Linville, J. C. Morrison and the Lee Bros. being the principal sellers, and James Miller and G. W. Mapes the buyers. The dairymen have altogether about 250 cows, and are doing well, and making a good quality of butter. At South fork the hay crop is very good, and of a superior quality. The grain crop, notwithstanding the exceedingly dry and unfavorable season, is looking remarkably well. Upon the sage brush land of Messrs. C. W. Williams and W. H. Nelson, the average will be about 30 bushels. Which proves beyond doubt the utility of the sage brush of Modoc.

#### MONTEREY.

SALINAS VALLEY.—*Democrat*, July 19: Harvesting progresses. The reports of the yield, as to quantity and quality, continue favorable.

#### PLACER.

PROTECTIVE UNION.—*Herald*, July 19: Quite a large number of miners and farmers assembled at Music hall, Auburn, at one o'clock last Saturday, for the further consideration of the grievances suffered by them in consequence of the endeavors of the railroad company to obtain title to nearly the whole of this belt of country, to the exclusion of the farmers and miners who have built homes in this section of the country. After a pretty thorough discussion on the aims and objects of the gathering, it became fully developed that the ends aimed at were of equal interest to all of the producing classes of this part of the State, and as a preliminary to action it was decided to first organize under the name of Miners' and Farmers' Protective Union, the general object being the advancement of this part of the country and the mutual protection of all its members. A member roll was opened and nearly every man present signed. A permanent organization was then effected by the election of A. Rackliff, President; Robert Stuart, Secretary; B. K. Low, Treasurer. A Finance Committee was elected consisting of A. Oliver, A. O. Bell and Wm. Pellow. It was decided to have a committee on land and land matters to consist of six members, three miners and three farmers. This committee will be announced at the next meeting. This organization, properly conducted, can not fail of accomplishing much good. It will not only be able to gather and collate a great deal of valuable evidence regarding the mineral or agricultural character of the various land claims in this belt of country, for use in cases of contest with the corporation cormorants, but it will be able to otherwise materially assist its individual members who may need assistance in the tedious and expensive routine which all land claimants in this character of country necessarily have to go through before having an opportunity to secure their land at any price.

#### SAN JOAQUIN.

THE WHEAT CROP.—*Independent*, July 22: From the present indications it is thought by those best qualified to judge that the wheat crop of San Joaquin county will be nearly as much as last year. We hear very favorable reports from various portions of the county, the

yield being more than was expected. In localities in the northern portion of the county, we learn that the yield has been better than ever before, over 30 bushels to the acre being harvested where a yield of 20 bushels was the largest ever before known. The same favorable reports are received from the sandy lauds in the southern portion of San Joaquin county, and we also hear that, in almost every instance, the land has been better cultivated than heretofore, and that in all instances where the land has been summer-fallowed, the yield is perfectly satisfactory. Thorough tillage is the main secret of success in the production of the cereals.

#### SAN BENITO.

HARVEST.—*Enterprise*, July 19: Harvesting is now in full blast and grain is being hauled to market daily. The cheerful sound of the steam whistles can be heard at regular intervals in all directions. The crops are turning out very well, and in some localities it is better than that of previous seasons. All taken together, San Benito county will hold its own with any of her neighbors.

#### SAN LUIS OBISPO.

CROPS.—*Tribune*, July 12: There will be a bountiful yield of produce in the north end of the county, and notwithstanding low prices we are steadily advancing toward solid prosperity. The yield of butter is unprecedented in the history of the dairy interests in our county. We also have an excellent crop of hay, wheat and barley. A large area of our rich valley lands has been planted to beans, which at present, give promise of a rich harvest. A large number of beef cattle have been driven from here the present season, which have been sold at remunerative prices.

#### SANTA BARBARA.

BUCKSKIN TANNERY.—*Telegraph*, July 19: John Waugh has opened a buckskin tannery in Santa Maria and is doing well.

CROP NOTES IN SANTA MARIA.—R. D. Cook has finished heading—in 38 days having cut over 900 acres of grain. He says his experience for the last eight years in crops is, that on an average the grain will turn out this year equal to that of any former years—most of the wheat being of the best quality. Mr. Morris reports crops on the Nipoma as the best for years. He says his 200 acres of wheat is the finest he ever saw in the valley. Mr. Blosser started his threshing machine yesterday on Mr. Crow's ranch. He states that the grain is turning out well. Our corn crops are large and all looking well. Nothing so far is disturbing the corn. Mr. Fessler has 60 acres of pumpkins adjoining town that promise to yield enormously. Already he has pumpkins two feet in diameter.

CORN.—*Santa Barbara Press*: The corn crop in this vicinity never looked better at this season of the year than at present.

#### SIERRA.

GRASSHOPPER WORK.—*Reno Journal*, July 19: A friend just in from the valley gives us these items: The farmers have about finished cutting. They were compelled to cut this early in order to save a portion of their crop from the grasshoppers. Some of the grain was not over six inches high, but to let it stand was to lose it, and it was cut with the rest. Thus not a quarter crop was realized anywhere in the valley, while in the middle of the valley nothing was saved. Many of the farmers who a few years ago were well-to-do, are now on the verge of bankruptcy, and all because of the grasshoppers. Their land is rich enough, but it is not profitable to sow and cultivate for several months and then realize only a myriad of insects which have no market value.

#### SOLANO.

A CHARMING RURAL HOME.—*Cor. Dixon Tribune*, July 19: We are now at the beautiful residence of H. A. Ross, one of our home-made farmers, who, with his truly amiable lady and their little ones, seem to be in the midst of earthly comforts. As I write this on the front porch, three beautiful spotted fawns gambol over the blue grass sward, and as the fountain sends forth its elegant jets, sparkling, like myriads of diamonds, in the sun's rays, numbers of California linnets dart from the trees to lave their wings under the refreshing shower. In a park of eucalyptus trees are a male and female deer with a little fawn, and in a small enclosure adjacent, two Shetland ponies; while in the fields are fine cows, horses, mules, and two fine windmills supply the needed water and also grind what feed is required for stock. A large and beautiful grove of black walnuts is growing, while mulberry, locust, gum, acacia, spruce and fir adorn the grounds around the residence. The grain this year is shrunken with rust, yet will average 15 bushels per acre. This beautiful property has been thus improved and adorned by Mr. Ross within 10 years. So much for a practical California farmer.

#### STANISLAUS.

SUMMER-FALLOW.—*News*, July 18: L. Diekey, one of the thorough farmers of the Salida neighborhood, harvested 33 bushels to the acre on summer-fallowed and twice-plowed land. The same field under the old system of cultivation used to be considered as doing well when it turned out 15 or 20 bushels to the acre. In the same neighborhood, Mr. B. Bailey harvested over 28 bushels to the acre by the same manner of cultivation, which is another proof of its benefits. Mr. Dagget, one of the extensive farmers near this place, informs us that he will this year, by heavy odds, harvest the largest crop ever taken from his land. Summer-fallowed and thorough cultivation he assigns as the cause. Mr. J. M. Henderson, south of the



Tuolumne river, says "summer-fallowing and good cultivation this year saved me." The above are only a few of the instances going to establish the fact that in this comparatively dry year, when the rainfall has been less than eight inches, not only good but heavy crops can be raised by a system of thorough cultivation. The successful experiments during the last two dry seasons, 1877 and 1879, are sufficient to cause us to hope that our farmers have at last learned a lesson in the cultivation of the soil that will in a manner offset, if not absolutely bid defiance to the severest drouths that inflict this part of our valley.

#### VENTURA.

**WHEAT.**—Signal, July 12: Our wheat is nearly all harvested. An Ojai farmer informs us that the yield will be nearly up to the best seasons. The yield on the Conejo will be very good. Threshing commences on the Ojai in a week and perhaps earlier on the Conejo. The barley crop is not up to the best seasons, but the grain is very good.

**FRUIT.**—The fruit crop opens up well. Apples and peaches have never been better. The trees are not so heavily laden but the fruit in consequence is of better quality. Apples will be good and the grape crop is promising.

#### YUBA.

**WHEAT.**—Marysville Appeal, July 18: The crops in this section of the State are reported to average well, but are not quite as good as was anticipated, as there is more or less of shrinkage in kernel, especially the Club variety of wheat. There has been for years considerable difference of opinion among farmers as to which variety of wheat was safest for the greatest yield, as well as less liable to rust and smut. This has been a disputed matter for a long time, and hence we find all the varieties considered among the favorites growing in different sections, both in Yuba and Sutter county. The Proper grain has had many admirers, and large fields are being harvested at the present time. But the Club, this season, appears to have more shrinkage than other varieties, and we have heard farmers say they would sow no more of it. The millers inform us that the Genesee is the favorite grain for milling, it making the whitest and best flour, and they believe will hereafter become the favorite in this section.

**ORANGES.**—The hundreds of orange trees in this city are well filled with green oranges, and the crop is very promising.

#### YOLO.

**BETTER THAN THEY THOUGHT.**—Democrat, July 10: We have conversed with several farmers lately in regard to grain matters, and they all say that wheat is turning out much better than was expected. Many fields that were considered worthless are being harvested with a fair result. This, together with the prospect of good prices tends to put a brighter phase on business matters.

**THE FRUIT CROP.**—Democrat, July 17: The fruit yield in this county this year is unusually large and of good quality. Our town markets are well supplied in the fruit line and we notice a number of wagons running into the country selling fruit.

#### ARIZONA.

**CANE SUGAR.**—Phoenix Examiner: Mr. W. Osborne has grown cane (from Sonora seed) for three years and has now the fourth crop growing on the same land and from the same seed, and last year made a good quality of brown sugar—some 6,000 pounds, which sold here for 20 cents per pound. We are told that the manufacture of this sugar was an accident, as Mr. Osborne tried to make paucha, but failed in that and made sugar.

#### NEVADA.

**MASON'S VALLEY.**—But for the sink of the Humboldt valley in which it lies, known as the Big Meadows, would be almost the exact counterpart of Mason's valley. The latter lies about 50 miles southeast of Virginia, and is favorably situated to be irrigated by the waters of Walker river, of which there are two branches, which join near the south end of the valley, and run for a considerable distance through it. Several important irrigation schemes have been planned and are in partial operation. The price of water is only 50 and 75 cents an acre per year. Two crops of alfalfa per season can be cut. Wheat and barley grow from 25 to 50 bushels to the acre. The valley is about 22 miles long and 10 wide, and is capable of supporting a dense population. The soil is alluvial mixed with decayed vegetable matter and is very rich. There have been great improvements in the last two years. The population is now about 600 and it is steadily increasing. Quite a furor existed for a time in parts of Nevada, and it looked as though half the people of the State were going to Mason's valley.

**GRASSHOPPER EXTERMINATOR.**—Reno Gazette: The little red bug described by Prof. Lemmon has appeared in Long valley and is making it very unpleasant for the grasshoppers. Antelope ranch has specimens, but they do not number one to a million of grasshoppers. When they do attack a "hopper" they bore into his body under the wing and soon kill him.

#### OREGON.

**HORTICULTURAL SOCIETY.**—Willamette Farmer: This society held its monthly meeting in the Council chamber, Portland, Saturday afternoon. The committee on constitution submitted the old constitution of the Horticultural Society, which was amended and adopted. The permanent name adopted was, The Northwestern Horticultural Society, to include all

persons interested, in Oregon and Washington. The society holds annual meetings for the election of officers the first Saturday in June of each year, and its monthly meetings are to be held the first Saturday of each month at 2 o'clock P. M., at such place as shall be designated. The name Horticultural was presumed to include gardening and floriculture as well as pomology. The permanent officers of the society, as now organized, are: S. Leulling, of Milwaukee, President; S. W. Brown of Vancouver, and G. W. Walling of Oswego, Vice Presidents; Henry Denlinger, Secretary; Dr. Cardwell, Treasurer. The above officers constitute an executive committee.

**INTENDED EXPOSITION.**—The Oregon and California Railroad company, we understand from Mr. Scheulze, agent of the Land department, desires to make a collection of Oregon products for exhibition at the coming fair of the Mechanics' Institute, in San Francisco. Such a collection was made two years ago and exhibited at the Mechanics' fair, and attracted a good deal of attention. Many strangers visiting that exposition saw the Oregon display, and by its means much information was conveyed abroad concerning our State and its products. All such displays are valuable, and tend to create interest in our State.

#### Subterranean Irrigation at Los Angeles.

There is being developed in Los Angeles county a system of subterranean water distributing which may ere long come into general use in orchards and like irrigations. It is called the "Asbestine" system, and it is about a year since our attention was called to it by our Los Angeles contributor, General Shields. We had expected before this time to have shown the system with illustrations of its appliances. The inventors, Messrs. E. M. Hamilton and C. N. Earl, have, however, found the invention developing on their hands, and they are improving their appliances in ways to secure more effective work. We hope ere long to have a full description and engravings to lay before the reader. We may at this time give a preliminary account of the working of the system as observed by a writer for the Los Angeles Journal. He saw it in operation on the fruit ranch of M. P. Grove, and gives the following description: The system consists of a tank or reservoir of water located at the highest portion of the field. A main pipe, the inside measure of which is from four inches upwards in diameter, according to the size of the field to be irrigated. This main usually runs along the highest side of the field. From this main at proper distances are branches, each branch is subdivided into three lines of pipe, one running down each row of trees. These pipes are only two inches in diameter inside measurement. Wherever a branch pipe leaves the main, there is a valve with which the operator can turn off or turn on water to any part of the field to be irrigated. Along the two-inch pipes, opposite each tree on the upper side of the pipe, is an inch wooden plug, through which is a gimlet hole; over this plug is placed a piece of pine six inches in diameter, which comes about six or eight inches above the ground. When it becomes necessary or desirable to irrigate, the water is turned on to a portion of the orchard; at each wooden plug in the pipe the water which escapes through the gimlet hole rises in the short pipe which comes to the surface and seeps away into the ground at the lower end of the pipe. The water is not allowed to run so fast as to flow over the upper end of the pipe and wet the surface of the ground. The flow is regulated by means of a small plug in the gimlet hole through which the water escapes. This system of irrigation places no water on the surface of the ground. There is no plowing before or cultivation after irrigation. The ground does not become settled, baked or hard by this system of applying the water as in the case of surface irrigation. One-tenth of the water only is used by this system that is used by surface irrigation, and the expense is nominal, after the system of pipes is once laid. The cost per acre of laying the pipes is about \$50. This would call for an investment which seems considerable, but really a small part of the value of an orchard in full bearing, and the claim is that the cost would soon be more than returned in the lessened expense attending each irrigation.

**WILLOWS FOR WASTE PLACES.**—While many Californians are studying the cheapest way of grubbing out willows, the Austrians are preparing for a large planting of them on waste lands. Their example may, perhaps, be profitably followed in some parts of this State. We read that the Inspector-General of Austrian railways has addressed a circular to the Boards of Directors of all railways in the empire, urging upon them the advisability of cultivating osiers on the waste lands adjoining their lines, both as a source of income, which is by no means to be despised, and as an encouragement to the wicker and basket-work industries of the country generally. He points out that, of the 800 or more different kinds of willows which botanists are now acquainted, there are three in particular, one or other of which would do well on the different soils met with along the course of the lines. These are the *Salix viminalis*, specially fitted for damp ground; the *Salix purpurea*, which does well on dry, sandy soils; and the *Salix pruinosus*, which yields satisfactory results on lands that are almost absolutely barren.

#### Agricultural Instruction at the State University.

**EDITORS PRESS:**—As the opening of the University session approaches it may not be superfluous to recall to the minds of those desiring for their sons, instruction in the facts and principles of agriculture, the present arrangement of the course and the increased and improved means of instruction.

For students entering for the full course of four years, the studies of the first year and a half do not differ from those pursued in the other scientific colleges; this being part of the necessary general preparation for the studies that are to follow. In the second term of the second or sophomore year the course of "economic botany" (following that of general botany had during the preceding term) begins the properly agricultural studies; it continues through the first half term of the third or junior year and is illustrated throughout, both by figures thrown on the screen by the magic lantern, by dried specimens, and, so far as practicable, by living plants grown in the garden of economic botany, lately established and in the experimental grounds. The student will thus see in actual cultivation all practically important plants capable of being grown in this climate; including also a standard orchard containing about 500 varieties of fruit. Excursions in the neighborhood are made with the class for the study of the native plants; a full representation of which is also intended to be placed on the agricultural grounds of the University.

After the conclusion of the course of economic botany the remaining three-fourths of the session of the third year is devoted to the study of agricultural chemistry, the physiology of plants, the nature and functions of soils, their improvement, the maintenance of fertility, the general policy of culture and preparation and use of manures.

The fourth year is devoted altogether to the detailed study of the several crops and other agricultural products by lectures, demonstration on the grounds and occasional excursions to farms and other establishments. The course of "practical agriculture" is under the charge of Mr. Chas. H. Dwinelle, whose practical experience as a farmer in California, together with a full course of study under Prof. Johnson of Yale college, render him especially competent in the premises. Other lecturers specially versed in particular departments will, however, be requested to deliver special courses from time to time as may be practicable. Among these I am now at liberty to mention the name of Mr. E. J. Wickson, editor of the RURAL PRESS, who has consented to deliver a few lectures on dairying at an early period in the coming session. The course on dairying will be preceded by one of about ten lectures on stock breeding by Mr. Dwinelle at the beginning of the session.

The lectures on practical agriculture will be delivered at the rate of about three a week, presumably at 11 o'clock, that hour having been found most convenient for persons, not students at the University, who may desire to attend. The days of the week will be announced hereafter with the subjects to be treated of in the columns of the PRESS and of such other papers as may desire to do so.

It should be distinctly understood that these lectures, as well as the rest of the agricultural course proper, are open to the public; and, that while students desiring to graduate, must conform to the requirements for admission as given in the University register, those desiring to attend only a part of the course are at liberty to do so, subject only to the general regulations of the University regarding deportment, diligence and regularity of attendance. As a matter of course the entrance upon advanced studies without due preparation (such as is given in the full course) subjects the learner to disadvantages; but as regards, especially the course of "special cultures" of the fourth year, it will be found interesting and useful even to those possessing only a very limited degree of preparation, but instead a certain amount of actual farm experience; therefore to farmers and their sons who can spare but a year or a part thereof from their business.

Farm operations on a small scale, illustrative of the best methods, may be witnessed and participated in by the students whenever the season permits. Manual labor is not imposed as a part of the course of instruction at the University, it being found that it encroaches too much upon the limited time the student can usually devote to his education, and can be more usefully learned on a business farm, but opportunity and encouragement is given to the student to engage in such labor; and on Saturdays, as well as during vacation or recesses, many have availed themselves of the chance at fair wages. That this has been, and is being done, not only by students of the agricultural college proper, but by others having no special connection therewith, is proof sufficient that labor is honored at the University.

EUG. W. HILGARD,  
Professor of Agriculture and Botany.

THE disturbances in the Rumpa district, Madras Presidency, against the tax of palm trees, have assumed the form of an open rebellion. Of four companies of Sepoys sent there, only four men remain faithful.

#### News in Brief.

THE Nihilists have applied the torch to Nijni Novgorod.

SPAIN will be requested by England to abolish slavery in Cuba.

A FIRE at Merced on the 21st inst. destroyed \$15,000 of property.

THE Zulus seem to be desirous of peace, and many have surrendered.

THE utmost alarm prevails at the prospect of a bad harvest in France.

THE attempt to get cheap marble into the new City Hall was a failure.

A NAPOLEON V. and a Henri V. will make it interesting in France shortly.

AFFAIRS in Peru since the death of Harry Meiggs have been topsy-turvy.

SITTING BULL meditates an attack upon the army with 4,000 hostile Indians.

THE entire capital of the Panama Canal Company will be 600,000,000 francs.

A RAILROAD strike is progressing in East St. Louis among the freight handlers.

PRINCE JEROME NAPOLEON has been declared to be the head of the Bonaparte family.

ALL must register by the 9th of August or become like unto Chinamen, without a vote.

ARIZONA points with pride to its climate, it is a way-up climate—up to 120° in the shade.

FRIENDS of the dumb brutes in San Francisco investigated 720 cases of cruelty during the year.

SUFFERING Memphis is again afflicted with the yellow fever. The disease is spreading alarmingly.

THREE men were drowned in S. F. bay last Sunday, while attempting to manage a small, leaky boat.

STUDENTS in the Canadian military college are to be allowed to compete for appointment in the English army.

RUSSIA has made the Caucasus a military basis for Central Asia, and is expelling the mountaineers.

A NEW musical fandango entitled "H. M. S. Pinafore" has been introduced in San Francisco. It will never take.

THE Sultan of Turkey is being coerced by England and France to extend the rights of Tewfik, Khedive of Egypt.

THE Porte refuses to allow the United States steamer *Quinnabaug* to enter the Black sea because her tonnage exceeds 800.

THE criminals of Chicago have resolved to emigrate, the Chief of Police having issued an order to run them in on sight.

SERIOUS agitation exists in Westmeath and Mayo against the payments of rents, and intimidation and lawlessness are increasing.

THE Piutes, says the *Virginia Enterprise*, are used as bait for leeches at Pyramid lake. Leeches were never very particular about their diet.

A CYCLONE at Tucson, July 17th, struck the office of the *Weekly Star*, completely demolishing the outside of the paper and giving the inside a verticose twist of 180°.

BONNER'S trotter, "Edwin Forrest," made 2:15 on a three-quarter-mile track at Tarrytown the other day; carrying Bouvier himself, who weighs 180 pounds.

THE first train crossed the Colorado river and entered Arizona, on the morning of September 30th, 1877, drawn by the Engine 31, John L. Fitzpatrick, engineer.

GEO. H. PENDLETON is said to be scheming for the Presidency in 1884, by killing Sherman or putting in Tilden who will not outlive the term. This is too dreadful to be true.

THERE is considerable *obiter dicta* in the Chinese queue business, and the opinion seems to obtain credence that if the Pocsasset murderer is to be punished, the queue of a Chiuanman should be cut off to restore the equilibrium.

INDIA pays annually to England 15,000,000 sovereigns for interest on debt, pensions, salaries and other charges. But she has no sovereigns. The coin she possesses, provided by her government, is in silver rupees. To pay these sovereigns she must buy them in London with her silver rupees. She does this at an annual loss of 3,000,000 sovereigns.

THE century plant, better known in Arizona as *magua* or mescal, is just now decked out in its finest suit. An abundance can be found in the hills surrounding Prescott, and the blossom which only comes once in a century, killing the plant for that period, is no curiosity to Arizonians. The nectar distilled from the above plant has an electrical effect on the human system.

ELECTRIC INSCRIPTION OF WORDS.—The transmitting apparatus is a microphonic speaker, the carbons of which instead of being pressed by a spring, are simply maintained in contact by the pressure of a small piece of paper folded in the form of a V. The vibrations of the diaphragm of the receiving apparatus cannot be written, since the movements of the style, however delicate the apparatus, can scarcely be distinguished upon the lamp-black. To enlarge the magnetic vibrations of the receiver the cover and the diaphragm of a Bell's telephone are taken away, and on the wood of the instrument there is fixed the end of a small, stiff steel spring. The other end of the spring abuts on the surface of the magnetic nucleus surrounded by its coil; to this extremity is soldered a small mass of soft iron, weighing about 10 grms., and upon this mass and in the produced line of the axis of the spring is fixed a light style of bamboo, 10 centimeters in length and terminating in a slender whale-bone pen.—M. Boudet.





### A Farmer for President.

At the recent Fourth of July celebration at Woodstock, Conn., a poem was read by Rev. A. J. Hough, entitled "The Bells." The poem consisted of ringing comments upon the events and needs of the day. The writer struck a clear note in the following lines:

And, lastly, I have now to state  
The bells intend to nominate,  
With or without your kind consent,  
A candidate for President!  
No master of the thousand tricks  
That trouble party politics;  
No subtle pleader from the bar,  
No platform pet or pulpit star,  
No soldier with a moneyed name,  
Or merchant with a moneyed name.  
The bells in solemn council hung,  
And now, without discordant tongue,  
Their choice for President proclaim,  
Withholding nothing but his name.  
Far from the world's debasing strife  
He leads a quiet, blameless life.  
Four themes he loved since thought began:  
His country, nature, God and man!  
The first has filled him with a grand  
Devotion to his native land;  
The second made him rarely wise,  
With wisdom of the earth and skies;  
The third, though faintly, dimly seen,  
Has touched his soul and made it clean.  
And, studying well the human race,  
He knows a man to see his face.  
The hills, the vales, the streams impart  
Their strength and freshness to his heart.  
His dress is homespun, modest, neat;  
His face is browned by summer heat;  
His hands the mark of labor wear;  
His back is broad and used to bear  
The precious burdens which ordain  
For plenty an eternal reign.  
He fills the place his father filled;  
He tills the farm his father tilled;  
He represents the sober thought,  
The solid worth, the power which wrought  
Through peace and war the nation's fame  
And guards to-day her honored name.  
By right of service duly paid;  
By right of worth, if justly weighed;  
By right of numbers, fairly told;  
By right of fitness, grit, and gold;  
A farmer, blunt, outspoken, shrewd,  
Ambitious for his country's good,  
The bells with ringing peals present  
As candidate for President!

### Woman's Influence in Society.

[Written for the RURAL PRESS by RHODA DENDRON.]

A lady writes to me that she wishes me to say something about "Woman in her home, and the influence she exercises over society." I take exceptions to the words "over society." Do you know we have a little influence in society, but not a bit over it? Well, it is so. Look about you and see if it is not as I say. When has our protest been heeded, or our wishes consulted by society? Do you not know that women would, if they could, have a very different state of public morals from that which now prevails, and that they cannot have what they wish? We want honesty in business, we want purity in politics, we desire the administration of justice in the courts, we see the need of reforms in educational affairs; but who heeds our wishes in these respects? We would have, long ago, banished from society the vice that saps its moral and physical health, if it had been possible for us to do it: but is it? On the contrary, we are brought face to face with it every day, until we have ceased to blush at it. Every youngest maiden has heard that whole streets of our cities are given up to it; and matrons know that the money that should go to the embellishment or comfort of their home-life, goes to procure the embellishment of that other life that is the poison of society. Mothers know that their sons and daughters are familiar with newspaper advertisements that offer exemption from the penalties of vice, and are therefore tantamount to a temptation to tamper with it. Women are woefully familiar with the sorrows that come from the licensing of all manner of hot-beds of evil, such as liquor saloons, gambling houses, dance cellars, and the like. Some of them have been so deluded as to think that by a combined effort with the womanly weapon of prayer and entreaty they might do something toward abolishing such things. We all know how they succeeded. Oh, no; we have no influence over society! Society snaps its fingers at us. Not only that, it drags us into the whirlpool, and bears us along on the irresistible current, until by-and-by we yield from weariness of useless effort. Pope never wrote a truer couplet than that oft-quoted one of vice, that

"Seen too oft, familiar with her face  
We first endure, then pity, then embrace."

The very religion of this gushing age is pity of vice. If then, religion has reached the second stage, it is easy to see how society has reached the stage where vice is embraced without protest. I know that all this is very shocking, but the most shocking part of it is its truth.

### Woman in her Home.

Well, here certainly, we ought to have some influence that should extend into society; and out of courtesy to a trite belief, I will assume

that we have. The ideal wife and mother is a woman of the household exclusively, whose thoughts, time and attention are divided about equally between kitchen and nursery. She is thoughtful as to buttons, and careful as to pudding recipes. In the brief intervals that occur between these duties she goes out to the church sociables, and makes calls upon the other ladies in her set. On Sundays she goes to meeting. What, with the annual irruption of infantile diseases, the semi-annual house cleanings, the quarterly set-to on the family sewing, and her own occasional illness, the years do not seem long enough to give time for thinking. How can she think with all the little cares of a whole household chasing each other through her tired brain day after day, year after year. How can she read, with the baby crying fretfully with its teething, and Johnny clamoring for a string to his kite. She cannot do it, and after a hasty glance at the morning paper in the middle of the afternoon, she gives it up. What is the outside world to her, with this restless, vociferous, exigent little world under her own roof? She asks papa when he comes home to dinner, "What is the news?" but papa is too tired and too careless to give an intelligent answer. If he stays at home during the evening she may renew the questioning, but then he is wholly absorbed in the evening paper, or dozing off to sleep upon the sofa, while she sits and sews in resigned silence. How is this woman to have any influence on society?

You say, through her husband and children. But how can she influence her husband when he only comes home to eat and sleep? and when it is he that controls every affair of importance that relates to the welfare of the whole family, including herself? Negatively she does, of course. If he had no home he might spend his leisure in less sanctified places; and by furnishing a cheerful, quiet, cosy haven of rest for him after the day's business, she does truly something for his good. If she is a woman gifted with intellectual charms and with tact, she may gain quite a strong hold upon him, so that he pays attention to what she says, and learns really to value her opinions. Even in this case, she is quite as likely to be influenced by his views, as he to accept hers. In any case he will convey to her the knowledge in a manner more or less decisive, that he expects to take charge of all affairs of importance outside of the family, if not in it, too.

But, you say, she must coax him, and flatter and wheedle him, and so gain her ends in that way. Well the coaxing is all very pleasant to both parties where they are fond of each other, and that sort of influence is sufficient to procure a new dress or bonnet; but it does not often go any farther than that. In short a man's character is formed usually before he is married, and the most that a wife, under the most favorable influences, can do towards governing his actions is to make him indulgent to her personally. Possibly she may persuade him to attend the church which she prefers instead of the one he was brought up in. But the most devoted wife I ever knew in my whole circle of observation was never able to get her husband inside of a church at all; and another woman of the same style who is a Congregationalist never has succeeded in getting her husband (an excellent man by the way) to go to her church when there were services at the Baptist church, to which he belonged; though she often went with him to his.

Women very often marry men to "save them from ruin." There is love between them, and the man tells the woman that undoubtedly he shall go to the bad unless she consents to act as his redeeming angel. Her friends oppose the sacrifice; but she believes him before all the world, and the marriage takes place. For a short time the novel pleasures of love and home hold the young husband steady, and the wife feels all the pride and joy of having successfully used her "influence" on the man she loves to keep him in the path of right. But by-and-by there comes a time when she learns with bitterest certainty that she might as well expect to hold the winds with jetties as to keep her husband from the courses to which he is tempted either by appetite or evil associations. Of the children of such a marriage as many are likely to inherit the base appetites of the father as the gentle self-sacrifice of the mother; and the result is her happiness ruined with that of all her children, half of whom may repeat their father's faults. Instead, therefore, of saving one man, she has given the world several more like him to go to ruin. Is this the kind of influence that will save society? If any of your friends have it in mind to "save" any worthless young men by marrying them, tell them they had better take a "cup of cold poison" at once. But first represent to them how much safer would be the experiment of "saving" honest, industrious, upright young men; and how much better such an enterprise would pay in money, in comfort and respectability.

Nevertheless there is security for men in the quiet pleasures of home; and inasmuch as women make the home, and contribute to its attractiveness by a thousand feminine devices, in so much do they exercise an influence over men. But a recipe for making happy homes is much in style of that one for cooking a hare: "First catch your hare." First you must have a husband who can be attracted by your pretty little artifices. There are thousands of women who would give their eyes to have their husbands acknowledge the charms of the place that passes for his home, but is not, because his heart is not there. In vain are all the cunning ornaments, the sweet smelling flowers, the dainty

dress and bright aspect of things generally. He comes and goes fitfully; his breath, when he gives the hasty kiss of home-coming or parting, is redolent of stimulants. Up to the present the wife is in ignorance of any positive public shame; but her heart is wildly troubled lest the dreaded truth should burst upon her at any moment. She knows she is doomed, and the poor little pretence of affecting to believe she is still his darling, is horribly hard to support.

Then there are poorer homes that might be happy if the husband could be made to see more pleasure in it than he finds in the boorish company outside. But he does not. The small house, with the noise of children, and the jaded looks of the tired mother and housekeeper are not agreeable to him; while the woman's entire ignorance of the ward politics and kindred subjects forces him to go outside for sympathy in his views, whatever they may be; and there he finds the strong, coarse mental aliment suited to his wants, the relish of which is heightened by the pipe and the glass of beer or whisky. Where is the influence in this case?

Perhaps you will say the woman should have been so intelligent as to have overborne the attractions of the outside company, or that her house should have been so complete a picture of comfort as to have held the strong man away from vicious associations. I shall not say no to the first proposition, but I shall inquire as to the second, by what supernatural strength one poor, uncultivated woman is to be wife, mother, housekeeper, cook, laundry-woman, governess, ward politician, and charming center of an attractive home at one and the same time? I do not say that I never saw a woman who was all this; but I do say she who accomplished this marvel was a very intellectual and considerably cultivated person. Her husband took great comfort in her society and was very proud of her; but I never knew him to take her advice in a single case of any importance to their mutual interests, though by neglecting to do so, he several times lost all their common property and brought very severe trials and want upon her.

Oh, no! it is all a mistake about the "influence"—one of those pleasant humbugs I would gladly see exploded, because very unjustly it is made a cause of reproach to us. And it is done in this way: A man falls into bad habits, and his wife who loves him, very gently, with secret tears and a public proud forbearance, tries to persuade him to give up the dangerous vice. He listens half impatiently, kisses her as if he were conferring a pardon upon her for being so disagreeable as to mention the matter to him, and tells her she must be very loving and patient with him, and try to exercise a strong influence over him through his affections! She takes this disinterested advice, not knowing what else to do, and forgives him sweetly over and over again. But by-and-by, when the evil habits are confirmed, she is aroused to a sense of the uselessness of patience and shows a little spirit upon occasions. What does my lord say to that? He makes it the excuse for behaving more wickedly than before, telling her with lofty assurance that her cold, unloving ways have driven him to dissipation, and will be the ruin of him yet. So it goes on from bad to worse continually, until there comes a time when she says, "I can no longer endure this; we shall have to live apart." And then he says, "why, what's the matter? You didn't use to take these things so seriously!"

Behold the reward of your sweetness—to be told that you used not to care about these abominable practices, but of late you are quite putting on airs! Let me inquire in this case, who used the controlling influence? Was it the patient woman? Yet you are required by society to keep up this delusion.

Let me inquire again, who is "society," that we are trying to influence it? Not other women, for I say it with abasement, we women care nothing about each other. Men constitute society. Men have physical strength, political power, money, education, rank. They own the homes we preside in by courtesy. They bring into those homes whom they choose, with one exception. They have by common consent voted it an outrage to introduce a bad woman to their wives and daughters; but a bad man? Why, that is different. Men have money, and rank, and "influence," therefore men must be courted, and we must help do the agreeable, affecting a polite ignorance of the characters of these influential fractions of society. If the wife or the daughter falls under the baleful fascinations of the combined attractions of rank, power, money and pretended devotion, and is whirled away into ruin by them, is it her influence over society, or society's influence over her that has prevailed? Talk about the power of women over this melstrom of the world! The wonder to me is, that any of us are left without blemish. How do we contrive to stand up against all the combined influences of society to pull us down?

We hear a great deal about the temptations of men. What has a great, strong, rich and powerful man to tempt him, except his own desires? If he could change places with some weak, dependent, poverty-stricken, yet struggling woman, he would find, in place of the one temptation in his own heart, a host of temptations in the guise of necessities, urging him to forget his fidelity to principle and to virtue. And are we to protect not only ourselves from men, but men from themselves? Assuming that we were upon an equality, should you not say, "let every one stand or fall for himself?" But, being as it is, should we not rather say, "help us!" than "we will help you?"

Consider this thing society, and who con-

stitute it? There is the powerful rich man; what does he do to promote virtue? There is the successful politician; what does he do for the purity of society? or the men in civil or military offices? What does the great lawyer do? or the legislator? What does the physician, who most of all comprehends the full amount of injury done society by its vices? What does the priest of God, who feels that he must build up a great and influential congregation? None of these are going to meddle with the ways of society, lest society should turn and rend them. But we, who are not of the least consequence in the world's affairs, are asked to influence society.

Am I too doubtful; too terribly discouraging to my sisters who yet have faith in their influence? I am sorry to take away one prop, however insecure, of woman's belief in her moral power. Nor shall I, if I say, as I feel, that in spite of our weakness we are strong, if we choose, in one way. Not to influence men by amiably condoning their offences against us; but by firmly requiring of them the same purity of character that they exact from us, or that we maintain in ourselves. It is the most dignified, the most rational, the most just, and certain way. It is better for us, for them and for posterity. I suppose if the women of this country, whose husbands are on the downward road, were, with one consent, to rise up and say, "either we will do as you do, or you must consent to live as we live," that there would be a great commotion. But the tempest would clear the air considerably. Those who are worth saving would be saved, and those who are worthless would simply declare themselves, and all further trouble about saving them by "influence" be dispensed with.

But then the wives of the real society men would fail to come up bravely to the issue, and the others, discouraged, would falter and fail, and the mischief would go on. The roots of the evil lie too far back in the past to yield to any sudden pressure. The only way to a true power over men, lies in ourselves, nevertheless. Each individual woman for herself may erect a standard of purity, to which, keeping herself, she can require those who seek her favor to reach. In this way we may, by long effort, influence society; for men, though they may care nothing for the personal influence of any individual woman, do recognize the might of the right in a general way, and do respect a consistent and reiterated demand for it at last, however much they may try to ignore it at first.

I presume that I have but half answered my correspondent in the foregoing remarks, for she meant to include the home influences from the cradle upward, no doubt. Some other time we may consider woman's influence in the relation of mother, as we cannot do to-day, having exhausted the space that has been graciously accorded to us in this journal.

CLERGYMEN LIKE THE STAND-BYS.—The simple presence of such persons in the church is of itself to every minister a powerful help and encouragement. He is glad, of course, to see new faces coming in from time to time. The poor mother, the stand-by at home, who has a breakfast and a husband and half a dozen children to get ready in the morning, so that she herself can come out only now and then, whenever she does come is seen with pleasure. The young men of his flock, flowers of the kingdom, whose eyes and religious natures open usually only in the latter part of the day, but who occasionally under the inspirations of a new suit of Sunday clothes blossom out in the forenoon, excite in him, till he learns better, a gleam of hope. The religious casual, the small and unrequited worshiper described by Horace, owning a pew, but occupying it so seldom that when he does use it it has to be found for him by the sexton, is not by any means unwelcome, and there is always an inspiration of some sort in the great crowd of strangers who appear Sunday nights when it has been advertised that he is going to speak on the kingdom of Satan, or the doings of the devil, or the sowing of wild oats, or some kindred theme. But after all it is the stand-bys, the men—usually old ones—and the women living often furthest from the church, who are absolutely sure of being in their places punctually every Sunday, Thanksgiving and even fast day, whatever the season or the weather or the subject may be—these that he looks upon with special delight and finds to be the fountains of his great earthly inspiration.—*Sunday Afternoon.*

ACT OF LOVE.—Each one of a thousand acts of love costs very little by itself, and yet when viewed altogether, who can estimate their value? What is it that secures for one the name of a kind neighbor? Not the doing of half a dozen great favors in as many years, but the little everyday kindnesses, neither of which seems of much consequence, considered in itself, but their continued repetition sheds a sunlight over the whole neighborhood. It is so, too, in the family. The child whose good offices are always ready when they are wanted—to run up stairs or down—to get chips or rock the cradle, or to run on an errand and "right back,"—and all with a pleasant look and a pleasant temper, has a reward along with such good deeds. If a little girl cannot take her grandfather on her lap, as he takes her on his, she can get his slippers, or put away his book, or gently comb his thin locks; and, whether she thinks of it or not, these little kindnesses that come from a loving heart, are the subbeams that lighten up a dark and woful world.—*London Reader.*



## Husbands and Wives.

The writer of "Home Interests," in the New York Tribune discourses as follows: There is one law for all, one rule, one duty, one reward; but there are all sorts of husbands, and there are all sorts of wives. There are husbands who without holding themselves to any high standard in the marital relation, hold their wives to the highest standard, and are aggrieved if they do not come up to it. There are wives who do precisely the same thing. There are selfish husbands who regard their wives as mere instruments of convenience, created solely for their service, and there are wives who regard their husbands precisely in the same manner. There are jealous husbands who cannot endure sharing with another even a pleasant word or look, who think that they should have a total monopoly of their wives, and that whatever they cannot use and enjoy should be kept under glass or under lock and key from everybody else; and there are wives of precisely the same pattern. There are husbands who married for money, for position, for convenience, and there are wives who married for a home, for a support, and to escape the odium of being old maids. There are husbands who honestly try to be good husbands and faithful and kind and true, but who meet with no corresponding return from their wives; and there are just such wives who meet with no response from their husbands. There are big-souled men married to but not mated with small-souled women, and there are noble, generous women married to, but not mated with narrow-minded men. There are perverse, unreasonable, impracticable husbands, and there are perverse, unreasonable, impracticable wives. And there are true, noble, intelligent, warm-hearted, pure-lived husbands married to and mated with true, noble, intelligent, warm-hearted, pure-lived wives—these are equally yoked and move along the highway of life as two well-matched horses, pulling evenly and keeping step and mutually steadying and encouraging each other.

In those States most enlightened with regard to marriage the law contemplates the wife as every way the equal and the partner of the husband. It proceeds upon the ground that in that intimate and sacred relation the aid and cheering influence of the wife conduces to the pecuniary success of the husband as effectually as his own more direct and strenuous exertions. Therefore it creates a commercial partnership between the two spouses, subject to the same rules that govern ordinary partnerships in the usual course of business between man and man. When those contracting parties have no money-capital to invest they may yet invest such valuable and efficient virtues as industry, economy, frugality, cheerfulness, patience, hope, courage; and the law, based as it is on profound views of human nature and borrowing all the wisdom of actual life, presumes that each party invests the same amount of those means or of those virtues by which success is won. It further presumes that so kind and sympathetic are the feelings of the wife toward her partner that she will do all in her power for the common good of both, and if her husband has been endowed with greater strength and courage so that his exertions are more efficient and his labors more directly successful in money-results, yet the law rewards her for that not less effective co-operation which contributes to his power as the rain fills the rivers, and makes his interest equal with her's in the results of his enterprise and labors, dividing the net profits equally between them.

## Chaff.

**TAKING persons—Policemen.**  
A TABLE of interest—The dinner-table.  
ONE thing in which two heads are better than one—A barrel.  
THE frog is the only animal that gives up tale-bearing after its period of adolescence.  
THE composer who made it read, "In the midst of life we are in debt," wasn't much out of the way.  
A PRETTY girl won a musket in a lottery. When they gave it to her she asked, "Don't they give a soldier with it?"  
THERE is no disgrace in being poor—the thing is to keep it quiet, and not let your neighbors know anything about it.  
AN Aberdeen critic writes: "We read in Longfellow that he wishes man could make love like a bird. Man does, Mr Longfellow; he makes love like a goose."  
WHEN President Lincoln was taken down with the small-pox he wrote to Colfax that he might let the army of office seekers approach, as he had now something that he would give them.  
"O, YES," said an old lady, "the modern cookstove is a great invention, and when my boy James gets through his studies in practical engineering, so he can come home and run it, I'll buy one of 'em, but not afore."  
A KANSAS farmer purchased a revolver for his wife, and insisted on target practice, so that she might be able to defend the house in his absence. After the bullet was dug out of his leg, and the cow buried, he said he guessed she'd better shoot with an ax.  
A PHILADELPHIA dry goods merchant has added a children's room to his store, where mothers may leave their children to be amused with rocking horses, pictures, and toys, while they do their shopping. Babies in arms are not admitted, lest they should not be called for again.

## Young Folks' Column.

## Our Puzzle Box.

## Numerical Enigma.

I am composed of fifty-four letters.  
My 26, 37, 23, 41, 12, is a native of Europe.  
My 6, 21, 29, 46, 23, is a fruit.  
My 32, 3, 30, 35, 2, 51, is a masculine name.  
My 10, 16, 34, 31, 52, is a city.  
My 43, 9, 5, is a useful article.  
My 1, 14, 19, 48, is a part of the body.  
My 33, 4, 45, 47, 7, is a masculine name.  
My 50, 27, 40, 44, 54, is a junction.  
My 17, 38, 22, 36 is an animal.  
My 49, 25, 13, 11, is order.  
My 24, 15, is part of flying.  
My 18, 20, abides always with you.  
My whole is an old proverb.

M. T. H.

## Blanks.

1. When the captain arrived in ——— he procured a ——— of paint with which to paint his life-boat.
2. The lad sat under a tall ——— eating a ———.
3. At the ——— the lady stopped to buy a ———.

[The above blanks are to be filled with some words with a letter or syllable omitted.]

UNCLE CLAUDE.

## Problem.

A farmer has two square gardens, the side of one of which exceeds that of the other by 4 rods, while the contents of both are 208 square rods. How many square rods does the larger garden contain more than the smaller?

F. W. F.

## Charade.

Half of a bird that chattering flies  
Across the wood is half of me.  
My other half your food supplies,  
Though daily cast into the sea.

A wondrous power pervades my whole—  
I'm shown to stretch from pole to pole,  
In which the sailor finds a guide  
To lead him o'er the ocean wide.

OLD ENGLISH.

## Concealed Song.

[One word of the title of a popular song is hidden in each sentence.]

1. The fragments of rock were blown through the roof.
2. "Please bring the book to me, John," said the lady.
3. The future is never revealed to mortal eye.
4. "Sleep, darling, sleep," sang the mother, softly.
5. "Mother, I'm at peace," lisped the child.

VERONE.

## Answers to Last Puzzles.

NUMERICAL ENIGMA—Grace Darling.  
PROBLEM—22 rods long, 20 rods wide.  
CHARADE—Flying Dutchman.

TRANSPOSITIONS—1, town, won't; 2, smile, miles; 3, mates, steam; 4, mate, tame, meat; 5, made, dame; 6, paste, tapes.

WORD SQUARE—  
M A R T  
A R E A  
R E A R  
T A R T

## Kitty's Lunch at Midnight.

I want to tell you how Miltiades Peterkin Paul, that's our kitty, called 'Tides for short, earned his midnight lunch.

The door-bell wire of our house ran through the cellar, and at a certain point it crossed a beam. Now 'Tides was often punished for some naughtiness by being shut in the darkness below stairs, and as he was a great lover of society, this was decidedly against his taste, and in a very little time he learned to scratch and pull at this wire so as to ring the bell in the hall above, when some one who chanced to pass would open the door and let him out.

And now I will tell you about the midnight lunch.

It was a stormy night in late November, and 'Tides was sleeping on the beam in the cellar with his nose warmly wrapped in his own fur, he dreamed happily of the summer-time, and the foolish birds that he loved to chase in the fields.

In this fairy land of dreams 'Tides was wandering, when a sudden crash dispelled the beautiful vision, and with a start, every hair erect and his ears quivering, he awoke to find himself still in the winter time and darkness. What was that terrible noise?

Cronching low upon the beam he opened both eyes very wide, and waited. For a moment all was still, and then from the further cellar where the coal-bin was, and the great outside doors, there came a low sound, a whisper, a soft foot-fall, and an instant later a little ray of light darted along the floor, and two ugly-looking men, one of them carrying a dark lantern, appeared!

'Tides' eyes followed them, but he hardly breathed in his excitement; what were they going to do? With careful steps they passed the beam where he lay, slowly ascended the cellar stairs, opened the door into the kitchen and disappeared. 'Tides waited. What passed through his furry head cannot be known; perhaps as he heard them a moment later rattling the silver spoons in the pantry, the idea of something to eat flashed into his little brain, and with nimble feet he ran to the bell-wire and pulled it sharply. If it was breakfast-time he wanted his breakfast, too.

Jingle, jingle, jingle, jingle; the bell never stopped, and 'Tides heard sudden angry voices and cries, and the sound of many feet running across the floor over his head. Doors were opened and shut with a slam, and a great noise was made, but still the bell rang, jingle, jingle.

Suddenly the cellar-door opened, and a bright light flashed in upon him.

"Why, 'Tides, 'Tides! You splendid old kitty, come here!" and his mistress stretched her arms toward him; "you shall have a whole beefsteak and a cup of cream right off now, for you have frightened the robbers away, and saved all my silver! You are a splendid fellow!"

And so kitty enjoyed his midnight lunch. Don't you think that he earned it?—Wide Awake.

## Good Health.

## Epidemics.

The limitation of epidemic pestilential diseases, as the yellow fever, typhus and typhoid, diphtheria, etc., is at all times a question of intense interest to every thoughtful person. The July number of the New York Sanitarian contains interesting and valuable matter upon the subject of epidemics, which we unhesitatingly appropriate:

The cholera is a product of the jungles of India and Burmah, and the yellow fever is as surely of West Indian origin. That it is an exotic as relates to the United States is the opinion of the last national commission; and that it never originates *de novo*, except in its primal birth-place, whatever elsewhere may be the excess of heat moisture, filth, and vegetable and animal decomposition, is almost demonstrated, perhaps established. As to communicability, it is certainly conveyed from individual to individual, not precisely by what we understand to be direct contagion, but through various media, especially by bed and body clothing, by articles of furniture, by apartments, cars and steam and sailing vessels, by baggage and by cargoes; and these propagators, deriving from the sick the pestilential material (intentionally not called germ), hold it with wonderful tenacity, and convey it to mankind with intense effect. Both may be held at bay by quarantine and literally "fenced out." In 1851 cholera prevailed in Southern Europe and in Algeria, but not one case occurred that year in Spain by reason of vigorous quarantine. Two years later, when the embargo was not strictly maintained, it ravaged the Spanish peninsula. It always followed the lines of travel and was always carried by mankind. The infectious germ might be long in germinating, but it could always be traced to individuals. Quarantine, to be effectual, however, must have a very wide applicability. It will not suffice to limit it to vessels from foreign ports. It must extend to all conveyances for the transportation of passengers and merchandise—must have relations with municipal, State and national authority. It is estimated that the cost of the late yellow fever epidemic in loss amounted to \$200,000,000.

Typhoid fever is certainly communicated through a tainted water supply exposed to the taint of infected vaults. Poisoned springs have been traced to this infection, and in a celebrated English dairy case, where poisoned milk was claimed to have been sold, scientific examination disclosed the fact that the milk had been contaminated through the cows having lain upon ground manured from infected vaults. Another source is in the ice supply, often taken from shallow ponds in the neighborhood of large cities, freezing not destroying the germ as supposed. The air in localities becomes contaminated from sewage deposits; and Budd states, as early as 1859, that the germ of this disease never originates *de novo*, but proceeds from a special and specific poison, capable of great diffusion and preserving its noxious qualities for a long period, even if buried for many months. In England the preventability of typhoid fever is so thoroughly established that an innkeeper who has a guest ill with it, is held criminally responsible if any other case could be traced to the one under his roof. By this means infectious substances are destroyed and the spread of the disease prevented. Boiling water applied to the discharges is said to destroy the infection. But when the substance is allowed to escape as sewage it must be disinfected by prompt means.

Diphtheria is much more prevalent and much worse in localities supplied with bad water. The microscope can detect a few of the germs of epidemic diseases either in the water or in the system, and the only sure method is to watch the slightest approaches of disease and investigate the sources of our water supply, whether in city or country. Chlorine gas, from recent experiments, seems to be a disinfectant as well as a deodorizer. This greenish-colored gas effectually seizes upon and destroys any hidden germs existing in dwellings, ships, etc. This gas has been used successfully at Bellevue hospital and other places. We must purify and quarantine. Mediums of communication have been made available to epidemics as well as to mankind in his business affairs.

**THE FLUIDS OF THE BODY.**—Prof. Jager, of Leipzig, has recently published a work in which he maintains that an increased proportion of water in the tissues and humors of the body is one of the most essential conditions of liability to disease. To guard against disease, therefore, it is necessary to make the body yield as much water as possible through skin and lungs, and to avoid all that favors the accumulation of water. To this end he recommends the wearing of close-fitting woolen clothing throughout the year; all bodily movements which promote perspiration; on outbreak of disease the use of vapor or sweating baths, of drinks that excite perspiration, and of foods that do the same; constant ventilation of sitting and bed rooms, so that the moisture of the air may not become great. Dr Jager asserts that the specific gravity of a living body is an accurate criterion of the strength of constitution of a man or a domestic animal—that is to say, for its capability of resistance to causes of diseases, such as chills, infection, etc., and its power of work, bodily and mental.

## Domestic Economy.

## A Department of Domestic Economy.

The Bureau of Education at Washington, state that there is such a loud call for information concerning the progress of schools of domestic economy which have been lately instituted, that they have included inquiries in the circulars which they send out to the heads of educational institutions. In answer to these inquiries, Mary B. Welch, "lecturer on domestic economy and superintendent of the experimental kitchen" at the Iowa Agricultural college, replies as follows:

The first instruction in our department of domestic economy was given in 1872, by a course of lectures to the junior girls, on matters connected with house-keeping. In 1877, the Trustees added a course in cookery, and provided and furnished a kitchen for the use of the class. For the last two years, therefore, lessons in plain cooking have been given to the junior class in connection with lectures on such topics as "House Furnishing," "Care of the Sick," "Management of Help," "Care of Children," "Dress," etc., etc. Domestic chemistry forms also a part of the course in domestic economy.

Our facilities are still farther increased this year by the addition of a laundry wherein the girls of the sophomore class are now learning to wash and iron. During March and April two afternoons a week are spent in this laundry under the careful supervision of competent teachers. In May the class are to receive instruction twice a week in plain sewing, and are to be taught to use sewing machines. In June an experienced dressmaker is to teach the art of cutting and fitting dresses. The kitchen will be opened the middle of July, and the class will receive instruction in cookery two afternoons weekly until the last of October. We are to use, this year, Miss Juliet Corson's "Cooking School Text Book," giving the class the "Plain Cooks' Course." Each student will be required to do the work explained in every lesson so that, when the course is finished, she will have cooked every article described.

A constant and increasing interest and enthusiasm have marked our progress in this department of study, and no one of our college courses has attracted more attention or received more encouragement from the State at large.

**AMBER PUDDING.**—In preparing this use two pounds of raw apples, three ounces of sugar, a gill of cold water, several drops of lemon juice, four eggs, six ounces of flour, two ounces of butter, one-half teaspoonful of baking powder and a pinch of salt. The sugar and one-half gill of water are placed over the fire and allowed to come to a boil. At this point add the apples, which should be cut into lumps, and the lemon juice, and cook until the apples are quite soft. Weigh out six ounces of flour in a basin, and mix in well two ounces of butter; then add the baking powder, a pinch of salt and one-half gill of water, and work the whole into a firm dough, and roll out to thickness of one-third of an inch. Then dampen the sides of a pie dish with cold water and line it with narrow strips of the dough. After trimming the edge nicely, brush them lightly with cold water, and garnish the outer edge with small circular pieces of pastry laid close together. The apples, when soft, are removed and strained through a sieve into a clean dish. The yolks of four eggs are then mixed in, and in this condition it is placed into the pie plate that has been prepared. In order to cook the newly introduced eggs and the dough the dish is put in the oven for ten minutes. The whites of the eggs, to which salt has been added, are beaten stiff, and when the pudding is done this is piled high up in the center, and is well sprinkled with sugar. After smoothing the white of the egg into a cone shape, it can be neatly garnished with pieces of Angelica or dried berries. It is again placed in the oven to brown for two minutes, and is then ready for the table.

**A SPICED ROUND OF BEEF.**—Take a large prime round of beef; extract the bone and close the hole. Tie a tape all round it to keep it firm. Take four ounces of finely-powdered saltpeter, and rub it well into the beef. Put the meat into a very clean pickling-tub that has a close-fitting cover, and let it rest for two days. Next rub it thoroughly with salt, and return to the tub for eight days. Then take an ounce of powdered mace, a large nutmeg powdered, a half ounce of pepper, not more. Mix these spices well together, and then mix them with a pound of fine brown sugar. Rub the spices and sugar thoroughly all over the beef, which will be ready to cook next day. Then fill the opening with minced sweet herbs, sweet basil and sweet marjoram, laid in loosely and lightly. Take half a pound of nice beef suet. Divide it in two, and flatten each half of the suet by beating it with a rolling-pin. Lay it in a broad earthen pan, with one sheet of suet under the meat, and the other pressed over it. Above this place a sheet of clean white paper, and above all a large plate. Set it in a hot oven, bake it five hours or more, till, by probing it to the bottom with a sharp knife, you find it thoroughly cooked. It is excellent as a cold standing dish for a large family.





DEWEY &amp; CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 202 Sansome St., N. E. Corner Pine. St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES: 1 week, 1 month, 3 mos, 12 mos.  
Per line.....25 .50 \$2.00 \$5.00  
Half inch (1 square), \$1.00 \$3.00 7.50 24.00  
One inch.....2.00 5.00 14.00 40.00

The Scientific Press Patent Agency.  
DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, July 26, 1879.

## TABLE OF CONTENTS.

EDITORIALS.—Curing Rooms for Cheese; Honey East and West; One-Horse Ranches; Notes on Geysers, 49-57. Subterranean Irrigation at Los Angeles, 53. The Week; Rust and its Effect upon Men and Animals, 56. The Salmon Berry; Subsidiary Dairy Products; Is the Farm a Field for Skill; Rainfall in Australia and California, 57.

ILLUSTRATIONS.—Geyser, Showing Ornamental Character of Border, 49. Grain Rust, as Seen with the Microscope, 56. Geyser Theories Illustrated, 57.

QUERIES AND REPLIES.—Fruit Growing—Lime for Heavy Soils; Rattlesnake Weed; Rooting out Wild Morning Glories; Cayenne for Gapes, 56.

CORRESPONDENCE.—Agriculture on the Humboldt River; Characteristics of Santa Cruz County, 50. Agricultural Instruction at the State University, 53.

SHEEP AND WOOL.—Constitution in Sheep, 50.

POULTRY YARD.—Extracting Gape Worms; Langshan Poultry, 50.

PISCICULTURE.—Pacific Coast Halibut; Carp Culture in San Bernardino County, 51.

HORTICULTURE.—Apple vs. Citrus Fruits, 51.

THE FIELD.—Quality of Wheat and Time of Cutting, 51.

THE DAIRY.—Parnships as Dairy Feed, 51.

PATRONS OF HUSBANDRY.—The Model Grange; Making all Property Shoulder its Burdens; The Insurance Company Suit and Assessment; Items from the "Patron," 52.

AGRICULTURAL NOTES from the various counties of California, Nevada, Oregon and Arizona, 52-53.

NEWS IN BRIEF on page 53 and other pages.

HOME CIRCLE.—A Farmer for President (poetry); Woman's Influence in Society; Clergymen Like the Stand-hys; Act of Love, 54. Husbands and Wives; Chaff, 55.

YOUNG FOLKS' COLUMN.—Our Puzzle Box; Kitty's Lunch at Midnight, 55.

GOOD HEALTH.—Epidemics; The Fluids of the Body, 55.

DOMESTIC ECONOMY.—A Department of Domestic Economy; Amber Pudding; A Spiced Round of Beef, 55.

MISCELLANEOUS.—State Fair Premiums for Field and Orchard Products, 58.

## Business Announcements.

Mechanics' Fair, J. H. Culver, Secretary, S. F. Yosemite and the Geysers, Matteson & Harrison, S. F. Bodie Stage Line, Matteson & Harrison, S. F. Thoroughbred Berkshire Swine, A. L. Sayre, Borden, Cal.

## The Week.

Again the annual concert of harvest sounds and panorama of harvest sights are at their highest estates, and newer zest is given to the busy work as each new fraction is recorded in the markets. The English reports show how the value of imported grain is appreciating, and again, as is often the case, California wheat goes up in a little balloon by itself above the general up-rising. This special lead of California grain is quite likely to be maintained during the year, because of our reduced surplus for shipment, and unfavorable conditions in other white wheat regions.

Mail advices from England bring the details of the more than dismal weather which the telegraph has hinted at, and the widespread destruction of harvest prospects plays a doleful second to the leading parts in industrial depression. It may be doubted whether any equal area of the globe has been more severely afflicted during the last few years. But one harvest in five has been respectable, all being ruined by the excess of water at unseasonable times. The proportion of success is hardly as good as in our drouth-disposed regions, and England's is the harder problem to obviate the evil, for it is easier to bring water upon land than to keep it off when the clouds are bent on generous deeds.

The days beneath our skies are warm, dry and sunny, and the harvest march is unrestrained. The reports of disappointment at the outturn of the fields in some sections continue, but the general verdict is a happy one. Again, owing to the partial drouth in certain counties, there are new indications of the advantage of a full year's work even on wheat ranches, and we imagine that many a plow which has hitherto waited for the rain will be pushed into dry soil as soon as the harvest is over. It will be fortunate for all our people if it can be shown that profit lies in continued rather than fitful endeavor.

## Rust and its Effect upon Men and Animals.

EDITORS PRESS:—I have forwarded to you a sample of the dust or powder known as rust on wheat. I send also a specimen of the grain affected thereby. From my observation the rust seems to stop the circulation of the "sap" to the head of the grain, and as you will see it withers and dries the same as if cut for hay. The greatest damage was done in this country during three days of hot sultry weather in June. Thousands of acres of grain that promised from 30 to 40 bushels per acre are now worthless; a great deal of it will not pay for cutting. The loss to farmers from the effects of rust in this county will be at least 1,000,000 bushels, and a great depreciation in the value of the remainder of the crop. Therefore you can easily comprehend why the farming community wish all the light possible on the subject. This dust seems to be odorless and tasteless, yet it affects man and beast strangely. Men who are working in grain badly affected are unable to retain food eaten at times, and unless a thorough bath is taken every night they are unable to sleep, and it affects the eyes of men, and animals under the very best of treatment lose flesh and become stupid. What we wish to know is what constitutes its death-dealing properties and a general knowledge of its constituent parts.—A. HENRY, President Upper Sacramento Agricultural Society.

The specimens sent by our querist show well the character of the destructive fungus (*Puccinia graminis*), commonly called "rust," and its effect upon the grain which it attacks. Studies of the fungus by microscopists have yielded many satisfactory points on the nature of the parasitic fungus and its method of reproduction after it has obtained a hold upon the foster plant, but the way by which it gains access to the tissue of the plant and a successful way of preventing its inroads are as yet unknown.

In order to show the manner in which the rust insinuates its mycelium (answering to the roots of other orders of plants) into the substance of the grain, disrupts the epidermis and turns the material intended for grain maturing into a mass of reddish spores or "powder" may be seen by the small engraving which we reproduce from a former issue of the PRESS. This engraving shows a part of the rusty grain stem or leaf as it appears under the microscope. The thread-like "rooting" of the fungus is seen in Fig. 2, working its way into and among the cells which compose the substance of the grain plant, and Fig. 1 shows the opening made in the surface or epidermis, which is filled with the reddish spores or dust which is discharged upon the hand or clothing which touches the grain, and which by agitation is thrown into the atmosphere in such numbers that men and animals working in the rusty grain are tinged with red, very much as are the workers in deposits of red iron ore.

The rust fungus assumes various forms at different periods of its growth and has spores or reproductive bodies of different characters. The mass of red dust which our correspondent sends is resolved by the microscope into countless myriads of spores, one-celled and kidney shaped. The engraving shows at Figs. 3 and 4 other formed spores which the fungus throws out at other periods of its growth.

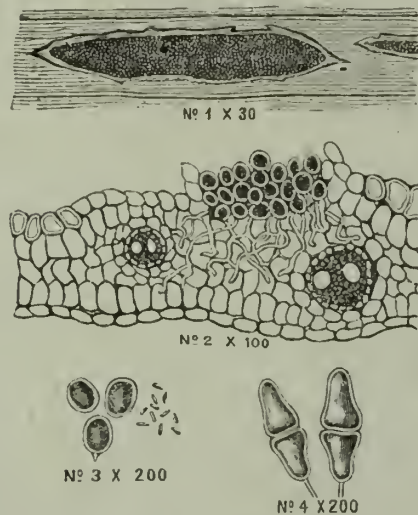
The ruinous effect of rust upon grain, the disheartening spectacle of a promising field covered quickly with a destroying fungus growth, are known to most grain growers. The ill effects of the rust upon harvest laborers, and the danger of feeding rusty hay or straw to animals are also points of frequent observation. Our correspondent desires to know in what the poisoning power which he describes consists. Upon this point there are a few interesting observations to make. The spores of different fungi have different effects upon the systems of men or animals. The analysis of one, for example, that known as ergot, shows the existence of an organic poison, ergotism, which is violent in its action. Other fungi spores produce transient illness and discomfort, probably by their irritating effect upon the tissues of which the organs of the system are composed. Of this class is the fungus known as corn smut (*Ustilago maydis*). Corn smut was analyzed last year by Prof. Kedgie, chemist to the Kansas State Board of Agriculture, and found to contain no active poison as exists in ergot, and yet smutty corn stalks fed to cattle produce ill effects. Prof. Gamgee, at one time employed by the U. S. Government to investigate this question, decided that the smut in connection with the hard indigestible fodder of the corn stalk induced impact of dry matter in the stomach of the animal and produced the disease commonly known as "mad itch." The spores then acted as a dry insoluble mechanical irritant and prevented the stomach from disposing of the hard stalks, but the spores in connection with moist food and plenty of water did not injure a cow which, in one series of experiments, ate more than 20 pounds of clear smut in her mashes.

It is quite probable that rust spores are similar in their effect upon the animal to corn smut; that is they act as a temporary irritant, and if conditions are favorable the system conquers and disposes of them. Were it not so there would be a far greater mortality among animals fed upon rusty hay. Where the animal is well nourished, and has plenty of water and moist food, the influence is temporary; if the food is hard and dry and spores very abundant the danger is greater. Every year that rust is prevalent in grain fields there are reports of sickness among cattle in different parts of this State, as for example last year in San Mateo county. We have also on record numerous instances of poisoning by rust spores in other parts of the world, and they are quite similar in their symptoms and results. For example, a German report tells of seven oxen fed on rusty barley straw, which lost flesh, stood with their backs arched and necks twisted, dribbling saliva from their mouths, unable to get food into the oesoph-

agus, coughing hoarsely, evidently from the presence of food in the pharynx irritating the epiglottis, voiding hard feces with great effort, and some of them after several days undergoing paralysis of the hind quarters and were then killed. The others were put upon a diet of green clover and a little hydrochloric acid put in their water, and recovered slowly but completely. These indications point to mechanical irritation from the rust spores rather than true poisoning, for the trouble passed away as soon as the system was thoroughly purged of the cause.

The effect produced by the rust upon harvest laborers is also compatible with the idea of mechanical irritation. Not long ago at the Botanic Gardens in Edinburgh, the assistant to the botanical professor was preparing for demonstration some dried specimens of a large puff ball, filled with dust-like spores, which he accidentally inhaled and was for some time confined to his room under medical attendance from the irritation which the spores caused. And yet there are fungus spores which are said to be dreadful in their effects. There is a black rust which attacks the large reed (*Arundo donax*) growing in the south of Europe, the spores of which produce violent headaches and other disorders among the laborers who cut the reeds for thatching. These spores are also credited with producing violent eruption of the face, and symptoms of inflammation and swelling in other parts of the body much like those known to attend poisoning by "poison oak." It cannot be that grain rust is so grievous a poison as this reed-rust of Europe, because, although laborers in rusty grain fields get their bodies colored and their systems charged with the spores, the effects though very uncomfortable, are not fatal nor ultimately dangerous.

The most important feature in all the wide range of discussion of the rust fungus is to determine some method by which our grain growers may be relieved from the great loss which it occasions them. This most vital point is the most obscure, although widely studied and experimented upon. As we stated recently, the Australians are discussing the advantage of offering a premium of \$25,000 for a successful



Grain Rust, as seen with the Microscope.

antidote. The nature of the fungus and its dissemination make it impossible to reduce its spread as is done with smut by soaking the seed in blue-stone water. The rust is wholly independent of the seed. It will grow on other plants than cereals, as on certain shrubs and weeds, and then when conditions favor its reproduction it rises in its might and ruins the growing grain. One line of avoiding rust is by selecting varieties of wheat which are shown to be less liable to rust than others. Investigations for rust-proof wheats have been long pursued, and it has been shown in England that the softer stemmed wheats are more liable than the harder. In this State growers like Mr. Gwin, of Anaheim, have reached satisfactory results by propagating seed wheat seen to be free from rust while other varieties were attacked. The whole subject of rust on grain is one of great interest and importance, and we shall at all times be glad to receive observations which our readers may make concerning any feature in connection with this foe of the cereals.

CALIFORNIA SEEDLING APPLE AT THE EAST.—At the recent convention of nurserymen at Cleveland, Ohio, Mr. P. Barry, of Rochester, read a report upon new fruits, in which the following allusion is made to a specimen from this State: "From California there has been sent a remarkable seedling of the Yellow Bellflower. The apple is large, roundish, inclining to conical; stalk long and slender in a deep cavity; skin of a beautiful golden yellow color, smooth and fair; flesh firm, juicy, sub-acid, rich, and excellent. It is said to keep as well as the Newtown Pippin, and is one of the most promising new fruits that I have seen." It does not appear from the reports we have seen thus far, to whom belongs the credit for bringing out this apple which is so favorably received by the Eastern authorities.

IN MEMORIAM.—We have received an obituary circular announcing that Jacques Antonie Moerenhout, Vice-Consul of France at Los Angeles, died at Los Angeles July 11th, 1879.

## QUERIES AND REPLIES.

## Fruit Growing—Lime for Heavy Soils.

EDITORS PRESS:—What are the two best fertilizers to neutralize a clayey soil and prepare it for fruit trees? Is a mixture of clay and light sandy loam (subsoil clay) objectionable for the cultivation and successful raising of fruit in Sonoma?—A. DAHMES, San Francisco.

EDITORS PRESS:—The best possible and fundamentally efficacious mode of preparing heavy clay soils for cultivation of fruit is underdraining, but as that is an expensive improvement, it is generally best to select, from the outset, a location possessing, besides the proper climatic conditions, a light, warm soil—naturally rich if possible; yet it is generally easier to enrich a poor but light soil, than to render a heavy soil fit for the production of first-class fruit.

Among heavy clay, or adobe soils, those containing a large amount of lime are found to possess the best qualities for fruit culture. Conversely, a clay soil may be rendered better adapted to fruit culture by the application of lime to the soil immediately under the trees at least, if not to the whole orchard surface. The lime not only renders the soil lighter, but also serves to repress the excessive formation of wood and favors fruiting, and the production of high flavor. It should of course be understood that, in any case, a clay soil should have deep and thorough tillage to make it do its best.

A light sandy loam with clayey subsoil, if well drained, ought to make a good orchard soil; and the intermixture of the two, by deep plowing, would probably be an improvement upon the natural condition of things.

In the Sonoma valley, the best orchard and vineyard soils are undoubtedly the red lands of the second bench, which sometimes reach down into the plain bodily, but mostly in intermixture with the gray adobe of the valley, which they greatly benefit. The gray adobe pure and simple is hardly a soil to be chosen for an orchard by preference. Where it becomes black, it contains a large amount of lime and is to that extent better adapted to fruit culture.

—E. W. HILGARD, University of California, Berkeley.

## Rattlesnake Weed.

EDITORS PRESS:—Some time ago I promised to send you some "Rattlesnake weed," as soon as it was in blossom. To-day I send you some. It is a sure cure for the bite of the rattlesnake. Mr. John Sozier, a friend of mine, has a little son about ten years of age. The little fellow was running around bare foot and a rattlesnake bit him on the big toe. His foot and leg swelled up, and in a short time the leg all turned black, and Mr. Sozier thought that his boy was dying. A neighbor, Mr. Sobara, was sent for and as quick as he could get some of the weed made a tea of it and had to give it to the little boy with a tea-spoon, as his teeth were set tight together. In a few moments the little fellow opened his eyes and saw his father looking at him, and the little boy spoke and said: "Hello, papa," and afterwards recovered. One of my sheep got bit by a rattlesnake on its hind foot, and it swelled all up the whole quarter and one side of the belly and all turned black, and the sheep could not walk. A strong tea was made of the weed and it was bathed, and also made to drink some of the tea. It was cured in twelve hours.—W. B. POST, Monterey, Cal.

EDITORS PRESS:—The plant sent by Mr. Post is *Daucus Pusillus*, Michx., a close relative of the common carrot, and of wide range from the Gulf States to the Pacific, and from Nootka sound to Mexico; therefore very available if efficacious in cases as in the ones reported. It is not mentioned as a snake-bite antidote by any authorities I have seen. A plant resembling it in many respects, and reputed as such antidote, is *Caucalis microcarpa*, stated to occur on "dry hillsides, Sacramento valley." It is, however, quite probable that several of these nearly related plants should be similar in their effects.—E. W. HILGARD, University of California.

## Cayenne for Gapes.

EDITORS PRESS:—A correspondent asks how to cure "gapes" in chickens. If he will administer an "ounce of prevention," in the shape of cayenne pepper, mixed with their food in small doses, he will need no cure. But cayenne pepper is also an efficient cure.—EDWARD BERWICK, Carmel, Cal.

## Rooting Out Wild Morning Glories.

EDITORS PRESS:—Can you, or any of your correspondents, inform me, through the PRESS, how I could get rid of a small patch of wild morning glories that have got a start in my garden. I have tried deep digging, covering them with salt, and covering them 12 or 18 inches deep in manure, but all to no effect.—ROBERT ROBERTS, Graton, Cal.

Who has done this, and bow?

WINE MARKET IN EAST INDIA.—Our wine makers will doubtless be interested to know that the Australian vignerons are now looking with considerable confidence to East India as a possible market for their wines. It seems that some shipments thither have brought satisfactory returns and won the high esteem of the East Indians and, the Australian *Mail* says that it only "confirms the opinion we have long entertained that the time is not far distant when India will draw largely on Australia for her wine supplies." This movement should receive the attention of California producers. We have direct trade with East India and purchase largely of the country in the way of bags and other products. Our canned fruit, etc., is finding favor in India. Let our wines have a chance in the same direction.

THE wheat clique in Chicago has sold all of its wheat, clearing four cents a bushel profit on the corner. The same clique are now running a bull movement in western railroad stocks, with a view to control the coming crop.



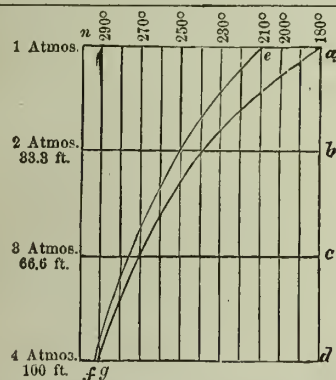
## Notes on Geysers.

Continued from page 49.

perature between the upper and lower parts of the tube becomes greater and greater, until finally the boiling point is reached below, while the water above is comparatively cool. Then the eruption commences, and ceases upon the withdrawal of the cause.

Now, we suppose the geyser to have a simple but irregular tube, without a curve heated below by volcanic fires, or by still hot volcanic ejections. Now, the temperature of the water in the tube increases rapidly with the depth, but is, at every depth to which observation extends, short of the boiling point for that depth. Let absciss *a d* represent depth in the tube and also pressure, and the corresponding temperature be measured on the ordinate *a n*. If, then, *a b*, *b c*, *c d*, represent 33 feet depth, or one atmospheric pressure, the curve *e f*, passing through 210°, 250°, 275°, and 293°, would correctly represent the increasing boiling points as we pass downward. This curve may be called the curve of boiling point. The line *a g*, commencing at the surface at 180° and gradually approaching the boiling point line, would represent quiescence. Now, at the moment of eruption, at some point below the reach of observation, the line *a g* actually touches the line *e f*—that is, the boiling point for that depth is actually reached. As soon as this occurs, water in the lower portion of the tube would be changed to steam, and its expansion would lift the whole column of water in the tube, and cause it to bulge and overflow the basin. As soon as the water overflowed, the pressure would be diminished in every part of the tube; and a large quantity of water before very near the boiling point would flash into steam and instantly eject the whole of the water remaining in the pipe. The steam itself would rush out immediately afterward.

The premonitory cannonading beneath is produced by the collapse of large steam bubbles rising through the cooler water of the upper part of the tube; in other words, it is *simmering on a large scale*. An eruption is more quickly brought on by throwing stones into the throat



of the geyser, because the circulation is thus more effectively impeded.

Fig. 4 will illustrate this theory. The apparatus is an artificial geyser, and consists of a tube of tinned sheet-iron, about ten feet long, expanded into a dish above for catching the erupted water. It is heated also, a little below the middle, by an encircling charcoal chauffer, to represent the point of nearest approach to the boiling point in the geyser tube. When this apparatus is heated at the two points, as shown in the figure, the phenomena of geyser eruption are completely reproduced; first, the violent explosive simmering, then the overflow, then the eruption, and then the state of quiescence.

**THE SALMON BERRY.**—Mr. John Reynolds, of Ferndale, Humboldt county, who has been previously mentioned in our columns as experimenting with the salmon berry, is still firm in the faith that the fruit is worth testing in different parts of the State. We had a call from Mr. Reynolds last week, and he brought samples in alcohol of two varieties of salmon berry, the yellow and the red. These berries, as seen through the glass of the jar were very handsome, and must have been from one inch to one and one-quarter inches in diameter. These berries were picked from plants which Mr. Reynolds has under cultivation. He took the seed of the wild berry and raised a lot of seedlings. The roots thus obtained he cultivated as other berries are usually cultivated. The result has been that the bush has assumed a much smaller habit, not averaging more than one-half the length of the wild plant, and the fruit at the same time has increased considerably in size. Mr. Reynolds believes that by transplanting the cultivated roots more satisfactory results can be obtained than by using the wild roots, which have been employed in former unsatisfactory attempts to propagate the plant away from its habitat. This remains to be proved. He says the plants, when grown in open situations, need protection when small. They should be planted closely together, and, when grown, protect themselves. He says high esteem is awarded the berry for table use when fresh. It is also used for pies. Humboldt people have made what they regard as a very fine wine from the berry juice, and Mr. Reynolds brought with him two jars of salmon-berry jelly, which certainly is very rich and fine flavored. Mr. Reynolds is going to show his samples at the leading fairs this fall.

## Subsidiary Dairy Products.

Not long ago we received a call from a man from Oregon who said that the owner of a fruit drier in that State had been experimenting with drying cider, milk and the like with perfect success. He showed us some dried cider, a thin, leathery, semi-transparent substance, not unlike a slab of glue. The inference would be that a man could put a plug of it in the same pocket with his plug of tobacco, dissolve it in the first glass of water he met, and be happy. This dried cider we were further told had made a voyage of the world, and still suggested the fragrance of the cider mill when dissolved in water. His story of dried milk was even more startling, for he said that the experimenter had dried a pan of milk and set away the resulting flap-jack-like slab for a number of months. One day his wife put the slab in a pan and filled it with water. In due time milk began to fill the pan; the cream began to cover the milk; the wife began to churn the cream, and when the man came into supper he partook of fresh butter from milk dried months before. Thus was the story told to us of the success attained in drying things even in Oregon, the Niobe of States.

This account of Pacific coast achievement is called to mind by the statement we read in the *Live Stock Journal* that an Iowa man has succeeded in canning cream, that this canned cream after being kept three months was shipped to New York, a distance of 1,500 miles, and then opened for the judgment of the editor of the *American Dairyman*, who pronounced it good enough. This method of preserving sweet cream, if it be found practicable in every way,

## Is the Farm a Field for Skill?

It has long been the declaration of thoughtless and silly people that "any kind of a man is good enough for a farmer," and the impression has gone out too widely that there is no such field for skill and thought in agriculture as in manufacturing or merchandizing. The effect of this idea is grievous, especially among the young men who are casting about for a choice of vocation and it is peculiarly unfortunate because the idea is wholly false. We have thought that perhaps a useful contrast could be drawn between the operations of a farmer and a large manufacturer, as for example an iron manufacturer. Let the contrast be drawn in familiar terms:

Mr. A. an iron manufacturer owns an ore bed and employs a number of men with tools and blasting materials in wrenching the red ore from the bosom of the earth. Mr. A. has also a blast furnace, and as the ore comes from his mine he mingles it with coal and limestone and by the aid of ponderous machinery changes the red earth into bright gray metal run into heavy pigs of iron. Mr. A. owns also a rolling mill and by skillful heating and working and mixing he changes his pigs into another quality of iron and rolls them out into long bars like those we see resting upon the sleepers of the railway track. Those are all skillful processes. Each of them depends upon some scientific discovery or upon some triumph of the inventor. Mr. A. is engaged in what men call a grand industry.

Let us glance briefly at another operation. Instead of starting with an ore bed, Mr. B. be-

meaning, and yet is a machine. It is a machine for manufacturing the pasture grasses into the rich fluid which we delight to place in silver pitchers. And when this machine takes its way slowly at nightfall from the pasture and awaits at the accustomed place the pressing invitation to give down its treasures, it has done a work which the ironmaker's most delicate or most powerful machinery might whirl and whiz a century without accomplishing. But the work is not yet done by either ironmaker or farmer. The iron is as yet a strip of metal, the milk would soon be worthless if left alone. The ironmaker turns his iron into a railroad. The farmer labors with his milk until it makes a box or firkin full as an egg of nourishing food material. The railroad stretches on to a city. Over its rails pass the cheese and butter boxes. The product of the ore bed says good by to the product of the pasture, and the work of ironmaker and farmer are complete.

Thus have we placed side by side the operations of the farmer and the large manufacturer, and traced a certain analogy between them. Of course there is an almost indefinite difference in degree in the two industries. We do not mean to say that building a railroad is no greater enterprise than making a cheese, but we wish to direct attention to a fact which is too often overlooked, and that is that the farmers' operations are really operations of skill, and they offer rewards for skill and prosper according to the degree in which it is brought to bear upon them.

There is no industrial operation which calls to its aid a wider range of mechanical skill, scientific knowledge, and ever ready common sense, which should be produced by full skill and knowledge, than the successful growing and gathering of a crop. This is looked upon as a very ordinary affair because it has been done so often, and because a bountiful nature has contributed so much to its success. But it is really a very complicated and very skillful operation, and is continually becoming more so because by our artificial drain upon the soil nature is becoming exhausted, and science and art are requisite to build up again her strength. Even when the farmer thoughtlessly turns the soil, plants the seed and gathers such harvest as the land may be able to furnish him, he avails himself of much complicated mechanism and high natural science without giving it a thought. And when he becomes better informed by thought and study and takes measures to raise the yield of the land by better fertilization and better cultivation, he undertakes a problem which combines the problems which come before the merchant and the manufacturer. He has to form intelligent judgment whether the receipts will be more than equal to the outlay; he has to determine whether he is taking proper means to reach a desired end. And the determination of these questions, if considered to the full extent of their possibilities, involve a commercial foresight and scientific knowledge which will surprise a man when he comes thoughtfully to analyze his operations.

## Rainfall in Australia and California.

It has been suggested that there might be some sequence of wet and dry years in Australia and on this coast. A late issue of the Melbourne *Argus* contains an enumeration of the years which in that latitude departed from the average either toward wet or dry, and we place in connection the years which in California showed the same behavior. The following is the contrast:

WET YEARS.		DRY YEARS.	
Austral.	Cal.	Austral.	Cal.
1848	1850	1858	1861
1849	1852	1859	1862
1863	1859	1862	1863
1870	1862	1865	1864
1871	1866	1866	1871
1872	1867	1868	1877
1875	1868	1879	....
....	1872	....	....

We do not see that there is any sequence or relation between these figures. Perhaps some reader can discover latent significance. If so let us have a report.

**SPECIES OF EUCALYPTUS.**—A New Zealand writer sends the London *Journal of Horticulture* some notes on species of eucalyptus which he prefers to the *E. globulus*. He says: "You will find that as your *E. globulus* trees increase in age they will lose much of their present beauty, and assume a very dark green instead of the blue, and cause a good deal of labor in sweeping, as the bark and the leaves are continually falling, and look very untidy where they abound. Some of the other varieties of eucalypti are far more ornamental, in my estimation, than *E. globulus*, some of them having light and graceful foliage, and looking very feathery, more resembling the weeping willow in their habit. They are quick growers, and more hardy than *globulus*. If they were seen and found to suit your climate in England they would become general favorites for ornamental planting."

FALL RIVER troubles continue; 1,000 rioters attacked a woman and her son who worked without consulting the Union. One woman and a boy won't be allowed to interfere with the rights of the downtrodden workmen at Fall River.

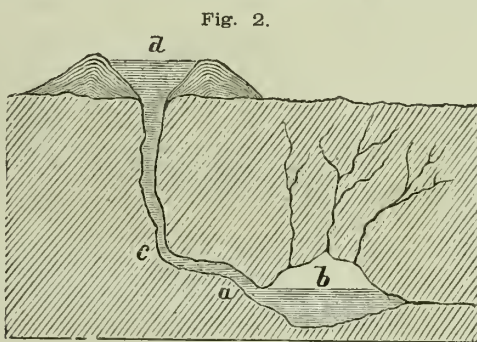


Fig. 2.

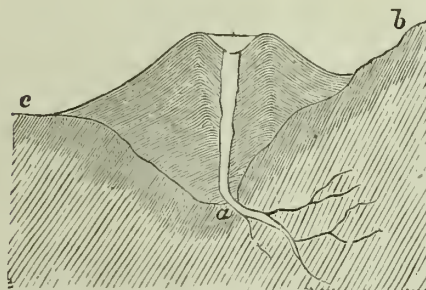


Fig. 3.

Fig. 4.



would no doubt be an important adjunct to dairying, as it would lead to a large consumption of cream by city people and would not materially interfere with the average city milk business, because that is made without cream or loses it midway between cow and consumer. Largely increasing the consumption of cream in canned form would relieve the market of some of its butter. It is to be hoped that the Iowa man will find his canned cream a success, market a billion cans a year of it and locate his first cannery in California, for here he can find the sweetest, purest cream in the world.

Another minor product of milk which may be mentioned is the manufacture of milk sugar from the whey of the cheese factories. This industry is said to be profitably established in Ohio, the milk sugar being largely used by makers of homœopathic pills for their widely used pellets. This manufacture though an interesting one, is hardly one which can be largely introduced, for the demand for milk sugar must be somewhat limited.

**CATS FOR GROUND PESTS.**—The proprietor of the Jersey farm, in San Mateo county, advertised, some weeks ago, in the city papers for 100 able-bodied cats at 10 cents each. We notice now another advertisement for 200 more, coupled with the statement that the wholesale enlistment of cats as gopher and squirrel killers is proving successful. We hope our friend of Jersey farm will keep notes of the feline war against rodents and give us ere long a full report of the struggle. Three hundred cats on one ranch ought to do something, and if they devote their time to murdering ground pests the murder of sleep may be overlooked by the tenants.

THE coinage at the United States mints during the fiscal year, ending June 30th, was as follows: Gold, \$40,986,812; silver, \$27,227,432.50; minor coins, \$97,798; total, \$68,312,042.50.

gins with a piece of land. While Mr. A. is digging his ore, Mr. B. is working his soil and getting it into the best possible condition for a crop. He examines the character of the soil and the grasses which grow naturally upon it. While Mr. A. is seeking the best steel for his pickaxes and drills, and the most effective explosives for his blasting operations, Mr. B. is employing other sciences and a different experience in ascertaining what is lacking in his soil and in collecting materials to supply it. Mr. A. carts his ore to the furnace; Mr. B. draws the material which his study and experience have taught him is best fitted and spreads it upon his field. Mr. A. finds that his ore will not become iron unless he burns it with coal and limestone. Mr. B. discovers that although he has made his soil rich, it will only grow weeds unless he gives it farther attention. Instead of coal and limestone he procures the nutritious pasture grasses and clovers, and while the flaming mineral mixture sends bright molten streams from the furnace, the sunlight spreads over his favoring soil a carpet of verdure. Mr. A., the iron manufacturer, has his iron in pigs. Mr. B., the farmer, has his pasture richly covered, but the process of neither is yet complete. Pig iron and pasture grass are both raw material. Mr. A. draws his pig iron to another manufactory. He heats and hammers it. He works upon it with the best machinery. He tortures it until it lies before him a length of railroad iron. Mr. B. drives into his pasture one of the grandest products of nature's chemistry and mechanism, the blooded animal. He has bred it with care and skill, and in itself it is a more perfect work than Mr. A.'s most powerful engine. But it becomes a machine. It moves slowly over the verdant pasture, gathering richness as it goes. At midday it lies at rest, but still active beneath a spreading tree, and even in its noontime it is working for its owner. It has a breath sweet as a zephyr which has come to us from a meadow. It has an eye kind and gentle but brilliant and full of



### State Fair Premiums for Field and Orchard Products.

The following is the list of premiums offered by the State Agricultural Society, for field, garden, dairy, orchard, vineyard and domestic products, to be awarded at the fair, opening in Sacramento, September 8th, 1879:

#### Fifth Department.

For the most meritorious exhibition in this department, the Society's gold medal.

#### Farm Products, Food, Condiments, Etc.

##### CLASS I—SILK, COTTON AND TOBACCO.

Best exhibition of the silk business, from the mulberry tree to the silk cocoon, including the feeding of the worms, their eggs, etc. \$25  
Best bale California cotton, not less than 400 pounds. 50  
Second best do. 20  
Best display of California tobacco. \$25 and Silver Medal  
Best display of Cal. manufactured tobacco \$10 and Diploma  
Best display of cigars made of Cal. tobacco \$10 and Diploma

##### CLASS II—FLOUR AND GRAIN.

All articles in this department must be exhibited by the producer, who must certify under oath that he raised the grain, and no premium will be awarded to any article that has previously drawn a premium of the Society.

Best three varieties of wheat, not less than two bushels of each variety. \$25  
Best sample of wheat, not less than two bushels. 10  
Best sample of barley, not less than two bushels. 10  
Best sample of rye, not less than two bushels. 10  
Best sample of oats, not less than two bushels. 10  
Best sample of buckwheat, not less than one-half bushel. 10  
Best sample of hops, not less than one hundred pounds. 10  
Best sample of clover seed, not less than one-half bushel. 10  
Best sample of mesquit grass seed. 10  
Best sample of blue grass seed, not less than one-half bushel. 10  
Best sample of red-top seed, not less than one-half bushel. 10  
Best sample of orchard grass seed, not less than one-half bushel. 10  
Best bushel alfalfa seed. 10  
Best bushel yellow corn. 10  
Best bushel white corn. 10  
Best bushel early corn. 10  
Best exhibit garden seeds of California production, not less than twenty-five varieties, and not over one year old. 10

Evidence must be presented showing that the grain, vegetables and products have been grown by the exhibitors.

##### CLASS III—VEGETABLES, ROOTS, ETC.

All articles in this class are to be raised by the exhibitor except the table or collection of vegetables.

Best half bushel red potatoes. \$5  
Best half bushel white potatoes. 5  
Best half bushel of any other variety. 5  
Best and greatest variety of Irish potatoes, half peck of each variety. 10  
Best half bushel sweet potatoes. 5  
Best twelve parsnips. 3  
Best twelve carrots. 3  
Best six long blood beets. 3  
Best six turnip beets. 3  
Best six sugar beets. 3  
Best peck tomatoes. 3  
Best six Brussels sprouts. 3  
Best six heads of red Dutch cabbage. 3  
Best six heads of any other variety. 3  
Best three heads of cauliflower. 3  
Best six heads of broccoli. 3  
Best six heads of lettuce. 2  
Best half peck of red onions. 3  
Best half peck of white onions. 3  
Best half peck of peppers for pickling. 3  
Best twelve roots of salsify. 3  
Best six stalks of celery. 3  
Best six marrow squashes. 3  
Best six Hubbard squashes. 3  
Best six crookneck squashes. 3  
Best and largest pumpkin. 5  
Best dozen of sweet corn, green. 2  
Best three mountain sweet watermelons. 2  
Best three watermelons of any other variety. 3  
Best three green-fleshed muskmelons. 3  
Best three yellow-fleshed muskmelons. 3  
Best six cucumbers. 3  
Best half peck Lima beans, in pod. 3  
Best half peck white beans, dry. 3  
Best half peck kidney bush beans, in pod. 3  
Best half peck pole beans, other than Lima, in pod. 2  
Best half peck field peas, dry. 2  
Best half peck garden peas, dry. 3  
Best half peck castor oil beans. 3  
Best and greatest variety of peas, dry. 5  
Best half peck gherkin cucumbers. 3  
Best three purple egg plants. 5

##### TABLE OR COLLECTION OF VEGETABLES.

For the best table of the following varieties of vegetables exhibited by one person:

Parsnips, carrots, beets, tomatoes, cabbage, cauliflower, broccoli, lettuce, onions, peppers, salsify, celery, squashes, sweet corn, watermelons, muskmelons, cantaloupes, cucumbers, Lima beans in pods, string beans, egg plants, watercress, parsley, spinach, radishes, turnips, potatoes. \$30

For the best table of the above varieties, exhibited by the producer. 25

##### CLASS IV—FLOWERS.

Best and largest collection of flowering plants in bloom. \$25  
Best collection of ornamental flowering plants. 25  
Best collection of new and rare plants. 15  
Best collection of roses in bloom. 15  
Best collection of fuchsias in bloom. 15  
Best display of cut flowers. 10  
Best display of bouquets. 10  
Best collection of Australian plants. 10  
Best collection of plants suitable for greenhouse, conservatory and window culture. 10  
Best display of hanging baskets containing plants. 15

##### Dairy Products.

##### CLASS V—CHEESE.

Best cheese one year old and over. \$15  
Best cheese under one year old. 10  
Best and largest display of cheese. Diploma and 20

##### CLASS VI—BUTTER, BREAD, ETC.

##### BUTTER.

Best display of butter in rolls, not less than ten pounds. \$25  
Best tub of butter, not less than twenty-five pounds, at least three months old. 15  
BREAD AND CEREAL FOOD.  
Best four loaves of bakers' bread, not less than forty-eight hours old. \$3  
Best pilot bread. 2  
Best biscuit. 2  
Best soda biscuits. 2  
Best crackers, butter. 2  
Best crackers, sweet. 2  
Best crackers, Boston. 2  
Best domestic corn bread. 5  
Best domestic rye bread. 5  
Best domestic brown bread. 5  
Best domestic wheat bread. 5  
Best display of domestic bread. 25

##### SUGAR AND SYRUP.

Best 100 pounds made from sugar beets. \$20  
Best 100 pounds made from cane. 20  
Best 100 pounds made from molasses. 20  
Best five gallons syrup made from either of the above named articles. 20

#### Sixth Department.

For the most meritorious exhibition in this department, the Society's Gold Medal.

##### Fruits.

##### CLASS I—GREEN FRUITS.

##### APPLES.

Best display. \$20  
Best twelve varieties. 10

Best six varieties. 5  
Best three varieties. 5

##### PEARS.

Best display. \$20  
Best twelve varieties. 10  
Best six varieties. 5  
Best three varieties. 5

##### PEACHES.

Best display. \$15  
Best six varieties. 10  
Best one variety. 5

##### PLUMS.

Best display. 10  
Best five varieties. 5  
Best one variety. 5

##### FIGS.

Best green figs. \$5  
Best display of tropical fruits—Raised in California. \$40

##### TROPICAL FRUITS—Raised in California.

Greatest number and best specimens. \$20

##### ORANGES.

Greatest number and best specimens. \$20

##### LEMONS.

Greatest number and best specimens. \$20

##### SEEDLING FRUIT.

Best display of seedling fruits. \$10

##### GENERAL DISPLAY.

Best general display of fruit, embracing best and greatest varieties. \$40  
Best display of fruit by the producer. 40

CLASS II—HONEY, PRESERVES, PICKLES, ETC.

Best ten pounds honey. \$5  
Best display of fruit in glass jars. 10  
Best six jars of raspberry jelly, in glass. 5  
Best six jars of red currant jelly, in glass. 5  
Best six jars of black currant jelly, in glass. 5  
Best six jars of blackberry jelly, in glass. 5  
Best six jars of strawberry jelly, in glass. 5  
Best six jars of quince jelly, in glass. 5  
Best six jars of blackberry jam, in glass. 5  
Best display of raspberry jam, in glass. 5  
Best display of preserves, in glass. 10  
Best display of pickles. 5  
Best display of brandied peaches. 5

CLASS III—DRIED AND PRESERVED FRUITS.

NUTS, ETC.

Best twenty-five pounds dried apples. \$5  
Best twenty-five pounds dried pears. 5  
Best twenty-five pounds dried peaches. 5  
Best twenty-five pounds dried plums. 5  
Best twenty-five pounds dried apricots. 5  
Best twenty-five pounds dried nectarines. 5  
Best ten pounds dried cherries. 5  
Best exhibition of dried berries in variety. 5

Exhibitors of dried fruits must furnish written statement of manner of drying and treatment in full, from time of picking to placing on exhibition.

CULTIVATED NUTS—Raised by Exhibitor.

Best half peck English walnuts. \$10  
Best half peck soft-shell almonds. 10  
Best two bushels peanuts. 10

Best package for shipping small fruit. 5  
Best package for shipping grapes. 5  
Best package for shipping peaches. 5  
Best package for shipping plums. 5  
Best package for shipping pears. 5

GRAPES, BRANDY, WINE, ETC.

Best sample of grape syrup, not less than one gallon. \$10  
Best sample of grape sugar, not less than five pounds. 10  
Best display of raisins. 25  
Best still (working still, not model). 25  
Best grape crusher and separator. 25

GRAPES.

Best twelve varieties of table grapes, not less than three bunches each. \$20  
Best six varieties of table grapes, not less than three bunches each. 10  
Best three varieties table grapes, not less than three bunches each. 5  
Best twelve varieties wine grapes, not less than three bunches each. 20  
Best six varieties of wine grapes, not less than three bunches each. 10  
Best three varieties of wine grapes, not less than three bunches each. 5  
Best variety of raisin grapes. 10  
Best and greatest variety of grapes, not less than three bunches each. 25  
Second best and greatest variety of grapes, not less than three bunches each. 15

BRANDY—(Not less than one dozen bottles.)

Best grape brandy. \$25  
DRY WINES—(Not less than one dozen bottles.)

Best white wine. \$25  
Best red wine. 25  
SWEET WINES—(Not less than one dozen bottles.)

Best sweet wine. \$25  
SPECIAL WINES—(Not less than one dozen bottles.)

Best California port. \$25  
Best California sherry. 25  
Best Cal. formula sparkling. 25

#### Seventh Department.

For the most meritorious exhibition in this department, the Society's Gold Medal.

##### Fine Arts.

##### CLASS I—PAINTINGS, DRAWINGS, ETC.

Best specimen of portrait painting, in oil. \$25  
Best specimen of landscape painting, in oil. 25  
Best specimen of landscape painting, in water colors. 25  
Best exhibition of photographs. 25  
Best exhibition, not exceeding seven, of painting by one artist. 150  
Best painting by any exhibitor. 100  
Best animal painting. 25  
Best monochromatic drawing. 10  
Best crayon drawing. 10

##### CLASS II.

Best exhibition of sculpture. \$25  
Best exhibition of statuary and busts in plaster. 25  
Best collection of polished California granite. 50  
Best collection of polished California granite. 50

##### CLASS III—PAINTINGS BY MINORS.

Best painting in oil. \$25  
Best painting in water colors. 25

##### CLASS IV.

Best specimen of engraving on wood. \$25  
Best specimen of engraving on steel. 25  
Best specimen of lithography. 25

Any article in the above classes of this department that has previously been awarded a Society's premium, will not be allowed to compete for the above premiums.

Entry Clerks will be in attendance at the Park and Pavilion on September 4th for the receipt of entries, and all entries, both at the Park and Pavilion, will close on Monday, September 8th, at 6 o'clock P. M., sharp.

FORMATION OF COAL.—E. Frey holds that there are several kinds of isomeric cellulose, constituting the skeleton of plants. Coal is not an organized substance. The vegetal impressions presented by coal are produced as in shales or other mineral matters. The chief substances contained in the cells of plants under the double influence of heat and pressure produce bodies having a great analogy to coal. The pigments, the resins, and the fats of leaves, if submitted to heat and pressure, yield compounds which approximate to bitumens. The vegetable matter which gave rise to coal has undergone, first, the peaty fermentation, the coal being then formed by a secondary transformation;

### Lands for Sale and to Let.

### BERKELEY PROPERTY.

#### Residence and Business Lots

FOR SALE VERY LOW AND ON EASY TERMS.

The Cheapest and most Desirable Property for Investment or for Homesteads in the State.

Lots worth \$200 sold on installments of \$5 per month. Lots worth \$300, \$10 down; installments of \$5 per month. Lots worth \$500, \$50 down; installments of \$10 per month. Lots worth \$1,000, \$100 down; installments of \$20 per mo.

Within 40 minutes of the business center of San Francisco, reached at an expense of 15 cents for single trips or \$3 for monthly tickets, being a point at which all the important railroads of the State will center, and where the University and other educational institutions of the coast are located. With fine view and delightful climate and its present rapid improvement, all combine to make this the most desirable place to locate.

Give us a call and we will give entire satisfaction, as we have property in all parts of Berkeley, and can sell cheaper than any others. Call on

S. A. PENWELL,

652 Market Street, San Francisco.

Or at residence, cor. 6th and Bristol Sts., West Berkeley.

### LOMPOC

### Temperance Colony.

45,654 49-100 ACRES.

### Cheap and Desirable Homes.

TERMS OF SALE—25% cash, and the remainder in eight equal annual installments with interest at 10% per annum, or full payment and deed immediately.

#### Rich Soil and Healthful Climate.

Located in the Western part of Santa Barbara County, California, embracing 10,000 acres of the Finest Bean Land in the State; as high as 3,700 lbs. of Beans to the acre have been raised the present year, while 3,000 lbs. to the acre is not an uncommon yield.

#### DAILY MAIL

And Telegraphic Communication with all parts of the State. The Telegraph Stage Co.'s Coaches now run daily, each way, directly through the town of

#### LOMPOC.

E. H. HEACOCK, President.

IRVING P. HENNING, Secretary.

November 6th, 1878.

### A Good Farm For Sale.

The undersigned offers for sale a Farm of 480 acres of fine loamy grain land in a high state of cultivation, 400 acres being well fenced, with house, barn, outbuildings, water tank, house and windmill, orchard, vineyard and garden sufficient for family use. The water is excellent. It is situated 14 miles north of Arbutuck Station, on the Northern Railway, in Colusa County.

#### THE TITLE IS COMPLETE.

A Schoolhouse is adjoining this farm, and everything desirable for a

#### Nice and Comfortable Home.

Can be bought for part Cash and part Credit, or payments in installments to suit purchasers. Address

FREDERICK SPRENGER,

Arbutuck P. O., Colusa Co., Cal.

### Farm For Sale.

Yields an Income of \$4,000 a Year.

Price, \$10,500.

My Farm and Poultry Business yield over \$4,000 a year. The place—116 acres—with orchard, vineyard and improvements, has cost me \$15,000. The good will of the business is worth fully \$6,000. I will sell the business and farm for \$10,500, half cash, or exchange for San Francisco property. It is a bargain such as is seldom offered.

M. EYRE, Napa, Cal.

Law Office in San Francisco, No. 630 Clay St., Room 25.

I am in Napa each Saturday and Sunday; other days in San Francisco.

### FOR SALE.

700 Acres. The Finest Stock and Grain Farm in Northern California.

Price, \$25,000, including Farming implements. The whole under fence.

The Stock upon this farm, all thoroughbred and graded, embracing some of the finest in the State, will be sold at private sale. Among the stock is some that has been awarded different premiums at State and County Fairs.

This is one of the finest opportunities for a man of means in the State. For full particulars apply to

D. B. HAYS,

Real Estate Agent, Oroville, Cal.

### Flour Mill for Sale or Rent.

A good water power flour mill, with two runs of 4-feet wheat stones, one middling and one feed stone, all in good order, situated in southern California, with a good wheat crop near the mill, can be bought cheap, or a part interest can be purchased by a good, reliable mill man, or the property can be leased; mill is running, and has a good reputation. Want of experience, and other business, induces the owners to offer a good trade. Apply to JOS. WAGNER & CO., 105 and 107 Mission street, S. F.

### LAND

Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

### C. C. RODGERS, CALIFORNIA LAND AGENCY,

Office, 276 First St., San Jose, Cal.

GENERAL LAND, REAL ESTATE, U. S. PENSION AND BOUNTY AGENT.

Will buy and sell Land Warrants; Locate and Survey Public Government Land, Pre-emption Homesteads, Soldier's and Sailor's Homesteads, Timber and Wood Lands, Desert Lands, Etc.

### FARMING LAND

For Sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

### Seedsman.

### SEEDS. TREES. SEEDS.

Continually arriving, NEW AND FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco



B. K. BLISS & SONS,

Importers, Growers and dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address

B. K. BLISS & SONS, 34 Barclay Street, N. Y.

### FENCING—CHAPPARAL SEED.

Parties wishing to experiment in the cultivation of Chapparal as an economical and valuable substitute for fencing, can obtain the seed in 50 Cts. and \$1 packages, at W. R. STRONG'S, Sacramento. Sent by mail.

### EXOTIC GARDENS.

F. A. MILLER & CO., Mission St., opposite Woodward's Gardens. Send for Catalogue and Price List.

### Patents for Mining and Farming Lands.

Having complete arrangements with competent and reliable parties in Washington City, by which we are able to secure prompt and careful attention to law business there, we are prepared to assist Mill and Mine, Canal and Ditch owners in securing patents for their lands, mines and claims, in addition to our general line of patent business.

Many who are acquainted with the manner in which this business has heretofore been conducted, (with or without assistance by local attorneys), will see at once the great advantage of patronizing an establishment that is thoroughly organized and has its representatives in Washington to look after and prosecute their applications before the Commissioner of the General Land Office. The business on this Coast will be attended to personally by a member of our firm, and satisfaction will be given in all respects.

Correspondence from persons desirous of securing patents for Lands, Mines, Mill Sites, Canal and Ditch property, promptly attended to.

Applicants for patents for mining and farming land, whose claims have been delayed for any reason, will find it to their advantage to consult with us and in case of necessity secure the services of our home and Washington branch agency.

DEWEY & CO.,

Solicitors of Patents for Lands, Mines and Inventions, MINING AND SCIENTIFIC PRESS OFFICE, No 202 Sansome St., San Francisco.

### The New Beekeepers' Text Book.

By N. H. and H. A. KINO. The latest work on the Apia, embodying accounts of all the newest methods and appliances. Fully illustrated. Sent by mail, postpaid, for \$1. DEWEY & CO., 202 Sansome Street, S. F.



BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

CATTLE.

PETER SAXE & SON, 520 Bush St., S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magle Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Doves, etc. Eggs for hatching. Send for price list.

SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Thoroughbred Berkshire and Poland-China Swine. Light Brahma and Black Cochon Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

BEEES.

JOS. C. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

Grangers' Bank of California,  
42 California Street,  
SAN FRANCISCO, CAL.

Authorized Capital - \$2,500,000,  
In 25,000 Shares of \$100 each.  
Capital Paid up in Gold Coin, \$405,000.

OFFICERS:

PRESIDENT.....G. W. COLBY.  
MANAGER AND CASHIER,  
ALBERT MONTPELLIER.  
SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

Grangers' Co-operative Business Association,  
tion, of Sacramento Valley.

Location: K & 10th Sts., Sacramento, Cal

Dealers in GENERAL PRODUCE, RETAIL GROCERIES, and sale of FRUITS. Desires the co-operation and trade of farmers in general. Pay the highest market rates for all produce, and sell for the smallest profit. Our orders are cash on delivery. Goods shipped; marked C. O. D. W. H. HEVENER, Manager.

GENERAL INSURANCE

— AND —

Commission Agent.

FERDINAND K. RULE,

310 Pine Street, Room 31, San Francisco.

Special attention to Fire, Marine and Life Insurance business.

Insurance placed in none but first-class Companies.

DIVIDEND NOTICE.

The German Savings and Loan Society.

For the half year ending this date, the Board of Directors of the GERMAN SAVINGS AND LOAN SOCIETY has declared a Dividend on Term Deposits at the rate of seven and one-fifth (7-1/5) per cent. per annum, and on Ordinary Deposits at the rate of six (6) per cent. per annum, free from Federal Taxes, and payable on and after the 15th day of July, 1879. By order.

GEO. LETTE, Secretary.  
San Francisco, June 30th, 1879.

PIANOS

FOR EVERYBODY!

WE WILL SELL THE

CELEBRATED

FISCHER PIANO

At Prices that Nobody can beat!

THE "FISCHER"

Is one of the leading Pianos, and  
has been before the Public  
For Forty Years.

We Sell no Bogus Instruments.

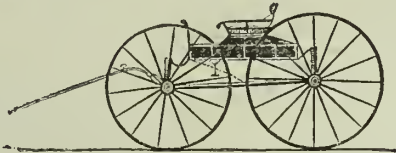
SEND FOR CATALOGUE AND TERMS TO

KOHLER & CHASE,

Post Street, near Dupont,

SAN FRANCISCO.

H. J. HASKELL,



MANUFACTURER OF

CARRIAGES,

BUGGIES,

— AND —

SPRING WAGONS,

At the Lowest Rates.

Corner of Alameda and White Streets,

SAN JOSE, CAL.

THE WILSON ADJUSTABLE CHAIR,

With 30 Changes of Position.

Patented in the United States and Foreign Countries.  
BEST CHAIR IN THE WORLD.

Parlor, Combining  
LIBRARY, Beauty,  
Invalid Chair, Lightness,  
Rocker, Strength,  
BED or Simplicity  
LOUNGE, and  
COMFORT.

READING POSITION.

Same Chair in Cane Seating, very desirable for summer. Manufactured of the best of wrought iron and rivets. Castors made purposely for the Chair. Everything to an exact science. IT WILL LAST A LIFE-TIME.

Has been awarded Medals, Prizes and Diplomas for its superiority and merit wherever it has been exhibited.

Orders by mail promptly attended to. Goods shipped to any address, C. O. D. Send for Illustrated Circular.

Address the WILSON ADJUSTABLE CHAIR MFG CO.,  
535 Washington St., Boston

60 Elegant Perfumed Cards, Chromo, Motto, Lily, Etc.,  
15c. Gift with each pack. H. M. SMITH, Clintonville, Ct.



BARLOW J. SMITH, M. D., announces to his friends and former patrons that he has resumed hygienic medical practice at the Smithsonian Medical and Phrenological Institute, 635 California street. The institute provides all forms of Electro-Medical baths and Hygienic boarding. Terms reasonable. Phreno-Physiological examinations in regard to health free. During the past 30 years Dr. Smith has developed a System of Phreno-Physiology that shows the relations that exist between the brain and body and claims that the organs of the brain show the strength of the spine, heart, lungs, stomach, bowels, liver and kidneys, also the reproductive organs, and the tendency of each and all to disease. The most powerful Electroized Magnet ever used in the treatment of nervous and chronic diseases is employed in this Health Institute. Mrs. Dr. Smith has charge of the Female Bathing Department Phrenological examinations daily.

Contents of Pamphlet on Public Lands of  
California, U. S. Land Laws, Map of  
California and Nevada, Etc.

Map of California and Nevada; The Public  
Lands; The Land Districts; Table of Rainfall in California; Counties and Their Products; Statistics of the State at Large.

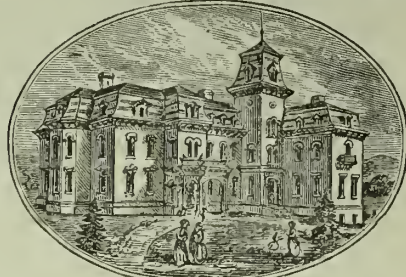
Instructions of the U. S. Land Commissioners.—Different Classes of Public Lands; How Lands may be Acquired; Fees of Land Office at Location; Agricultural College Scrip; Pre-emptions; Extending the Homestead Privilege; But One Homestead Allowed; Proof of Actual Settlement Necessary; Adjoining Farm Homesteads; Lands for Soldiers and Sailors; Lands for Indians; Fees of Land Office and Commissions; Laws to Promote Timber Culture; Concerning Appeals; Returns of the Register and Receiver; Concerning Mining Claims; Second Pre-emption Benefit.

Abstract from the U. S. Statutes.—The Law Concerning Pre-emption; Concerning Homesteads; Amendment Act Concerning Timber; Miscellaneous Provisions; Additional Surveys; Land for Pre-emption; List of California Post Offices. Price, post paid, 50 cts.

Published and sold by DEWEY & CO., S F

Educational.

GOLDEN GATE ACADEMY.



A first class Boarding and Day School. Location unsurpassed; methods most approved; health preserved and physical development secured by daily gymnastic and brief military drill. Preparatory department for lads in successful operation. Attention invited to methods and terms. Address for particulars.

H. E. JEWETT, A. M., Principal,  
Oakland, California.

N. B.—The next school year will commence July 29th, 1879

Washington College.

The Fifteenth Semi-Annual Term of this Institution will commence on

Thursday, July 31st, 1879.

Catalogues can be had at Bancroft & Co.'s Bookstore, San Francisco, and at Hardy's Bookstore, Oakland.

For further information address

S. S. HARMON,

Washington, Alameda County, Cal.

HEALD'S BUSINESS  
COLLEGE,  
24 Post Street  
Near Kearny,  
San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post street, or address for circulars, E. P. HEALD  
President Business College, San Francisco, Cal.

E. CHAMBERLAIN, JR.

THOS. A. ROBINSON.

PACIFIC  
Business College,  
320 POST ST.  
SAN FRANCISCO.

SEND FOR CIRCULAR.

Anderson's Springs,

LAKE COUNTY, CAL.

Nineteen miles from Calistoga, five miles from Middletown, and ten miles from the Great Geysers; between which and Anderson's Springs there is a good stage road.

HOT SULPHUR WATER

For Rheumatism, Paralysis, etc.; Cold Sulphur for Dyspepsia, Diseases of the Stomach and Bowels. Scenery unsurpassed. Climate mild and equable. Consumptives generally improve in health, and asthmatics are invariably relieved.

TROUT FISHING ON THE GROUNDS.

Deer Hunting in the Immediate Vicinity.

Accommodations and Cookery good. Board from \$10 to \$12 by the week.

ANDERSON & PATRIQUIN, Prop's.

PLEASANT SUMMER READING.

THE NEW PENELOPE

— AND —

Stories of California Life.

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. For sale by

A. L. BANCROFT & CO.

PRICE, \$2 00.

PATENTS  
OBTAINED IN U. S. AND FOREIGN COUNTRIES; trademarks, labels and copyrights registered through DEWEY & CO.'S MINING AND SCIENTIFIC PRESS Patent Agency, San Francisco. Send for free circular



## New American Industries.

The recent rapid increase in American chemical manufactures—in many cases from native crude materials—is a very encouraging feature of American trade. The *Grocer* notes that six years ago we imported from France cream of tartar to the extent of 9,000,000 pounds yearly; but so successful has the manufacture of it in this country been carried on, that last year not a single pound was imported. Notwithstanding the crude materials have at present to be imported, the price of the manufactured article has been reduced from 32 cents per pound, the rate for the French article, to 23 and 24 cents per pound for the American production. France and England formerly sent us annually 500,000 pounds of tartaric acid, while the importation for the last fiscal year was 183 pounds. England formerly monopolized our market for nitric acid to the extent of 250,000 pounds annually, at the rate of \$1.30 per pound, while last year 27,018 pounds were imported and sold at the same price as the American article—57 cents per pound. At present the lime juice from which citric acid is made has to be imported, but it could easily be produced from fruits grown in Florida, if only sufficient energy were put into the work. If the lemon and lime growers of the South can be induced to prepare the lime juice, the entire production and manufacture of citric acid will be kept in this country, saving hundreds of thousands of dollars annually, and developing another great industry. Borax was formerly brought from England at the rate of from 600,000 to 1,000,000 pounds per year. Owing to the development of borax mines in Nevada, this importation has largely fallen off, and the report for the last fiscal year showed only 3,492 pounds, and the price of the refined article, which is now prepared in New York city, is only from 8 to 9 cents per pound, when formerly it was 35 cents, England being now among the buyers instead of the principal seller, as she once was, both of the crude and refined product. —*Manufacturer and Builder.*

**OPPRESSIVE TRANSPORTATION CHARGES IN ENGLAND.**—It seems that the old country is in the same boat with the new in the matter of high rates of transportation by rail, which seriously cripple producing interests. It seems that the Atlantic can be crossed by freight cheaper than it can be moved across the little island, and thus American fruit has almost a monopoly in English markets. A Worcester-shire farmer wrote to the *London Field* in opposition to advice which had been given in that journal for more extended fruit-growing, asking what would be the use, as the Americans can send apples across the Atlantic at far less cost than English growers can send them to London from the outlying districts of his own county and Herefordshire. The *Agricultural Economist* says this is just the state of things which ought to be altered. The market for good fruit is almost limitless, and the English towns do not, at present, get a full supply of any kind, at all equal to demand. The Americans step in with large consignments of apples, and the French do the same with their cherries. The latter fruit may, perhaps, be grown with more certainty and success in the sunny clime of France than in England, with its treacherous springs and cold, damp summers; but, for the production of autumn apples and pears, the southern half of England may properly defy the world. Yet it is said the Americans are likely to drive English producers out of the market, entirely through the evils already pointed out.

**GALA WEEK AT SACRAMENTO.**—According to telegraphic reports, the people of Sacramento are doing their best to furnish varied entertainment for the thousands who will visit the capital city during the State fair. A large citizens' meeting was held Monday night to make arrangements. It is proposed to offer inducements for a military encampment of a superior order, much improved over that of last year by reason of the experience then had. It is also proposed to have an art exhibition, asking the State Agricultural Society to forego its preliminaries for art, and allow the sum to be increased from the citizens' fund to defray expenses. The proposition is to place pictures on exhibition, and the construction of a proper gallery, and make it a pure art exhibition, to be managed by the art associations, and invite loans of works; also the offer of inducements for a good display, and arrange for the proper hanging of works. It is also proposed to have a \$1,000 wing shooting tournament and other attractions. Commissioners, advisory on the various propositions and to correspond throughout the State, were named. It is probable a large sum will be raised by citizens to carry out the idea of a gala week.

**COST OF MOVING SHEEP FROM NEW YORK TO JAPAN.**—It appears from a statement made in the *Live Stock Journal* by Mr. W. G. Markham, who was recently in this city en route for Japan, that it cost the Japanese government \$5,175.24 to move three carloads of sheep from western New York to Yokohama. By rail from New York to this city the cost was \$2,175.24, and the steamship rate hence to Japan was \$15 per head; or \$3,000 for the 200 sheep.

## The Age of Wonders.

A recent English writer, reviewing the scientific and industrial achievements of the past half century, calls this "the age of wonders," and refers as follows to a few out of the many modern marvels that fully justify the appellation:

We have seen a substance which our ancestors proudly used to obliterate a pencil mark so molded to our use as to make man almost an amphibious animal; a noxious vapor, from which they would turn with disgust, made the means of a brilliant light, which enables the night almost to rival the day. We have seen the surgeon's knife, to them an instrument of necessary torture, divested of its horror by a discovery which gives a temporary insensibility to pain, which enables the suffering patient to wake from nothing more than a troubled dream, and find that over, under which, without this, his fortitude might have faltered, or his constitution sunk. We have seen a power which is inexhaustible so long as the elements of fire and water remain, the effects of which our grandmothers may have witnessed with a sigh, when terminating, by a sudden crash, the serene music of their tea-kettles; but which, by the combined efforts of modern science, has become the very hands and feet of the world, the great and almost universal manufacturer for man; the great propeller by which we rival the flight of the bird, and which so unites the human family that degrees of latitude and longitude are little more than milestones on the great highway of the world. And, lastly, we have seen that subtle power which our ancestors recognized only in the minute spark of the electric circle transformed into the faithful, untiring agent of the human mind, bearing its thoughts from one end of a vast continent to the other with an accuracy which would be in vain looked for in any other messenger, and with a speed which far outstrips the action of the mind which formed them. "Quick as thought" will not do now to express the greatest speed, and "quick as lightning" has become a practical, not merely a figurative expression.

**WIND GAUGE.**—A simple apparatus for continuously recording the direction of the wind, constructed by M. Redier, is now in use at the observatory at Lyons. A weathercock of suitable form is supported by a sort of tripod of grooved wheels running upon a circular rail of steel (the wheels having individually a horizontal axis, but collectively a vertical). From the weathercock passes down a vertical rod to connection with a cylinder (placed with axis vertical), which is supported below by a steel pivot resting on a plate of agate, and is guided at the upper part by horizontal pulleys. Thus each movement of the weathercock is transmitted to the cylinder. The latter has wound round it a sheet of paper, graduated vertically and horizontally (the vertical divisions representing the hours, the horizontal the directions), and a pencil applied to the paper is moved in vertical directions by clock-work. It will thus be seen that the tracing obtained on the paper indicates the successive positions taken by the weathercock, and, accordingly, the direction of the wind for any given time.

**LIGHTNING RODS.**—Mr. R. S. Brough has been discussing, in the *Philosophical Magazine*, the proper sectional areas of iron and copper lightning rods. So far as mere conductivity is concerned, a comparatively thin wire of either metal would suffice for any conductor; but such a thin conductor would be dangerous, because it would be fused by a heavy discharge of lightning. Iron being more liable to be fused than copper, Mr. Brough sought to determine the relative sectional areas of rods of two metals, so that neither would be more liable to fuse than the other. Ordinarily, it is stated that the iron rod should have four times the sectional area of the copper rod. Mr. Brough shows that these areas should be as eight to three; or since the rods are invariably made circular, and circular areas are to each other as the square of their diameters, the diameters of iron and copper rods of equal effectiveness should be in the proportion of 1.63 to 1. Iron is, therefore, much the cheaper metal for lightning rods.

**IMPROVEMENT IN SUGAR MANUFACTURE.**—A sugar planter and manufacturer sends the *Martinière Bienpublic* an account of an experimental application to sugar cane of the diffusion process employed in the beet-sugar factories of France and Germany. The experiments were made at the plantation Moncepos, Guadalupe, with an apparatus of six macerators. It was hadly adapted to meet the difficulties incident to the peculiar nature of cane, yet it showed (1) that by a methodical washing of the slices of cane an artificial juice nearly equal in density to natural cane juice could be obtained; and (2) that one hour of systematic maceration is sufficient to completely exhaust the cane fiber of the sugar which it contains.

**STRAIN ON PIANOS.**—The strain on 7 $\frac{1}{2}$  octave large concert grand Steinway & Son's piano is 60,000 pounds. Parlor grands of the same make average 30,000 pounds strain each; and upright pianos, having also three strings to each note, from 20,000 to 25,000 pounds, according to size; the square grand pianos, 7 $\frac{1}{2}$  octave, being partly three-stringed to each note, about 20,000 pounds; 7 octave square pianos, two strings to each note, about 16,000 pounds each.

**THE AUSTRALIAN EXHIBITIONS.**—Intending exhibitors in the Australian exhibitions will find all the information they need on the transportation of goods and arrangements in Australia, in a circular issued by Charles S. Cox, Secretary to the U. S. Commission to the Sydney exhibition. It is desirable that an early application for space be made. Goods will be received in Sydney up to the end of March, next year, and it will be arranged with the Victoria Commission to have them sent on in time for the opening of the Melbourne exhibition in that year. Exhibits can be addressed to the representatives of this country in Sydney, and should be marked in such a way as to show where they came from. Transportation, etc., must be paid by the exhibitor. Exhibits will be admitted free of duty. The general reception of articles will commence July 1st. An official catalogue will be published. Where it is intended that exhibits shall not be entered for competition it must be so stated. Reports and awards will be based on inherent and comparative merit. Within two months after the close of the exhibition, articles must be removed. Goods should be strongly boxed, and copies of invoices retained.—*Call.*

**THE TELEPHONE AS A LIGHTNING INDICATOR.**—Mr. George M. Hopkins, of Brooklyn, N. Y., during a recent thunder storm connected the gas and water pipe of his dwelling with an ordinary Bell telephone, and discovered that the electrical discharges were plainly indicated, either by a sharp crack or by a succession of taps. This occurred when the discharge was so distant that the thunder was inaudible. The sound also seemed to be perceived by the ear before the lightning could be seen. There was a marked difference in the character of the discharges, some that appeared single to the eye were really multiple. Often the discharges would consist of a series, beginning and ending with discharges larger than the rest, thus: — — — — —, sometimes it would be thus: You will have to use small turned rules, and thick ones — — — — —, sometimes the reverse, and often a single crack. The gas and water pipes were used, being the most convenient and at the same time the safest conductors for the purpose. Special apparatus might be devised, having a good ground, and a series of points for gathering the electricity from the air, but in using apparatus of this kind there is always more or less danger.—*Scientific American.*

**PACIFIC RURAL HANDBOOK.**—The little work before us could not have been treated of by a more competent authority. The book manifests throughout the author's ardent love for the beautiful in nature, and is well calculated to inflame and stimulate the same sentiment in its readers.—*Rural New Yorker.*

The book is written in a very pleasing manner by one who thoroughly understands his subject. In laying out private grounds or gardens, or in the cultivation of flowers and plants, to one who is inexperienced in such matters, a copy of this book will be found valuable.—*San Jose Mercury.*

We have read the "Handbook" with much pleasure and can cheerfully recommend it to all who wish to adorn, beautify and make their homes attractive.—*Salinas Index.*

The "PACIFIC RURAL HANDBOOK," written by Chas. H. Shinn for the publishers of the PACIFIC RURAL PRESS, will be sent, post-paid, in substantial cloth binding for \$1; in full leather, \$1.50; in cloth, interleaved with fine ruled paper for memoranda, \$1.50. Address

DEWEY & CO., PUBLISHERS,  
No. 202 Sansome Street, San Francisco.

## Books on Agriculture, Etc.

The following among other books will be sent post-paid on receipt of publishers' prices, annexed: Tobacco, its culture, manufacture and use, 500 pages, \$2.50.—The Patrons of Husbandry, 500 pages, \$3.75.—The Women of the Bible, 77 engravings, \$4.—Wells' Every Man His Own Lawyer, 612 pages, \$2.75.—American Husbandry, 2 vols., \$1.50.—Gray's Agricultural Essays, \$1.—Langstroth's Honey Bee, \$1.50.—Rauland's Sheep Husbandry, \$1.50.—Agricultural Engineering, \$1.50.—New Bee-keepers' Text Book, \$1.—Pacific Rural Handbook, \$1.—Rupp's Easy Calculator, \$1.—U. S. Land Law, 50 Cts.—Woodward's Grapes, Etc., \$1.—Sugar from Melons, 25 Cts.—Strawberry Culture, 50 Cts.—Layton's Belles Lettres, \$1.—Holt's Map of California and Nevada, to subscribers, \$1.—Back Volumes PACIFIC RURAL PRESS (bound) \$5; unbound, \$3.—Picturesque Arizona, \$2. Address DEWEY & CO., Publishers, 202 Sansome St., S. F.

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

SETTLERS and others wishing good farming lands for sure crops, are referred to Mr. Edward Frisbie, of Anderson, Shasta County, Cal., who has some 15,000 acres for sale in the Upper Sacramento valley. His advertisement appears from time to time in this paper.

**HOW TO STOP THIS PAPER.**—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

**SAMPLE COPIES.**—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate the copy sent.

**EXTRA COPIES** can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.

For information in music matters send a postal to Kohler & Chase.

SEND to the Great Music House of Kohler & Chase for anything in the music line. 137 and 139 Post street, S. F.

## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, July 23d, 1879.

The markets have been rather in better tone and more interest manifested, owing to the quickening in Wheat and Barley and the machinations of the Bag ringers. The outlook in Wheat is now quite promising, providing Bag and charter advances do not keep pace with the advance in the grain. General produce and merchandise keep along in low channels and do not give much material for comments.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.			CLUB.		
Thursday....	8s	9d@9s	6d	9s	6d@13s	10d
Friday.....	8s	6d@8s	6d	9s	6d@9s	9d
Saturday.....	8s	6d@8s	6d	9s	6d@9s	9d
Monday.....	8s	6d@8s	6d	9s	6d@9s	9d
Tuesday.....	8s	8d@9s	8d	9s	7d@9s	10d
Wednesday..	8s	8d@9s	8d	9s	7d@9s	10d

To-day's cable quotations, to the Produce Exchange compare with same date in former years as follows:

	Average.			Club.		
1877.....	12s	6d@12s	10d	12s	10d@13s	4d
1878.....	10s	@10d	2s	10s	3d@10s	6d
1879.....	8s	8d@9s	8d	9s	7d@9s	10d

## The Foreign Review.

LONDON, July 22.—The *Mark Lane Express* says: The rain, which held off during the greater part of last week, recommenced Saturday and still continues. The harvest, even in the south, will hardly commence before the middle of August. Of all crops, Barley gives the least promise of a satisfactory yield, which is doubly deplorable, as an unusually large acreage is sown therewith. Wheat came into ear nearly a month late, and its prospects are not hopeful, even on the lightest soils, whilst on heavy lands, even should the weather next month be more favorable, two-thirds of a crop is all that can be expected. Oats in the south have been coming in ear moderately well, but the cereal crops are in no case up to the average promise, even of ordinary years. During the past week a good part of the fair hay crop was secured in counties nearest to London, but throughout the country, hay has suffered from too long standing. Potatoes are also suffering. Farmers have now become strong holders of Grain. English Wheat is in reduced supply, and the demand considerably increased. Prices advanced irregularly, two, three, and even five shillings, on the week. Quotations depended upon the quantity offered at each agricultural market. The best price obtainable for English White Wheat a fortnight ago was 50s; the best price now is 54s, and at some markets, such as London and Guilford, 57s per quarter. Red Wheat from eastern counties also has been held very firmly, and for a material advance. Foreign Wheat was higher on the week in a majority of markets, though there is no large advance. The inquiry has been somewhat less since Thursday. Maize, though higher at certain markets, as a rule, has merely maintained prices in the face of very heavy supplies. There was a fair business in Oats at 36d advance. Imports into the United Kingdom for the week ending July 12th, were 1,138,008 cwt. of Wheat, and 190,780 cwt. of Flour. In Mark Lane, Monday, holders were firm, in consequence of bad weather. There was some demand for France. The supply of English Wheat was moderate, and prices generally rose a shilling, as compared with last Monday. The supply of foreign was fair, and the demand somewhat irregular. California rose 2s 6d, and other descriptions were mostly 1c 2s dearer. Flour was firm, but not higher, in consequence of large supplies; Barley was firm; Oats and Maize were higher, despite large supplies.

## Freights and Charters.

The British iron bark *Selkirkshire*, 1,192 tons, has been chartered, prior to arrival, for Wheat to Cork, at £278 6d. The chartered Wheat fleet in port numbers 23 vessels, of a registered tonnage of 32,550, with a carrying capacity of 48,000 short tons, or 930,000 ctns. Disengaged tonnage in port, 35,000; on the way, 170,000.

## Eastern Grain Markets.

NEW YORK, July 21. A *Times* Chicago special says: It is understood that the Wheat clique has the rest of its Wheat here sold, in "seller July" and "seller the year" contracts, and intends to deliver it at its pleasure in a few days. The clique bought its Wheat at an average price of 81c; storage and other charges amount to 11c, and sold it for about 81, leaving 4c a bushel profit. It made most of its money on option operations in Spring. It is stated by one of the firms which has been managing the Chicago part of the Wheat clique that Keene has to-day delivered the last of his cash grain in this city, a parcel of 250,000 bushels having been turned over to-day. Notwithstanding the fact that this was given out at an early hour this morning, the market price for Wheat mounted steadily up till it sold at 90½c, or nearly 10c above Saturday's lowest price. The prime cause of this was the news from Liverpool, which quoted a stronger market there than has been reported for many months.

NEW YORK, July 22.—The general markets remain quiet. Flour is irregular, more active. Wheat, after opening 1c higher, closed dull, weak, with half the advance lost. Pork is dull, unchanged. Lard is more active, easier.

## Eastern Wool Markets.

NEW YORK, July 22.—Wool continues in limited demand, prices easier.

PHILADELPHIA, July 22.—The Wool market is quiet and steady. Colorado washed is quoted at 18@25c; unwashed, 17@19c; extra and merino pulled, 35@37c; No. 1 and super, 34@36c.

BOSTON, July 19.—The Wool receipts were large and stocks were quite rapidly accumulating, but toward the close there was more inquiry, sales for the week amounting to about 1,500,000 lbs. The demand still runs on medium grades. Fine Wools are neglected, and prices are for the most part nominal. Manufacturers are purchasing as their wants require, and the market has assumed a settled and healthy tone. Business is light in combing and delaine fleeces. Sales comprise Ohio and Pennsylvania fleeces, X, XX and No. 1 at 37½@41c; Michigan, Wisconsin, New York and Indiana fleeces, 35@37½c; coarse and low fleeces, 32@34c; combing and delaine, 40@44c; unwashed combing, 40c; unwashed and unmerchantable fleeces, 21@22c; Texas, 25@35c; Territory, 17@20c; Colorado, 24@26c; Georgia, 31@35c; Kansas, 21c; scored, 48 @62½c; super and X pulled, 32@43c; California in fair demand; sales of 390,000 lbs Spring, 17½@22½c; 35,000 lbs Fall at 15c.

## Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon to-day



as compared with the receipts of previous weeks :

ARTICLES.	WEEK. July 1.	WEEK. July 9.	WEEK. July 16.	WEEK. July 23.
Flour, quartersacks..	95,216	16,672	25,864	28,033
Wheat, centals.....	50,729	113,961	120,468	139,776
Barley, centals.....	46,085	25,482	20,036	22,643
Beans, sacks.....	1,223	521	855	1,814
Corn, centals.....	5,524	4,058	777	1,879
Oats, centals.....	9,250	5,742	4,096	1,729
Potatoes, sacks.....	8,063	9,270	15,219	1,248
Onions, sacks.....	1,256	1,929	1,535	14,251
Wool, bales.....	3,036	4,523	6,145	3,140
Hops, bales.....	184	41	89	75
Hay, bales.....	1,379	729	1,142	1,798

**BAGS**—The annually recurring "Bag ring" has tightened its grasp upon the Bags now in the market and due to arrive. The combination is said to be more firm than before, and a design of advancing Grain Bags to 12½¢ is credited to the managers. The Bags are all placed in the hands of one firm as agents, and no prices whatever are now quoted, and none are promised until the beginning of next week. This trade conspiracy bids fair to increase from one-third to one-half the amount of money which farmers ought to pay for their Bags this year. Those are wise and fortunate who laid in their Bags two or three weeks ago when the price was low. This would seem to be always the thing to do, for every year the ring trouble comes in.

**BARLEY**—The price of Feed Barley is about 5c per cwt better than last week, and the market is firm; Chevalier is now rated at \$1.50@1.75; it has been purchased for shipment to the East and to Europe. We note sales of Feed Barley as follows: 800 sks old Bay Feed, at 80c; 5,000 sks Coast Feed, at 77½c; and 700 do foul, at 72½c per cwt.

**BEANS**—Beans are still very low. No change has occurred during the week.

**CORN**—Large White and Yellow have gained a little, about 5c per cwt. We note sales: 100 sks Small Round Yellow, at 85c; 200 sks do, 83½c; and 300 sks Large Yellow at 77½c per cwt.

**DAIRY PRODUCE**—Some receivers report their receipts diminishing somewhat, and sales rather more easily made, but no improvement in rates is attained. Some large dealers say they are still receiving more than they can sell readily. There is no change either in Butter or Cheese prices.

**EGGS**—Fresh California Eggs have gained a point, the best now bringing the quarter dollar, with a promising feeling.

**FEED**—Millers have put a dollar on the ton of Bran in sympathy with the advance in Wheat; Hay is still dull at \$6@11, and sales few.

**FRESH MEAT**—Beef and Mutton are unchanged; Pork is a little weaker and lower, and Hog arrivals large.

**FRUIT**—Prices have fluctuated somewhat but not largely. Our list shows the ruling rates to-day. Tahiti oranges are now out of the market for the time, and some Australian Fruit has come in. There is no change in the price of California-grown Citrus Fruits.

**HOPS**—There has been quite a disposition to close out the Old Hops, at least, 500 bales, some last year's, some two-year-olds, have sold at a range of 3@5c per lb. It is now reported that bids of 15c per lb for the new crop to arrive, have been refused, and the opinion is that they will bring more money. Experts who have looked over the field expect a reduction of one-third from the acreage of last year and poor cultivation, because of unsatisfactory prices, will still farther reduce the year's crop. The coming crop, it is thought, will not be more than two-thirds or three-quarters as large as last year, and that, it will be remembered, was considerably reduced from the yield of 1876. The New York market is reported by Emmet Wells, for the week ending July 11th, as follows:

Continued discouraging crop reports, both from England and from our own country, has caused a further advance of 2c per lb on choice Hops of the last growth, and 1c on "Yearlings." The chief buyers are speculators and brewers. The market is not at all excited, but a very strong feeling prevails, and the tendency is toward a further advance. We hear of a few buyers offering to contract with growers at 15c for the new crop; not a very liberal offer considering the fact that the opening price is likely to be nearer double that figure, judging from the present outlook. Our advice to growers would be not to contract at any price.

**OATS**—The market is firm, but sales rather limited. Choice Surprise are still selling high, some at \$1.02½ per cwt.

**ONIONS**—Prices are unchanged.

**POTATOES**—Low prices are chronic and arrivals are still large, notwithstanding the fact that 20@35c per sack pays for nothing. We hear of thousands of early acres in different regions which will not be dug.

**POULTRY AND GAME**—Poultry prices are lowered this week. Receipts are larger this year than usual during harvest time, and the demand seems very slack at present.

**PROVISIONS**—The trade is reported moderately active, but prices are unchanged.

**VEGETABLES**—Narrowfat Squash drops to \$20 per ton. Tomatoes also have increased supplies and divided values. Our list shows to-day's prices for all Vegetables specified.

**WHEAT**—The price has taken a good start upward, but buyers are shy and pleading. Millers are the freest purchasers, and have paid as high as \$1.35 for their choice lots. Our quotations are advanced all around. We note sales of 400 cts good Shipping at \$1.75; 1,000 do new Coast at \$1.65; 240 sks old grade at \$1.60; and 595 sks do at \$1.35 per cwt.

**WOOL**—The trade is chiefly confined to Oregon Wools, quite an amount of Eastern Oregon being sold at 18@20c. Some Humboldt County Wool has sold at a price believed to be 25½c. Our prices in the table are about as the market is thought to be, but are somewhat nominal in the absence of transactions.

**Gold, Legal Tenders, Exchange, Etc.**  
(Corrected Weekly by SUTRO & Co.)

SAN FRANCISCO, July 23, 3 P. M.  
SILVER, 37½@121.  
GOLD BARS, \$90@910. SILVER BARS, 8@19 ½ cent. discount.  
EXCHANGE on New York, 20, on London bankers, 49½@49. Commercial, 50; Paris, five francs \$ dollar; Mexican dollars, 90½@92.  
LONDON Consols, 97 15-16; Bonds (4½), 105½.  
QUICKSILVER in S. F., by the task, ½ lb, 33½c.

## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., July 23, 1879.

<b>BEANS &amp; PEAS.</b>			
Bayo, cts.....	10 @ 15	Pecans.....	12½ @ 14
Butter.....	17 @ 20	Peanuts.....	4 @ 6
Castor.....	3 @ 30	Pilberts.....	15 @ 16
Pea.....	2 @ 20	<b>ONIONS.</b>	
Red.....	1 @ 20	Alviso.....	— @ —
Pink.....	— @ 20	Union City, etc.....	— @ —
Small White.....	15 @ 20	San Leandro.....	— @ —
Lima.....	6 @ 20	Stockton.....	— @ —
Field Peas.....	15 @ 20	Sacramento River.....	— @ —
<b>BROOM CORN.</b>		Salt Lake.....	— @ —
Southern.....	2 @ 25	Oregon.....	— @ —
Northern.....	3 @ 4	New Onions.....	40 @ 70
<b>CHICORY.</b>		Red, cts.....	40 @ 50
California.....	4 @ 4	White, cts.....	60 @ 70
German.....	6 @ 7	<b>POTATOES.</b>	
<b>DAIRY PRODUCE, ETC.</b>		Humboldt.....	— @ —
<b>BUTTER.</b>		Cuffey Cove.....	— @ —
Cal. Fresh Roll, lb.....	15 @ 18	Early Rose, sk.....	25 @ 35
Fancy Brands.....	— @ 20	Half M'n Bay, new.....	25 @ 35
Pickle Roll.....	19 @ 22	Kidney.....	— @ —
Firkin, new.....	16 @ 18	Sweet.....	— @ —
Western.....	12½ @ 15	<b>POULTRY &amp; GAME.</b>	
New York.....	— @ —	<b>CHICKS.</b>	
<b>CHEESE.</b>		Penns, doz.....	5 @ 6 50
Cheese, Cal., old, lb.....	7 @ 9	Roosters.....	5 @ 6 50
do, new.....	7 @ 10	Broilers.....	2 50 @ 3 50
N. Y. State.....	12 @ 14	Ducks, tame, doz.....	4 00 @ 5 00
<b>EGGS.</b>		Geese, pair.....	1 25 @ 1 75
Cal. fresh, doz.....	23 @ 25	Wild Gray, doz.....	— @ —
Ducks.....	— @ 20	White do.....	— @ —
Oregon.....	— @ 20	Turkeys.....	18 @ 22
Eastern.....	17 @ 18	Snipe, Eng.....	— @ 1 50
Pickled, etc.....	— @ —	do, Common.....	50 @ 75
<b>FEED.</b>		Quail, doz.....	— @ —
Bran, ton.....	14 @ 15 00	Rabbits.....	— @ 50
Corn Meal.....	20 @ 21 00	Hare.....	1 25 @ 1 50
Hay.....	5 @ 10 00	Venison.....	5 @ 8
Middlings.....	— @ 18 00	<b>PROVISIONS.</b>	
Oil Cake Meal.....	32 @ 40	Cal. Medium, Hvy, lb.....	8½ @ 9
Straw, bale.....	40 @ 50	Light.....	10 @ 11
<b>FLOUR.</b>		Large.....	8½ @ 9
Extra, bbl.....	5 @ 6 50	Cal. Smoked Beef	8 @ 9
Superfine.....	4 @ 5 00	Shoulders, Cover'd.....	6½ @ 7
Graham, lb.....	2½ @ 3	Hams, Cal.....	9½ @ 10½
<b>FRESH MEAT.</b>		Dupees.....	13 @ 14
Beef, 1st quality, lb.....	5 @ 5½	Neck, S.....	13 @ 14
Second.....	3½ @ 4	Poyd's.....	13½ @ 14
Third.....	3 @ 3½	Whittaker.....	12½ @ 13
Mutton.....	2½ @ 3	Royal.....	13½ @ 14
Spring Lamb.....	4 @ 5	Reliable.....	— @ —
Pork, undressed.....	3½ @ 4	Clough's.....	13 @ 14
Dressed.....	5 @ 5½	<b>SEEDS.</b>	
Veal.....	6 @ 6½	Alfalfa.....	5 @ 12
Milk Calves.....	6½ @ 7	Canary.....	4 @ 5
do, choice.....	7 @ 8	Clover, Red.....	15 @ 16
<b>GRAIN, ETC.</b>		White.....	50 @ 55
Barley, feed, cts.....	70 @ 85	Cotton.....	6 @ 10
Brewing.....	90 @ 110	Flaxseed.....	2½ @ 3
Chevalier.....	150 @ 175	Hemp.....	8 @ 10
Buckwheat.....	125 @ 135	Italian Ry Grass.....	35 @ 40
Corn, White.....	75 @ 80	Perennial.....	35 @ 40
Yellow.....	75 @ 80	Mill.....	13 @ 12
Small Round.....	85 @ 90	Mustard, White.....	5 @ 8
Oats.....	100 @ 110	Brown.....	1½ @ 2
Milling.....	150 @ 165	Rape.....	3 @ 8
Rye.....	80 @ 85	2d Blue Grass.....	17 @ 20
Wheat, No. 1.....	175 @ 180	2d quality.....	16 @ 18
do, No. 2.....	167½ @ 172½	Sweet V Grass.....	10 @ 25
do, No. 3.....	145 @ 160	Chick.....	20 @ 25
Choice Milling.....	— @ 85	Hungarian.....	8 @ 10
<b>HIDES.</b>		Lawn.....	30 @ 50
Hides, dry.....	16 @ 16½	Mesquit.....	— @ 20
Wet salted.....	7½ @ 9	Timothy.....	7 @ 8
<b>HONEY, ETC.</b>		<b>TALLOW.</b>	
Beeswax, lb.....	20 @ 25	Crude, lb.....	5 @ 5½
Honey in comb.....	5 @ 10	Refined.....	7½ @ 8
do, No. 2.....	7 @ 9½	<b>WOOL, ETC.</b>	
Dark.....	5 @ 6	<b>SPRING.</b>	
Strained.....	4½ @ 5	San Joaquin and S. Coast.....	— @ —
<b>HOPS.</b>		Burry.....	12 @ 13½
Oregon.....	— @ 8	Free (dusty).....	14 @ 16
California.....	4 @ 8	Free (choice).....	15 @ 23
Wash. Ter.....	4 @ 8	<b>NUTS—Jobbing.</b>	
Old Hops.....	3 @ 5	Walnuts, Cal.....	8 @ 9
<b>NUTS—Jobbing.</b>		do, Chile.....	8 @ 9
Almonds, hd sh lb.....	7 @ 8	Almonds, hd sh lb.....	7 @ 8
Soft sh lb.....	16 @ 18	do, Oregon, Eastern.....	18 @ 22
Brazil.....	12½ @ 13	do, Valley.....	24 @ 26

## GENERAL MERCHANDISE.

[WHOLESALE.]

WEDNESDAY M., July 23, 1879.

<b>CANDLES.</b>			
Crystal Wax.....	17 @ —	Pacific Glue Co's	00 @ 90
Eagle.....	12 @ —	Neatsfoot, No. 1.....	1 35 @ —
Patent Sperm.....	30 @ —	Castor, No. 1.....	1 30 @ —
<b>CANNED GOODS.</b>		Baker's A A.....	1 25 @ 1 30
Assorted Pie Fruits.....	2 @ 25	Oliver's A A.....	1 25 @ 1 30
2½ lb cans.....	2 @ 25	Olive, Plagniol.....	5 25 @ 5 75
Table do.....	3 50 @ —	Posselt.....	4 75 @ 5 25
Jams and Jellies.....	3 75 @ —	Palm, lb.....	9 @ —
Pickles, hf gal.....	3 25 @ —	Linseed, Raw, bbl.....	78 @ —
Sardines, qf box.....	1 67½ @ 1 90	Boiled.....	80 @ —
Hf Boxes.....	2 50 @ 2 75	Cocoanut.....	55 @ —
Merry, Faul & Co's.....	— @ —	China nut, cs.....	— @ 65
<b>Preserved Beef.</b>		Sperm.....	1 40 @ —
2 lb, doz.....	3 75 @ 4 00	Coast Whales.....	— @ 32½
do Beef, 4 lb, doz.....	5 00 @ —	Polar.....	— @ 35
Preserved Mutton.....	3 75 @ —	Lard.....	— @ 70
2 lb, doz.....	3 75 @ —	Oleophine.....	22 @ 22
Beef Tongue.....	6 50 @ —	Chalks Britl.....	17½ @ 18½
Preserved Ham.....	6 50 @ —	Photoline.....	31 @ 32½
Deviled Ham, 1 lb.....	5 50 @ —	Eureka.....	18 @ 42½
do Ham, 4 lb doz.....	3 00 @ —	Barrel kerosene.....	20 @ —
Boneless Pigs Feet.....	4 50 @ —	Downer Ker.....	35 @ —
3 lbs.....	4 50 @ —	Elaine.....	37½ @ —
2 lbs.....	3 75 @ —	<b>PAINTS.</b>	
Spiced Fillets.....	4 25 @ —	Pure White Lead.....	8 @ 8½
Head Cheese.....	4 25 @ —	Whiting.....	14 @ —
3 lbs.....	4 25 @ —	Putty.....	4 @ 5
<b>COAL—Jobbing.</b>		Chalk.....	14 @ —
Australian, ton.....	6 00 @ 6 50	Paris White.....	2½ @ —
Coos Bay.....	— @ 5 50	Ochre.....	34 @ —
Bellingham Bay.....	5 50 @ 6 00	Venetian Red.....	34 @ —
Seattle.....	12 @ 12 50	Averill Mixed.....	— @ —
Mt Diablo.....	4 75 @ 6 00	White & tints.....	2 00 @ 2 40
Lehigh.....	11 50 @ 12 50	Green, Blue & Ch Yellow.....	3 00 @ 3 50
Liverpool.....	6 00 @ 6 50	Light Red.....	3 00 @ 3 50
West Hartley.....	— @ 8 00	Metallic Roof.....	1 30 @ 1 60
Scotch.....	— @ 8 00	<b>RICE.</b>	
Scranton.....	6 00 @ —	China, Mixed, lb.....	4½ @ 5
Vancouver Id.....	75 @ —	Hawaiian.....	6 @ —
Charcoal, sack.....	60 @ —	<b>SALT.</b>	
Coke, bush.....	60 @ —	Cal. Bay, ton.....	15 00 @ 22 50
<b>COFFEE.</b>		Common.....	10 00 @ 12 00
Sandwich Id, lb.....	— @ —	Carmen Id.....	12 00 @ 14 00
Costa Rica.....	16 @ 16½	Liverpool fine.....	19 00 @ —
Guatemala.....	16 @ 16½	<b>SOAP.</b>	
Java.....	25 @ 26	Castile, lb.....	8 @ 15
Manila.....	17 @ —	Common brands.....	4½ @ 6
Ground, in cs.....	25 @ —	Fancy brands.....	7 @ 8
<b>FISH.</b>		<b>SPICES.</b>	
Sack'd Dry Cod.....	— @ 4	Cloves, lb.....	— @ 45
do in cases.....	5 @ 6	Cassia.....	19 @ 20
Eastern Cod.....	7 @ 7½	Nutmegs.....	85 @ 87½
Salmon, bbls.....	8 00 @ 9 00	Pepper Grain.....	— @ 12
Hf bbls.....	5 00 @ 5 50	Mustard.....	19 @ 20
1 lb cans.....	1 10 @ 1 12½	Mustard, Cal.....	— @ 25
Pkld Cod, bbls.....	22 00 @ —	<b>SUGAR, ETC.</b>	
Hf bbls.....	11 00 @ —	Cal. Cube, lb.....	— @ 10½
Mackerel, No. 1.....	9 50 @ 10 00	Powdered.....	— @ 10½
Hf Bbls.....	1 85 @ 2 10	Fine crushed.....	— @ 10½
In Kits.....	3 25 @ 5 50	Granulated.....	— @ 10
Ex Mess.....	3 00 @ 3 50	Golden C.....	— @ 8½
Pkld Herrings, bx.....	30 @ 3 50	Cal. Syrup, kgs.....	70 @ 20
Boston Sck'd Hg.....	70 @ —	Hawaiian Molasses.....	26 @ 30
<b>LINE, ETC.</b>		<b>YOUNG TEA.</b>	
Gate Mills.....	3 00 @ 3 25	Young Hyson.....	— @ 51
Land, Sta Cruz, 100.....	100 @ 12 50	Moynne, etc.....	— @ 51
Lime, Sta Cruz, bbl.....	1 25 @ 1 50	Country pck'd Gu.....	— @ 42½
Cement, Rosen.....	2 00 @ 2 25	powder & In.....	— @ 42½
Portland.....	4 00 @ 4 50	Yoon-Chow O.....	30 @ 35
<b>NALES.</b>		Japan, 1st quality.....	40 @ —
Ass'd sizes, keg 2 70 @ 2 75		2d quality.....	20 @ 25

## FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., July 23, 1879.

<b>FRUIT MARKET.</b>			
Apples, bsk.....	20 @ 35	White.....	6 @ 8
do, box.....	25 @ 1 00	Peaches.....	7 @ 8
Apricots, box.....	— @ 1 25	do pared.....	18 @ 20
Bananas, bunch.....	2 00 @ 4 00	Pears.....	8 @ 10
Blackberries, ch'st.....	2 25 @ 3 00	Pitted.....	12½ @ 14
Cherries, ch'st.....	— @ —	Prunes.....	8 @ 9
Citrons, Cal, 100.....	— @ —	Raisins, Cal, bx 150.....	1 50 @ 1 75
Cocoanuts, 100.....	10 @ 12 00	do, Halves.....	2 00 @ 2 25
Crab Apples.....	50 @ 1 25	do, Quarters.....	2 25 @ 2 50
Currents, chest.....	— @ 1 00	Malaga.....	2 75 @ 3 00
Figs, box.....	75 @ 1 00	Zante Currants.....	8 @ 10
Gooseberries.....	— @ —	<b>VEGETABLES.</b>	
Limes, Mex.....	8 00 @ 12 00	Asparagus, box.....	1 25 @ 1 50
do, Cal, box.....	4 00 @ 5 00	Beets, ct.....	50 @ —
Lemons, Cal M, 10.....	10 @ 15 00	Beans, String.....	1½ @ 2
Sicily, box.....	8 00 @ 10 00	Cabbage, 100 lbs.....	40 @ 50
Oranges, Cal M, 15.....	60 @ 20 00	Canteloupes, doz.....	1 75 @ 2 01
do, small.....	6 00 @ 9 00	Carrots, ct.....	30 @ 40
do, Tahiti.....	— @ 75	Cauliflower, doz.....	2 @ 3
Peaches, box.....	30 @ 75	Chile Peppers.....	60 @ 75
do, bsk.....	25 @ 75	Cucumbers, bx.....	60 @ 75
Pears, bx.....	40 @ 75	egg Plants, bx.....	1 50 @ 1 75
Pineapples, doz.....	4 00 @ 6 00	Garlic, New, lb.....	11 @ 13
Plums, box.....	50 @ 1 03	Green Corn.....	17 @ 30
Quinces.....	— @ —	Green Peas, lb.....	2 @ 2½
Raspberries, ch'st.....	6 00 @ 9 00	Lettuce, doz.....	10 @ —
Strawberries, ch'st.....	6 00 @ 10 00	Parasips, lb.....	14 @ 11
<b>DRIED FRUIT.</b>		Rhubarb, lb.....	10 @ 12½
Apples, sliced, lb.....	4 @ 6	Squash, Marrow.....	— @ 40
do, quartered.....	2 @ 3	fat, tin.....	— @ 40
Apricots.....	15 @ —	Summer, box.....	40 @ 50
Blackberries.....	12½ @ 15	Tomato, box.....	20 @ 75
Citron.....	23 @ 24	Turnips, ct.....	40 @ 50
Dates.....	9 @ 10	White.....	— @ 50
Figs, Black.....	3 @ 4		

## RETAIL GROCERIES, ETC.

[WHOLESALE.]

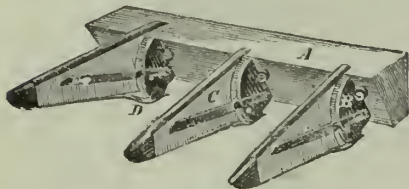
WEDNESDAY M., July 23, 1879.

Butter, California.....			Rice.....	8 @ 12
Choice, lb.....	25 @ 35		Yeast Pwdr. doz.....	1 50 @ 2 00
Cheese.....	18 @ 25		Can'd Oysters doz.....	0 25 @ 50
Eastern.....	25 @ 30		Syrup, S F Gold'n.....	75 @ 02
East, Cal.....	18 @ 18		Dried Apples, lb.....	10 @ 14
.....	20 @ 25		Ger. Prunes.....	12 1/2 @ 10
Flour, superfine, bibb.....	0 60 @ 05		Eggs, Cal.....	9 @ 15
Corn Meal, lb.....	2 1/2 @ 3		Peaches.....	11 @ 16
Sugar, wb. ershd.....	12 @ 13 1/2		Oils, Kerosene.....	50 @ 60
Light Brown.....	8 @ 9 1/2		Wines, Old Port.....	3 50 @ 05
Coffee, Green.....	23 @ 35		French Claret.....	1 00 @ 2 50
Tea, Fine Black.....	50 @ 01 00		Cal, doz bot.....	3 00 @ 4 50
Finest Japan.....	55 @ 02 00		Whisky, O K, gal.....	3 50 @ 05
Candles, Adm'te.....	15 @ 25		French Brandy.....	4 00 @ 8 00
Soap, Cal.....	7 @ 10			



## Agricultural Articles.

# BONNEY'S PATENT Adjustable Grain Lifter FOR HEADERS.



GRAIN BELTS, GRAIN LIFTERS,  
Drapers, and Draper Sticks  
AND FINDINGS

Of wood work for all kinds of Farming Implements furnished at short notice. Also,

# HAY RAKES

AT COST PRICE.

At O. BONNEY'S,

No. 221 Mission Street, San Francisco, Cal.

# The Famous "Enterprise,"

PERKINS' PATENT  
Self Regulating  
WINDMILLS,  
Pumps & Fixtures.



These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babbitted boxes.

Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs.

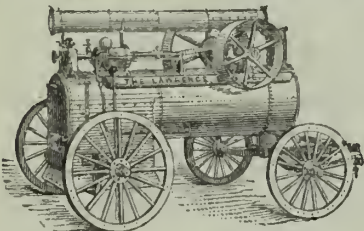
All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

HORTON & KENNEDY,

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

# The LAWRENCE ENGINE.



The Best Farm Engine in the World.

AUTOMATIC CUT-OFF,

Less Fuel, Less Water, Less Repairs than any other Portable Engine.

No Commission to Agents! Bottom Price to Purchasers!

Engines for all purposes, with and without Wagons. You can save money by buying direct of us. Order early for next season's use. Send for Illustrated Catalogue and Price List.

ARMINGTON & SIMS, Lawrence, Mass.

ARMINGTON & SIMS were lately with the J. C. Hoadley Co

MATTESON & WILLIAMSON'S



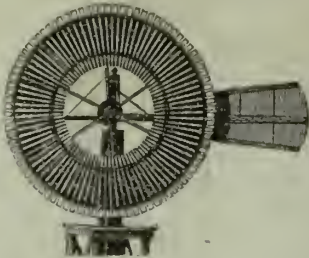
Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,  
STOCKTON, CAL.

\$50.

The New  
Worthington  
Windmill



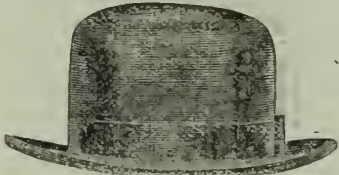
Manufactured by

W. D. PARSON,

1364 San Pablo Avenue, Oakland, Cal.  
Also, maker of the "Colorado Wind Engine," Wind Grist Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern of Deep Well and Artesian Lift Pump Cylinders. Circulars free.

# HERRMANN'S HATS

ARE THE BEST!



Try one and you will Wear no other.

Spring and Summer Styles,

— AT —

336 Kearny St., bet. Bush and Pine,

— AND —

910 Market St., above Stockton.

Send for Illustrated Spring Style Catalogue.

# ARITHMETIC MADE EASY BY ROPP'S

Easy Calculator.

This valuable work is used by thousands of farmers, mechanics and business men, and is highly recommended for its practical utility and convenience.

It embodies an entirely new system of calculation, by which a vast amount of figures and mental labor—required by the ordinary methods—and fractions with their complexities, are absolutely avoided.

It is so simple and easily comprehended that even the most illiterate is enabled, in a few minutes, to reckon with absolute accuracy and speed; while its original and rapid methods, benefit and delight the most scholarly.

It shows at a glance the accurate value of wheat, corn, rye, oats, barley, cattle, hogs, hay, coal, lumber and merchandise, from one pound to a car load, and for any price the market is likely to reach.

It gives the interest, simple and compound, on any sum, or any time, at six, seven, eight, and ten per cent.; the exact measurement of boards, scantlings, timbers, saw logs, cisterns, tanks, wells, granaries, bins, wagon beds, corn cribs, etc., the wages at various rates, for hours, days, weeks and months; besides numerous other important methods, rules and tables.

It is printed on fine tinted paper, is well and elegantly bound in pocket-book shape, and accompanied by a silicate slate, pocket for papers, and memorandum, which can be replenished in the two latter styles.

It answers the purpose of a pocket book and diary, and costs no more, although it was gotten up at great expense and labor, and is unquestionably one of the most useful publications ever issued from the press.

Price, bound in Fine English Cloth, \$1.00.

Sent direct from the Eastern publisher, postpaid, on receipt of price, by P. O. order, registered letter or receipt by express. Address

DEWEY & CO., San Francisco.

# SEND FOR THE \$1.50

Homœopathic Medicine Case.

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address

BOERICKE & TAFEL,  
Homœopathic Pharmacy, San Francisco.

# New Dusters.

DEARBORN DUSTERS,

Taking the place of all Feather and other Dusters. Made in six sizes, retailed from 35 Cents to \$1. The best, most durable Duster now known. Trade supplied. Address

DEARBORN DUSTER CO.,

No. 12 California St., San Francisco.



AMERICAN



MACHINE AND MODEL WORKS.

Experimental and Fine Special Machinery, Planing, Gear Cutting, Patterns, Models for Inventors, etc. Printing Press and General Machine Repairing. Punches, Dies, Taps, Reamers, etc., made and repaired

I. A. HEALD, Proprietor.

514 Commercial Street, above Sansome, San Francisco

ASK YOUR PLUMBER FOR



SPIDER HOSE.

The best Rubber Hose in market. Every foot guaranteed.

H. P. GREGORY & CO.,

General Agents, San Francisco, California.

# WANTED—100 FARMERS.

We will give the use of 50 acres or more of choice land, rent free, for one year, with the privilege of purchasing at a low price thereafter; crops of all kinds may be planted nine months of the year. Apply to

J. F. GREENMAN,

Room 10, No. 320 Sansome Street, San Francisco.

# Stock Notices.

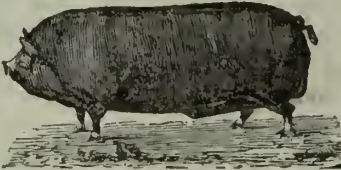


# SPANISH MERINO SHEEP.

Choice stock of thoroughbred Bucks and Ewes, guaranteed free from disease. Purchasers are invited to examine. About 10 minutes' walk from the Railroad terminus, adjoining State University.

E. W. WOOLSEY,  
Berkeley, Alameda County, Cal.

# BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

15th and A Streets, Sacramento City, Cal

# ANGORAS AT THE FAIRS.

The undersigned would announce to those interested in ANGORA GOATS, and the public generally, that he will have a lot of

# Choice Angora Bucks

On Exhibition at the State and District Fairs

This fall, namely: At the State Fair at Sacramento, the Golden Gate Fair at Oakland, the Nevada State Fair at Reno, and the Oregon State Fair at Salem.

These Bucks will be sold at fair rates.

JOHN S. HARRIS,

Hollister, San Benito Co., Cal

# Thoroughbred Spanish Merino Sheep

FOR SALE.



Wool Growers and Sheep Breeders desirous of improvement are invited to examine the *Banner* and *Premium* flock of the State. All 1st Premiums taken at State Fair in 1878, with strong competition. No sheep superior in the world.

100 head yearling and 20 head 2-year old Rams for sale, large sized carcass free from wrinkles. Heavy shearers, long staple of white glossy wool. A few young Ewes also for sale. All Sheep warranted free from Disease. Send for circular and price list or come and see us at once. Laurel Ranch, Hayward, Alameda County, Cal. One mile from depot on C. P. R. R. J. H. STROBRIDGE.

# RAMS FOR SALE.

400 THOROUGHbred

And Graded

SPANISH MERINO

Rams For Sale.



Bred from the first importation of Spanish Merino Sheep to California, in 1859.

Residence, one mile north of McConnell's Station, Western Pacific Division C. P. R. R.

P. O. address, MRS. E. McCONNELL-WILSON,

Elk Grove, Sacramento Co., Cal.

# JOHN ROGERS & SONS,

GENERAL STOCK AND SALE YARD,

Corner Market and 9th Sts., San Francisco,

HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN. Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

# MONEY TO LOAN

AT LOWEST RATES

On Country Real Estate and Grain in Warehouse.

McAFEE BROTHERS,

202 Sansome Street, San Francisco.

TRADE



MARK.

# LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price, \$2 per gallon. For directions and testimonials, apply to

FALKNER, BELL & CO.,

Sole Agents, 430 California Street, S. F.

50 Perfumed, Snowflakes, Chromo, Motto Cards, made in gold and jet 10c, G. A. SPRING, E. Wallingford, Ct.



Pyrethrum Cinerariae Follum—A California Production.

THE MOST WONDERFUL DISCOVERY OF THE NINETEENTH CENTURY.

This wonderful Insect Powder will exterminate Flies, Weevils, Caterpillars, Mosquitoes, Midges, Crickets, Cockroaches, Spiders, Tarantulas, Scorpions, Ants, Hawk-bugs, Phylloxera, Plant Lice, Moths, Grasshoppers, Locusts, Bed-bugs, Fleas, and every species of Insects.

Remember that none is genuine unless my Trade-Mark is attached to every package. Put up in eight-pound cans at \$10 per can, wholesale. Ask your druggists and grocers for it, and take no other to rid yourself of Insects. Sold at \$1.50 per pound or 12 1/2 cents per ounce, retail. Agents wanted everywhere.

\$100 WILL BE PAID IF IT FAILS TO KILL ANY INSECT.

Endorsed by Prof. E. W. Hilgard, of the University of California, and by Prof. C. V. Riley, Chief Entomological Commissioner at Washington, D. C., and pronounced superior to any imported article, and perfectly harmless to man and beast.

G. N. MILCO,

Patentee and Sole Manufacturer, Stockton, Cal.

# The Voice of Worship,

FOR CHOIRS,

Conventions and Singing Schools,

BY L. O. EMERSON.

This splendid new book is nearly through the press, and will be in great demand. Full collection of the best Hymn Tunes and Anthems for Choirs, numerous Glees for Social and Class singing, and a good Singing School course. Its attractive contents, with the low price (\$1, or \$9 per dozen,) should make it the most popular of Church Music Books.

**THE TEMPLE.** For Singing Schools, Conventions and Choirs. By W. O. PERKINS. Will be ready in a few days. First-class book for Singing Schools, with large collection of Glees and plenty of Hymn Tunes and Anthems. Price, \$1, or \$9 per dozen. Although Singing Classes are especially provided for, both the Secular and Sacred Music render it one of the best Convention and Choir books.

**FATINITZA.** The new and very favorite opera, is now ready, with words in three languages, all the Music and Libretto complete. Price, \$2 paper, \$2.25 boards.

**PINAFORE.** Price reduced to 50 cts. The same elegant edition heretofore sold for a dollar. Complete words, Libretto and Music. All ready for the stage.

Any book mailed for retail price.

OLIVER DITSON & CO., BOSTON.

C. H. Ditson & Co., 843 Broadway, N. Y.

# IMPORTANT!

We wish to open correspondence immediately with one or more enterprising parties in each township upon the Coast to

Establish an Agency

Of our valuable publications, among which are the "Pictorial History of the World," Stanley's "Through the Dark Continent," "Chase's Improved Recipes," the Farmer's Account Book, and many others. Ministers, teachers, farmers and others will find this profitable. Ladies especially are successful. Address for full particulars,

A. L. BANCROFT & CO.,

No. 721 Market Street, San Francisco, Cal.

M. COOKE.

R. J. COOKE

# PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,

AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOK & GREGORY.

J. P. JONES.

J. THOMPSON.

# JONES & THOMPSON.

Wholesale and Retail Dealers in

# Hay, Grain and Feed.

Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above, 1535 Mission St., San Francisco.

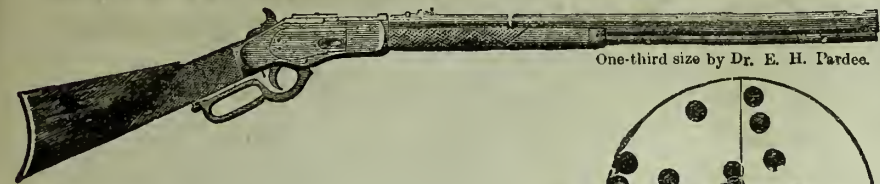
# AGENTS, READ THIS.

We will pay Agents a salary of \$100 per month and expenses, or allow a large commission, to sell our new and wonderful inventions. We mean what we say. Satisfree. Address SHERMAN & CO., Marshall, Mich.



# Winchester Repeating Rifle,

MODEL 1873.



The Strength of All its Parts,  
The Simplicity of its Construction,  
The Rapidity of its Fire,  
The Power and Accuracy of its Discharge,  
The Impossibility of Accident in Loading,  
Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:  
Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder.

JOHN SKINKER, No. 115 Pine Street, San Francisco,  
SOLE AGENT FOR THE PACIFIC COAST.

## FOR SALE. COMPLETE THRESHING OUTFITS,

Consisting of HOADLEY'S STRAW-BURNING ENGINE, 15 horse power, JACKSON'S REMODELED PITT THRESHER, with Feeder, Elevator, Derrick, Forks and Water Wagon,

\$2,500 to \$3,000,

Fully Guaranteed to Equal the Best Improved Outfits in the Market.

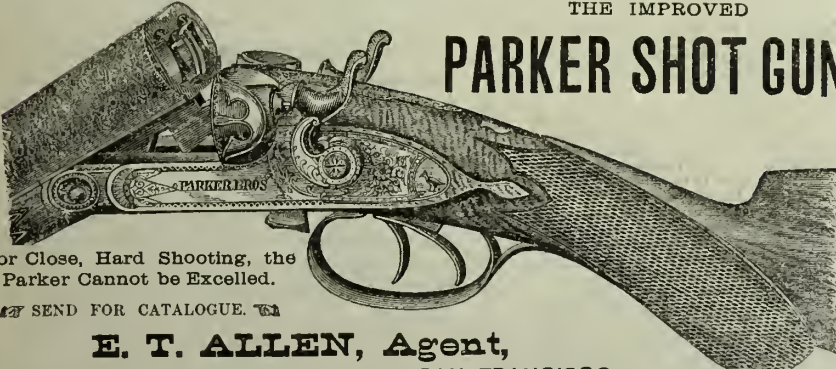
Also, one four-sided, six-inch SMITH'S MOLDING MACHINE, and one HOADLEY WOOD-BURNER 12-horse power, at a bargain. Also, new 3½-inch Tumble-Skein Wagons at \$75, and 10-foot WINDMILLS at \$80.

Machine Work and Castings of all Kinds to Order.

— FOR CIRCULARS ADDRESS —

Jackson Agricultural Works,

S. E. Corner of Sixth and Bluxome Streets, near S. P. R. Depot, San Francisco.



THE IMPROVED  
**PARKER SHOT GUN.**

For Close, Hard Shooting, the Parker Cannot be Excelled.

SEND FOR CATALOGUE.

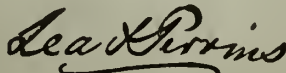
**E. T. ALLEN, Agent,**  
NO. 515 MARKET STREET, - - - SAN FRANCISCO.

Importer of Muzzle and Breech-Loading Shot Guns and Rifles.  
Sole Agents for Burgess Repeating Rifles—45 cal., 70 grains; Whitney and Phenix Rifles, Muskets and Carbines; Phenix Single-Barrel Breech-Loading Shot Gun; Allen Rifles, 44 cal., rim fire, very cheap; Lovell & Sons Revolvers, the best and the cheapest.

In consequence of spurious imitations of

## LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,



which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

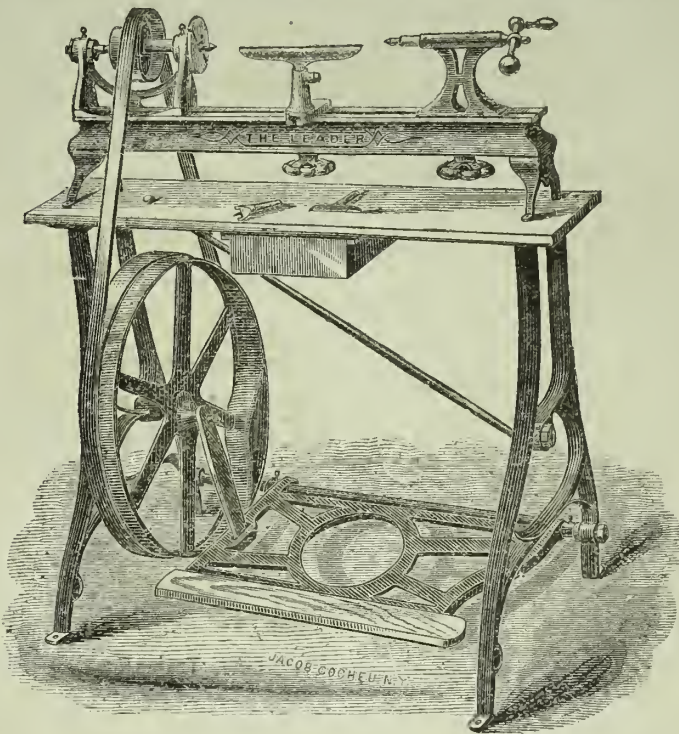
To be obtained of CROSS & CO., San Francisco.

# Dunham, Carrigan & Co.,

Nos. 107, 109 & 111 Front Street, S. F.

Lathe Without Saw Attachments.

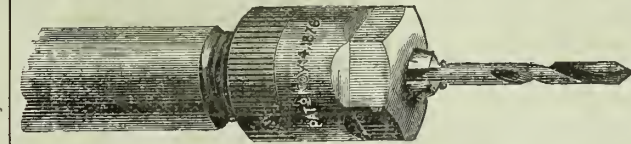
This lathe has been made especially to meet a want felt by many for a really good and substantially made Foot-Lathe at a reasonable price, and we think that we can safely say that it is by far the best lathe ever placed on the market at the price asked. The bed, head, and tail stocks are of iron; the spindles of steel. The bearing of the head stock is conical, so that the wear can be easily taken up.



Material eighteen inches long and eight inches in diameter can be turned upon it. The pieces that accompany this lathe without extra charge are two T rests, two plain centers, one spur center for wood turning, and one face plate.

Price of Lathe without Saw Attachments.....\$45. Price of Lathe with SCROLL Saw Attachment.....\$55.  
Price of Lathe with both Scroll and Circular Saws, \$70.

## Trump Drill Chuck.



Chuck for drills ¼ and under,  
Price.....\$1.50  
Chuck, for drills ½ and under,  
Price.....\$2.25  
They are made on solid steel plug, centered and readily fitted to Lathe or Drill Press.  
SEND FOR CIRCULAR.

— OFFICE OF THE —

## BLACK POINT PACKING AND SLAUGHTER HOUSE.

MERRY, FAULL & CO., Proprietors.

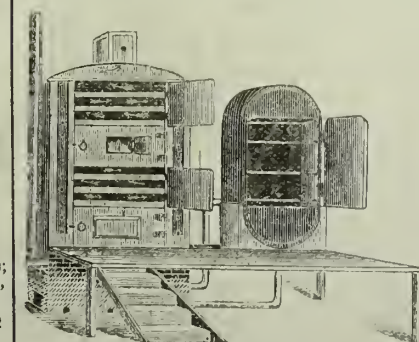
TO OWNERS OF LIVE STOCK!

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

SQUARE DEAL and FULL MARKET PRICES

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices. Please address our

Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.



BUTTS'

IMPROVED ANTISEPTIC "CHALLENGE"

Fruit, Vegetable and Hop Drier  
AND CANNING APPARATUS.

The cheapest, quickest and greatest labor-saving Drier ever introduced. Retains the quality, color and flavor of the fruit. The Canning Apparatus has a capacity of from 500 to 4,000 cans per day. Machines varying from 500 lbs. to 10 tons capacity per day constantly on hand. For Circulars, prices, etc., address

WM. BUTTS, Patentee,  
S. E. Cor. Spear and Mission Sts., San Francisco  
P. O. BOX 1,859.

State, County and Individual Rights for Sale.

## Mission Rock Dock & Grain Warehouses,

SAN FRANCISCO, CAL.

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

Grain received and weighed in free of expense. Wheat Cleaned and Graded. Deep Water Berths for the largest ships. Insurance and storage at the lowest rates. Loans effected on wheat stored in Warehouse at lowest rates. Apply to

CHAS. H. SINCLAIR, Superintendent.

Or to the California Dry Dock Co., Office, No. 318 California Street. San Francisco.

50 CHROMO, Gold Border, etc., 10c., no 2 alike, or 20 Cupid Cards, 10c. J. B. HUSTED, Nassau, N. Y. Dewey & Co. { 202 San- } Patent Ag'ts  
some St.



## Commission Merchants.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCE—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

BRYANT & COOK,

Commission Merchants,

AND DEALERS IN

GRAIN, FLOUR, ETC.

No. 8 Davis St., near Market, San Francisco.

CHARLES NAUMAN.

FRANK NAUMAN.

C. & F. NAUMAN & CO.,

Wholesale Commission Merchants

— AND DEALERS IN —

GRAIN, POTATOES, FRUIT, BUTTER, POULTRY, EGGS, GAME, ETC.

227 & 229 Washington St., San Francisco.

Consignments Solicited.

H. M. COVERT,

Commission Merchant,

AND PURCHASING AGENT.

General Agent for the CALIFORNIA SACK HOLDER.

306 Davis St., San Francisco.

Liberal advances made on Consignments.

A. GALLI & CO.,

General Commission Merchants,

AND WHOLESALE DEALERS IN

Tropical, California and Oregon Fruits, Nuts, Produce, Butter, Cheese, Poultry, Eggs, Honey, Hides, Potatoes, Grain, Wool, Etc.

516 and 518 Sansome St., San Francisco.

Cash can be drawn for immediately upon receipt of account of sales.

BODIE!!

THE



New Route!

170 MILES SHORTEST,

And made in about One-half the Time!

— BY THE —

Pioneer Stage Line,

AS FOLLOWS:

LEAVE SAN FRANCISCO—Monday, Wednesday and Friday at 4 P. M. for Stockton; leave Stockton at 8 A. M. on Tuesday, Thursday and Saturday, connecting with stage at MILTON at 9:30 A. M., arriving at BODIE at 4 P. M. next day.

LEAVE BODIE—Sunday, Tuesday and Thursday at 6 A. M. and connecting with train at MILTON at 10:40 A. M. next day, arriving in SAN FRANCISCO at 5:15 P. M.

T. J. Matteson & Ed. Harrison, Agents,

— OFFICE WITH —

BILLINGS, HARBOURNE & CO.,

3 Montgomery St., S. F.

CHEAPER YET!

Tension Sewing Machines!

A large number of nearly new genuine SINGER, WHEELER & WILSON, HOWE, WEEB, WILSON, GROVER & BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

NO TENSION MACHINE.

Wilcox & Gibbs' S. M. Co.,

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.

ROOMS TO RENT.

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

Blackberry and Cranberry Plants.

100,000 Plants of new varieties of BLACKBERRY Plants—the Early Cluster and Vina Seedling, Missouri Mammoth and Deering Seedling, the earliest and the most productive of all. I will give satisfactory proof that these berries have realized \$750 per acre. It paid more than double the amount as the old late varieties. Price by mail, \$2 per dozen, \$8 per hundred, and \$80 per thousand. Send for Catalogue. Cherry Cranberry plants for \$150 per acre, planted, not less than 10 acres in one order. We will sell to responsible parties, large orders on time, part cash. H. NYLAND, Bouillon Island, San Joaquin Co., Cal.

Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.

60 Chromo, perfumed, Snowflake & Lace cards, name on all 10c. Game Authors, 15c. Lyman & Co., Clinterville, Ct.



SOLE PROPRIETORS AND MANUFACTURERS

Celebrated Detrick "E W" 22x36 Grain Bag.

CALCUTTA, DUNDEE and PACIFIC JUTE HAND-SEWED BAGS always on hand. OUR No. 1, No. 2 and No. 3 SECOND HAND GRAIN BAGS selected and graded with care.

TWINES.

3, 4 and 5-ply for Grain Bags, 6 and 8-ply for Potato Gunnies, 3-ply EXTRA FINE for Flour Bags, made expressly for our trade and QUALITY GUARANTEED.

FLOUR BAGS Printed to Order WITHOUT EXTRA CHARGE. POTATO GUNNIES, Wool, Bean, Ore and Salt and Seamless Cotton Bags.

Tents, Awnings and Hydraulic Hose.

ORDERS PROMPTLY FILLED AT LOWEST MARKET RATES.

119, 121 and 123 Clay St., and 118 and 120 Commercial St., San Francisco.

READING RANCH,

Shasta Co., Cal.

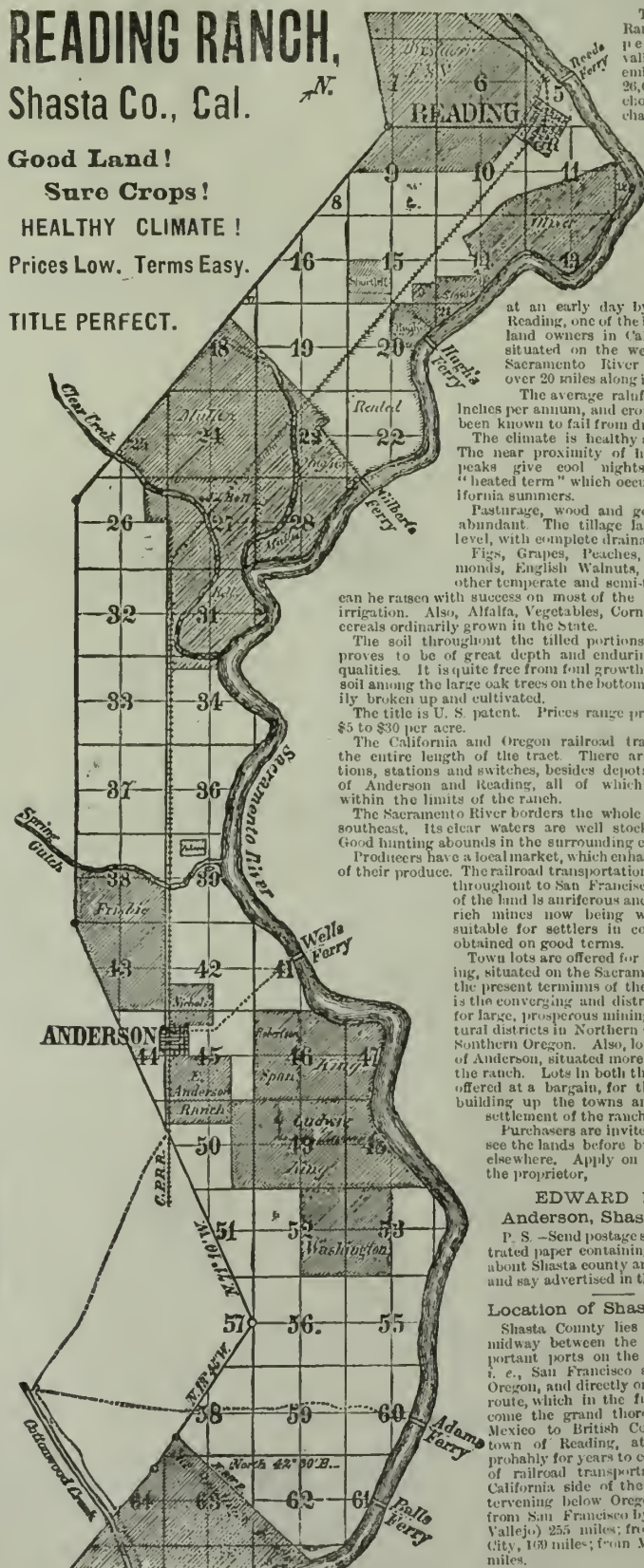
Good Land!

Sure Crops!

HEALTHY CLIMATE!

Prices Low. Terms Easy.

TITLE PERFECT.



The Reading Ranch, in the Upper Sacramento valley, originally embracing over 26,000 acres of choice grain, orchard and pasture land, is now offered for sale at low prices and on favorable terms of payment, in subdivisions to suit purchasers.

The ranch was selected at an early day by Major P. B. Reading, one of the largest pioneer land owners in California. It is situated on the west side of the Sacramento River and extends over 20 miles along its bank.

The average rainfall is about 30 inches per annum, and crops have never been known to fail from drought.

The climate is healthy and desirable. The near proximity of high mountain peaks give cool nights during the "heated term" which occurs in our California summers.

Pasturage, wood and good water are abundant. The tillage land is mostly level, with complete drainage.

Figs, Grapes, Peaches, Prunes, Almonds, English Walnuts, Oranges and other temperate and semi-tropical fruits can be raised with success on most of the tract without irrigation. Also, Alfalfa, Vegetables, Corn and all other cereals ordinarily grown in the State.

The soil throughout the titled portions of the ranch proves to be of great depth and enduring in its good qualities. It is quite free from foul growths. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

The title is U. S. patent. Prices range principally from \$5 to \$30 per acre.

The California and Oregon railroad traverses nearly the entire length of the tract. There are several sections, stations and switches, besides depots at the towns of Anderson and Reading, all of which are located within the limits of the ranch.

The Sacramento River borders the whole tract on the southeast. Its clear waters are well stocked with fish. Good hunting abounds in the surrounding country.

Producers have a local market, which enhances the value of their produce. The railroad transportation route is level throughout to San Francisco. A portion of the land is auriferous and located near rich mines now being worked. Land suitable for settlers in colonies can be obtained on good terms.

Town lots are offered for sale in Reading, situated on the Sacramento river, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

Purchasers are invited to come and see the lands before buying here or elsewhere. Apply on the ranch, to the proprietor.

EDWARD FRISBIE,

Anderson, Shasta Co., Cal.

P. S.—Send postage stamp for illustrated paper containing information about Shasta county and these lands, and say advertised in this paper.

Location of Shasta County. Shasta County lies not far from midway between the two most important ports on the Pacific shore, i. e., San Francisco and Portland, Oregon, and directly on the overland route, which in the future will become the grand thoroughfare from Mexico to British Columbia. The town of Reading, at present, and probably for years to come, the head of railroad transportation on the California side of the mountains intervening below Oregon, is distant from San Francisco by railroad (via Vallejo) 255 miles; from Sacramento City, 160 miles; from Marysville, 117 miles.

LAND FOR SALE OR RENT IN SUB-DIVISIONS.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

50 Perfumed, gilt edge & chromo Cards, elegant case, name in gold, 10c. ATLANTIC CARD CO., E. Wallingford, Ct.

Engraving. Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the PACIFIC AND SCIENTIFIC PRESS, San Francisco, at favorable rates. Send stamp for our circular and samples.

Baling  
Fencing  
Telegraph  
Telephone  
Galvanized

WIRE

Barbed Fence Wire.

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the Trademark.



A. S. HALLIDIE

Wire Mills.

Office, No. 6 California St.

SAN FRANCISCO.

WIRE ROPE and CORDAGE

Of every kind on hand or Made to Order.

Yosemite, Big Trees, CEYSERS,



Merced, Coulterville,

CALAVERAS.

And Big Oak Flat Routes

ARE NOW OPEN!

These are the shortest, most picturesque and cheapest routes.

The COULTERVILLE route passes by the celebrated BOWER CAVE and Merced grove of trees, and the OAK FLAT route by the TUOLUMNE GROVE OF BIG TREES, where the stage passes through the "DEAD GIANT," the only tree in the world that a loaded stage can drive through.

This is the only office where tickets can be had for the entire round trip—all other lines ticket in and out by the same route.

For tickets and other information call at

Billings, Harbourne & Co.'s Bookstore,

No. 3 Montgomery St., S. F.

T. J. MATTESON,

Proprietor.

ED. HARRISON,

Agent.

MECHANICS' FAIR,

SAN FRANCISCO, CAL.

Opens August 5th, 1879.

SCIENCE, ART, INDUSTRY and NATURAL PRODUCTIONS will be fully represented.

Grand Instrumental Concert

EACH AFTERNOON AND EVENING.

MACHINERY IN MOTION, RARE PAINTINGS, FINE STATUARY, A TROPICAL GARDEN, FOUNTAINS and PROMENADES, will make this Exhibition the most instructive and pleasant place of resort on this Coast.

Those desiring space should apply at once.

OFFICE: 27 POST STREET.

IRVING M. SCOTT, President.

J. H. CULVER, Secretary.

The PERPETUAL WICK

Makes no smoke or smell, breaks no chimneys, gives a beautiful soft and clear light, never requires trimming, never burns out. The wicks are made of felt, chemically prepared with Asbestos, which is non-combustible, thereby rendering the wick perpetual. A single wick was burned in the Patent Office at Washington, by the officers of that department, for 140 days and nights (without burning out), before a patent would be granted. Sample by mail, 10c; a for 10c; 50c per doz. Agents wanted. Address

A. S. SPENCE & CO.,

24 Geary St., San Francisco.

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast Joseph H. Dorety, 120 Sutter St., S. F.



# PACIFIC RURAL PRESS

Volume XVIII.]

SAN FRANCISCO, SATURDAY, AUGUST 2, 1879.

Number 5.

## Landscape Gardening.—No. 1.

Written for the RURAL PRESS by J. B. ARMSTRONG.

The writer proposes to set forth, in a few chapters for the RURAL PRESS, some of the secrets of the art of landscape gardening. He believes they can be made plain to the understanding of any man of intelligence, and hopes to inspire some of his readers with enough pride to surround their houses with more tasteful improvements. More than 30 years devoted, much of the time, to his profession of civil engineering, and its allied branches of drawing and landscape gardening, may warrant him in venturing to advise others, less familiar with the subject, how to beautify their homes.

The man who toils at his office desk, or behind the counter of a city warehouse, often dreams of the delights of a country life. His memories of boyhood recall the ever-fresh pleasure of times when he went swimming in the brook murmuring in its pebbly bed, down in the woods-pasture of the old farm where he was born. And, while memory holds her sway, he never will forget the early apple tree, with its low-branched limbs, where he plucked the first ripe, red fruit. His beard may be sprinkled with gray, but he looks forward to the time when he will turn his back on the crowded city, and build himself a home somewhere among the green hills, which shall be his castle and place of refuge for his children and their posterity. Thus it is that nature asserts herself, when we see the population of cities overflowing into the country. Some hints, therefore, respecting rural improvements may be of use to numbers of intelligent men who, but for these suggestions, might not think of their importance.

In this country the art of landscape gardening is in its infancy, and unfortunately, we see too few examples worthy of imitation, either in the rectangular parks of cities, or the confined limits of suburban places. There is almost a human expression in the appearance of a country home. Its owner seems to impress the surroundings with his individuality, and we are not often far astray in taking his measure accordingly. No one needs information concerning the tastes and domestic life of certain inhabitants of the great ranches of California, or the hillside farms of the Middle States, where the barn is often the most comfortable structure, and the weather-worn dwelling stands in the hot glare of the sunshine, without a tree, or vine, or flower to beautify it.

Choose large grounds for ornamental purposes. The cost of improvement is about the same for 10 acres as for 100 acres. This, of course, is aside from underdraining. But the finest results of the art are more easily produced for a given sum of money on 50 or 100 acres than on a smaller plat. It is extremely difficult to plan curved roads, and plant trees singly and in groups with good effect on a small bit of level ground. But such grounds may be beautified by exercising great skill, and avoiding the too common error of close planting. With a larger area there may be noble sweeps of lawn and hillside, and park-like clusters of trees and shadows, and generous spaces for the eye to roam over and rest upon, with new beauties at every turn. Indeed, limits cannot be set to the extent of ornamental grounds; for even the grand plains of the Laramie are but magnified panoramas of all the finest parks in existence.

An irregular surface is capable of the largest embellishment. Its undulations please the eye when advantage is taken of the formation of the ground so to plant as to lighten its beauties of outline. Here is where perceptions of the beautiful may be so aided by the skill of the artist in selecting the site for building, the winding road leading thither, and the fringed plantation of trees judiciously located as to justify—

"Nature, assuming a more lovely face,  
Borrowing a beauty from the works of grace."

If such grounds border on and overlook a wide extent of valley with a mountain view, or river, or glimpse of the ocean beyond, then but little skill of the landscape gardener is required

to add to the natural beauties of the site. Such a location is still more desirable if it be covered with scattered clumps of forest trees and piles of gray rocks here and there, with ferns and wild vines clambering over them. The savage wild can soon be tamed by a little judicious thinning out of trees to open up a distant view; some planting of rapidly-growing evergreens to hide a gap or other unsightly object, and the location of ornamental trees to change the contour of a bleak hillside. All may be created

for repairs than was needed for keeping the grounds in order.

The fortunate owner of a mountain place will do well to select a gentle knoll, far above the valley, for the site of his dwelling. To such a point he can sometimes convey spring water from above to supply household needs; then it might escape in a fountain on the lawn, and thence by pipes do duty in irrigating. The elevation would broaden the landscape, which, with picturesque outlines, will need little aid



FIG. 1. SCENE ON THE JUNIATA.

in a short time by the taste and skill of the designer as if by the wand of enchantment into a scene of incomparable beauty.

If the proprietor has not erected his buildings, we do not advise much digging and leveling. Artificial cuts in hillsides and piles of terrace work should be sparingly made. Hardly any amount of ornamental planting ever succeeds in veiling these scars. Earthwork is always troublesome to protect from washing; and the steep sides of excavations are apt to furrow out

of the landscape gardener but to subdue its rugged features. This will best be done by a careful study of the site for building; by the choice of such architectural forms as will not do violence to the surroundings; in the proper location of roads and drives, and by the intelligent selection of trees for plantations, with reference to habits of growth, color of foliage, and their grouping for effect. In availing ourselves of the art of landscape gardening, we must adapt our work to the design furnished by nature. We



FIG. 2 A DISTANT GLIMPSE OF MOUNT SHASTA.

every rainy season. The construction of embankments, as approaches to bridges, must always be avoided by crossing the stream at points favored by higher banks. These rules apply, with even more force, in less favored climates than California. The disintegration, caused by freezing and thawing, soon destroys the best earthworks, unless protected by solid revetments of the heaviest retaining walls. Instances have come under the writer's notice where the mistake was made, in the outset, of locating buildings where much of this kind of work was required, entailing a larger annual expenditure

level plains. Where there are swelling hills and distant ranges of rugged mountains a bolder style of architecture is admissible. Gothic roofs and towers, surrounded chiefly by plantations of dark, spiry-growing pines, best express the purpose of the owner who fancies picturesque scenery. It is the want of judgment that converts many of our costly places into caricatures of nature. We often see piles of absurd buildings with pretensions towers and battlements located in a plain, not at all in harmony with the landscape; when a hint might have given better direction to the outlay for improvements, and converted the place into an elysium of graceful outlines and beauty.

Water can be introduced with fine effects. There are numerous ways of using it, either in fountains, artificial lakes, or waterfalls. Rocks, and cliffs, and overhanging trees, and ferns, and vines are the natural environs of the waterfall. A lake, if built, should not be a square or circular horse pond. In some parts of the country we see shallow pools of ditch water, covered with scum and bordered with weeds, dignified with the appellation of the fish pond. If the water cannot be gathered in a fitting basin, having a gravel beach on one side and rocky banks on the other, do not undertake it; for, unless there is a good supply of running brook water, with the proper setting of trees, rocks, and suitable banks, the attempt to create an artificial lake will fail. When successful, it will be found that much skill is required to hide the dam by suitable planting, to give it a natural appearance. So with the stream in its approach; there should be a gravelly bed for the limpid water and rocks for the cascades. But they must be disposed in the way nature delights to build, a disregard for regularity that still is not meaningless confusion, and without showing a trace of artificial work. Trees, vines and trailing plants will rapidly convert it into a tangled wildwood, where the summer sun can hardly peep at noon and the cool shade and splashing waters make a fairy grotto fit for the Naiads.

There are points to be remembered in preparing the ground for planting, as well as in designing. And it is of the utmost consequence, as it will tell on the appearance of the work, that everything attempted shall be thoroughly well done. Each drive, or roadway, should be perfectly shaped, solidly built, and kept scrupulously clean. With respect to the dwelling, we suppose there is not one man in free and enlightened America, who does not imagine himself capable of planning his own house. On this point the writer has an opinion; and it is his private belief, with all due respect, that the number able to plan a satisfactory house, one with which the owner shall be pleased when he lives in it, is not as great as those who can measure themselves for a perfectly fitting coat. The professional architect is the only one who should be allowed to design a good dwelling. Before doing it he ought to be shown its proposed location; then, if he understands his business, he will not be long in determining the style of architecture to suit the place.

To illustrate the leading ideas of this paper, the outline view, Fig. 1, of a scene on the Juniata, is given as one of soft and quiet beauty. Fig. 2 is a distant glimpse of Mt. Shasta, unapproachable in its grandeur. It stands at the head of the magnificent landscapes of the Pacific coast. They are types, in their way, of the beautiful and picturesque everywhere.

Santa Rosa, Cal.

THE WOOL OUTLOOK.—Walter Brown & Co., wool merchants of New York, say in a recent circular: "It is the general opinion that a healthy tone will pervade the woolen goods trade during the season, and that a steady consumptive demand for wools, will continue during the next few months without any material change in prices."

MOUNT SHASTA.—The lofty outline of Mount Shasta, as shown in the engraving on this page and the allusion thereto in Mr. Armstrong's article, gain additional interest if taken in connection with the climbing narrative of Prof. Lemmon, which may be found on the next page of this issue.

OVER 3,000 acres of grass, near Fort Miller, Fresno county, were destroyed by fire last week.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents. — EDS

### Ascent of Mt. Shasta.

[Written for the RURAL PRESS by J. G. LEMMON.]

Mt. Shasta is the most impressive peak known to travelers. The grand distinguishing features of Mt. Shasta, those which give it this pre-eminence, are not so much its lofty height of 14,442 feet, but first its entire isolation from other peaks, and second its majestic up-rise of nearly 11,000 feet from the midst of a heavily forested plain, broken here and there only by meadows of robust grasses and rich cultivable fields.

The group of lofty peaks in southern California—Whitney, Kaweah, Tyndall and King, though from 200 to 500 feet higher than Mt. Shasta, fail to strike the beholder as predominant peaks, because they stand on an elevated plateau 8,000 to 11,000 feet high, a plateau clothed with forests and easily reached by horsemen.

The plain around Shasta is only 3,567 feet high, from which the magnificent double cone arises over two miles vertically, in a line incline of less than ten.

Through the kindness of Gen. B. B. Redding, whose articles freighted with important and practical facts so often enrich the columns of the RURAL, I was invited to join his party for ruralizing in the vicinity of Shasta, during a portion of the heated term, including the Fourth of July.

Himself and most of the party upon arrival at Sissons, at once sought their old haunts for fishing and hunting over on the McCloud river, leaving me to botanize at will.

Finding a party forming at Sissons for scaling Shasta and learning that the first days of July, before forest fires were raging were the best for views, I gladly left off searching copse and meadow for rare flowers and joined this party.

The ascent requires a day and a half. You go the first half day to a stated camp at the timber line and remain for the night. Early the next morning you leave horses and climb the peak, arriving at the monument some time in the P. M. The descent is made, the whole distance of 18 miles, back to the hotel by supper time.

On the afternoon of the 7th of July our party of eight started from the usual headquarters of tourists at Shasta—Sissons' hotel, in Strawberry valley. We were mounted on sure-footed horses and directed by an experienced guide. The trail led at first through a thinly-forested even plain for three miles, then gradually ascended over rough lava and conglomerate boulders to an upper parterre or bench several miles wide and surrounding Shasta on all sides. Here the common pines, with the white fir and Douglas spruce, that form the bulk of Californian forests, leave off, and the noble fir (*Abies nobilis*), of Douglas, often called from the color of its bark when broken "the red fir," occupies the plateau exclusively. This is perhaps, all things considered, the most beautiful tree at all ages in the West. Trees of 5 feet in diameter and 150 feet high, do not depart from the graceful arrangement of their spray in youth, but still display their immense, horizontal, fan-shaped limbs in symmetrical, diminishing whorls to the top. On the upper limbs, erect and firm, stand the purple or yellowish cones, clothed with long, pointed bracts that depend from between the scales, causing the cones to resemble owls at roost on the tree tops.

Fringing the upper edge of this fir forest and running up the projecting rock-ribs of Shasta, are two more cone-bearers, found only on such elevations in this latitude—*Pinus albicaulis*, or the "white stemmed pine," and the *Picea Pattoniana*, or "silver spruce." Both these trees are often misalled; the first *Pinus flexilis*, the other *Abies Williamsoni*, but the former names have been established by the highest American authority after much examination.

The evening of our camp where timber and snow banks mingle, was clear and fine, inviting to study the stars in the brilliant canopy. Later, after all were under blankets spread over pine and fir boughs, the cold air poured down the sides of Shasta lifting blankets or piercing them so sleep was banished except from the mountaineers of the party.

At the dawn of daylight we were up and shivering around a large fire while swallowing a forced breakfast, made barely eatable by a tin cup of delicious coffee. Then selecting alpenstocks from a store at hand, we started up the smooth hard snow beneath which rumbled and ground an incipient glacier. Our course as indicated by the guide lay directly up the deep canyon of the broad inclined valley on the southeast side. There was no dodging the smooth, forbidding, snowy steep by any zigzag approaches. Six thousand four hundred feet of vertical rise (over a mile and a quarter) must be made by about five miles upward grade. Does not that statement appal the RURAL reader? No wonder so few persons attempt to scale Shasta. Only about three dozen names are registered in the book prepared for the purpose and kept in a cairn of rocks near the monument.

A party, preceding us by a few days, failed to reach the top, though composed of stalwart

hunters. Every season parties essay in vain to conquer Shasta. Ours was the first to succeed this year. Personally, I never had such difficulty in getting a foothold in climbing snow-clad peaks, or was so much affected by the rarity of the air. Every few rods I was obliged to drop down on my face and rest a few seconds, a proceeding soon adopted by nearly all the party.

Arrived by slow, toilsome labor to about the upper third of the down-swooping canyon, the steeper snow face, shaded from the morning sun, was found nearly as hard as ice. We had to strike feet and pike repeatedly into the flinty slope, in order to make a half-inch ledge for the side of our nailed boots. Not a word was spoken. Questioned as to direction, were asked of the guide, and answer returned by motions. Only the ring of iron-shod boots and resonant pike, with the hard breathing of your nearest companion, was heard. The inclination was about 25 degrees only from the vertical. Dropping to the surface now to rest, was impossible. We could only keep to the steep incline by carefully keeping one foot and the pike in place. Below, the chasm yawned a full mile of threatening descent; above, a steeper mile stretched away to the sky.

And now I must make a humiliating confession. Being no longer the athlete I was before Andersonville, I am now no longer a daring cragsman and an undaunted mountaineer. Shasta has broken my spirit; from henceforth, he has substituted a contrary statement for my long-vaunted boast. Before fully aware of my condition, the guide called out, "Lemmon, you are giving out and pale as a ghost. Let me assist you." I feebly protested as I turned my course directly for a ledge of rocks at the right and distant about eight rods. But I could no longer make an indentation in the snow with my weak, trembling legs. My head, aching dreadfully for the last hour, now became dizzy and my eye-sight was uncertain. The brave-hearted, noble-spirited guide (let me call his name, Dick Hubbard) came alongside, cut with his hatchet notches in the ice for my feet, and, dizzy with exhaustion and fright, I tottered along to the splintered rocks and was saved.

The rest of the climb—about two miles—had many nearly level sections in it of a few rods, and also many a steep declivity of ice and crumbling scoria, as difficult but not so dangerous as the part described.

By 2 P. M., we reached the hot springs in the old crater. These are still rumbling and spouting series of *solfataras*, the vestiges of the monster crater, a mile across, out of which poured a stream of lava that now overlies the plain for 100 miles around, but disintegrated and forming rich soil for one of the noblest pine forests in the State.

Lying on the interior heated rocks to rest, we learned from our guide how John Muir and Jerome Fay passed a fearful night there in April of 1875, roasting and freezing alternately, an adventure which Muir subsequently so graphically portrayed in *Harper's Magazine*. It appears that a change to cold and storm occurred in the night, the snow falling thickly upon the adventurers, and melting by the warmth of the gas jets, with no pure heat to dry them off. Being short of food they were forced to return the next day though the terrific wind froze their garments stiff as sheet iron. Arrived at the base, they found their feet so frozen that blisters formed all along the sides, and eventually they lost most of their toe-nails. Muir had to keep his bed for a fortnight, but the time was not lost to the lovers of grand and graphic descriptions.

On the way up I was deeply interested in the different features presented by the noble old volcano of Lassen, distant southward 70 miles, but so distinctly seen as to seem only 20 miles away. He rests upon the eastern side of an alpine, snow-covered plateau, 20 miles across. With those daring friends, Case and Larsen, I had with great difficulty botanized the whole of that region, including the lofty Lassen. Now I was soaring 3,000 feet above the monument of that peak while the whole plateau lay unrolled at my feet.

Arrived at the summit of Shasta, undoubtedly the most diversified and extensive landscape is presented that ever astonished human understanding. You seem standing on a pedestal, rising out of the bottom of an immense, hollow hemisphere joining the equally extensive, over-arching hemisphere of the sky by an irregular, waving line at the horizon. The optical illusion is perfect. You are not perched two miles above the general earth's surface, but only raised up to its level.

It is impossible for pen to picture the details of this landscape as we saw it on that clear, cool, still July day. Not a valley or plain, not even a near canyon was obscured by smoke or dust. The whole anatomy of the many-ribbed Sierra Nevada, curving its vertebra to the sun in the southeast, was disclosed. The many parallel coast ranges with white tipped spines rode rank on rank in the west. Between these monster skeletons reposed the yellow grain fields of the Sacramento valley. Eastward rolled wave on wave of noble forests, limited at last in the far horizon by the peaks of the Warner range, shutting out the Great Basin of Nevada.

Northward this forest gives place to treeless plains, to interior, alkaline lakes and broad, fertile valleys. Of peaks the list would embrace hundreds, including nameless snow drifts glinting on the distant Oregon Cascades, 300 miles away, and the well-known St. Helena, Hamilton, Lola and Tahoe peaks as far away southward in central California.

A dense dark bank lying along the western

horizon beyond the coast ranges, told where lay the cloud-forming Pacific. Was ever grander, clearer, more picturesque scenery vouchsafed to mortal gaze?

Some persons on beholding such mighty creations as Shasta, are very loud in the expression of their appreciation. In the presence of the thundering geysers, the mouster *Sequoias* and the cataracts of Yosemite I have heard vehement exclamations in recognition of their Divine author. To me the existence, wisdom, power and benevolence of the Deity are ten times more forcibly exhibited by a microscopical examination of the wing of a gnat.

The physical features of Shasta—the immense, old, extinct volcano on which we stand—are past description in one newspaper article, even if I had the ability. We can but briefly examine its double crowns of unequal heights; gaze down into their broken-sided craters; smell, hear, feel and see the hot, sulphurous gases still escaping from the highest crater; trace the out-cropping ribs of lava gaily striped with red breccia, black mica, gray trachyte and brown scoria, extending from crater mouth down to timber line; follow the still living glaciers between, in their slow, majestic march down along the track of their mighty predecessors in the old ages, these glacier beds now appearing like the smooth trail of monster serpents as they form the peculiar curving, steep-sided river valleys entering and hiding in the dark, evergreen forest on all sides; we can see all these visions, then come away from Shasta bearing with us glorious, ever-recurring, priceless memories forever.

The descent of Shasta is a speedy, and in our case, was a most enjoyable experience. Arriving at the top of the precipitous canyon, described on the way up, we prepared to slide down on the now softened snow, by passing a loop of baling-rope attached to a barley sack over our necks, allowing the sack to drop down in front, thus sitting down upon the sack, for protection against injury to clothes—aye, and flesh, too, perhaps, if certain rocks known to be near the surface around yonder bend should be exposed by this warm afternoon sun.

Sitting down on the edge of the precipice, then removing the pike from the snow, away we dropped one after the other, skurrying along and swaying from side to side, swiftly down the long canyon. At once, as soon as the leader plunged off the precipice, he set up a shout of joy, which was taken up by each follower in turn, and soon a grand chorus of yells and cheers resounded all along the line. There were several collisions and upsets, which were instantly rectified, and one sharply-contested race. Friends at the hotel, 10 miles away, happened at the moment to be looking for us with the aid of opera glasses, and they declare that we shot down the whole mile and a half in less than half a minute.

It was noon next day before all the Shasta pilgrims became visible around Mrs. Sissons' dining table, exhibiting nearly every degree of exhaustion, blindness and suffering. Each had a story of special adventure to relate, and of peculiarly ecstatic enjoyment experienced, but the expression most often heard—the one that met with unanimous concurrence—was: "I'll never be so foolish, again, never!" But, dear reader, we were tired then, and so, perhaps, are you.

A few days afterward, a gentleman connected with the United States Coast and Geodetic Survey, conducted on this coast by Prof. Davidson, arrived at Sissons' with several stage loads of equipments for ascending Shasta and establishing a signal station thereon.

Mr. Sissons employed several experienced guides and about 15 stout Indians to pack the outfit up the peak, but their labor was to be much obviated by making a new trail up one of the rock ridges, avoiding the snow. Hence, hereafter, tourists will find the ascent easily accomplished. And now, my aches gone, bruises healed and clothes mended, while the old, snow-mantled, cloud-veiled monarch looms up yonder, loftier and grander than ever, because I know him, I join my predecessors in advising every lover of nature, if they would "see all the world," to climb the lofty cone of old Shasta.

Sissons, July 20th, 1879.

A FEAT IN ENGINEERING.—Owing to the immense weight that they sustain, the iron shoes in which rest two of the spans of the railroad bridge at Easton, Pa., lately sunk about an inch, throwing the bridge out of grade. As it was certain that the depression would continue, from the fact that the inside masonry of the pier is less solid than the outside, an iron casting, weighing 7,000 pounds, was recently successfully placed under the spans, in order to elevate them. The spans weigh 180 tons each. Hydraulic jacks were used. The spans were raised, the masonry redressed, the castings placed in position, and the spans lowered without the stoppage of a single train.

THE MISSISSIPPI JETTIES FINISHED.—Capt. J. B. Eads reports, under date of July 10th, that the greatest depth and width of channel required by the Jetty Act at the mouth, and also at the head of South Pass, has been secured. The completion of the great work was certified to the Secretary of War the same day by Capt. M. R. Brown, of the United States Engineers, inspector of the work. The jetty channel is over 30 feet deep, and a good navigable channel of 26 feet, measured at the lowest stage of the river, exists at the head of the passes. The benefits to commerce likely to flow from this brilliant achievement are inestimable.

## THE VINEYARD.

### Remedy for Grape Mildew.

At the last meeting of the California Academy of Sciences, the following paper was read by Dr. A. W. Saxe, of Santa Clara, Cal.

The grape mildew (*oidium*) is familiarly known to all microscopists, its ravages are too well understood by all vine growers, to require any specific description. The object of the following paper is to point out a simple, economical treatment of the vine by which its ravages may be averted.

In the winter of 1868, having suffered the loss of all my grapes, in a small vineyard of 150 vines, from mildew, I cast about for some remedy for the disease. My neighbors were using sulphur, and were to some extent successful in preventing the disease. I had used it also, but found that unless three successive applications of the sulphur were made, the first on the opening of the buds, the second on the falling of the blossom, the third when the grapes were about one-third grown, there was no certainty of success. And that often after the utmost care the grapes were so far injured as to be of only second or third rate quality.

The fact that wheat growers uniformly applied a solution of bluestone (cup. sulph.) to their seed before planting to prevent smut, suggested to my mind the use of this agent in combating the mildew upon the vine.

My vines being at that time some ten years old and covered with rough loose bark, I had them cleaned immediately after pruning, by a small triangular steel scraper, and then a solution of bluestone, four pounds to five gallons of water, applied with a swab to the dormant fruit buds and to the entire body of the vine. Then after carefully spading the ground, no further attention was given to the vines during the season. The result was an entire absence of mildew and perfect grapes.

From the above date to the present season I have omitted or neglected to apply the bluestone three seasons—1873, '76, '78; the result has been diseased vines and no grapes.

Last February, after my vines were pruned, I employed a man to clean out the vineyard and apply the bluestone solution. He did his work faithfully, but omitted to apply the solution to one row of 12 vines of the Black Frontignan variety. At this date, July 1st, all the vines are healthy except this row, which is now exhibiting the curled everted leaf so significant of the disease, and I have applied sulphur, but with little probability of saving the fruit.

The above is a concise narration of my experience and observation, in regard to the use of the bluestone for preventing mildew upon grapevines.

Young healthy vines having smooth compact bark, are comparatively free from the disease. But after six or eight years of age the forks of the vine become filled with decayed vegetable matter and atmospheric dust, and unless this accumulation is removed it affords a nidus in every plant for the lodgment and subsequent growth of the oidium spores.

Vineyards remote from public highways, on mountain sides, or elevated localities, where the atmosphere is free from dust, suffer least from the encroachments of the disease. But in any locality, having been once introduced it remains, unless it is destroyed by the use of sulphur or bluestone.

My observation confirms me in the belief, that one application of the solution of sulphate of copper to the dormant grape bud is a more complete protection than sulphur however often used, or any other agent heretofore used for the purpose. That as it can be applied at a time when all parts of the vine are accessible, and one application is efficient, there is a great saving of time and expense in treating the vines. That however efficient the sulphur may be when it can be applied directly to the fungus, it cannot be effectually applied after the expansion of the foliage of the vine, except by some other method than that usually employed.

I am satisfied that healthy vines may become diseased after some development of the foliage by proximity to diseased ones, and hence the necessity of making thorough work and leaving no diseased vines to the windward of those treated.

It is needless to say that the solution of the strength above certified is quite destructive to the foliage of the vine.

The application of the solution to the vines, while there are yet two months of moist weather with occasional rains, keeps the salt in a state of solution more or less of this space of time, and is constantly acting as a protection to the vine.

It is desirable that the above facts should have the widest publicity before the next period of treatment of the vine, as they are quite important to the vine-growing interests of California.

A NOVEL WAY OF PRESERVING GRAPES.—It is said that the Chinese have a method of preserving grapes during the entire year by cutting a circular piece out of a ripe pumpkin, or gourd, making an aperture long enough to admit the hand. The interior is then completely cleaned out, the ripe grapes are placed inside, and the cover replaced, and pressed in firmly. The pumpkins are then kept in a cool place, and the grapes will be found to retain their freshness for a very long time.



## SHEEP AND WOOL.

### The Angora Goat in California.

EDITORS PRESS:—I have read with interest the several articles published by you recently on the subject of Angora goats. I hardly like to see any antagonism existing between sheep and goat interests, as both interests are worthy ones, and there is no necessity of their conflicting.

There is scarcely a locality on the Pacific coast where Angora goats will not thrive, but they cannot be raised with profit from the mohair on ranges producing clover or clover burrs. The burrs detract from the price of sheep's wool, but they can be taken out by machinery. There is no more nutritious feed grown in this country than the clover burr, and I have often thought that the loss sustained in price of burry wool was more than made up in extra weight of wool, and extra fine condition of the fleeces. On account of the length and strength of mohair, burr pickers used on sheep's wool will not remove burrs from it, consequently those who have been obliged to keep their flocks on lands where burrs grow, have either had to submit to a very large reduction in price of mohair or be to the trouble of picking the burrs out by hand. On burry pastures I think more profit can be made out of sheep than goats.

There are along the foothills of the Sierra Nevada, also portions of Nevada, Utah, Idaho, Oregon and Washington Territory, immense tracts of rough land more or less covered with brush and shrubs of different varieties that afford excellent pasturage for goats. Here the Angoras find their natural home, and by appropriating such lands to their use, an income will be realized out of their products that could not be realized otherwise. The habits and instincts of the Angoras are much like those of the deer, and they enjoy skipping from rock to rock and picking here and there the briars, ferns and other varieties of herbage that these localities afford. This variety of feed is not only very fattening, but it gives the freshness and luster to the mohair of the goats that is so much sought for by manufacturers.

Numerous attempts have been made to utilize these lands with sheep, but almost all have proved unprofitable to parties investing in it. There is no doubt that sheep can be raised here, but such lands are not suited to them. They do not fatten readily when they have to climb so much to get a living. Very little wool will grow on sheep that have wasted their strength and condition in climbing over a rough country to get a living. As many of our best sheep ranges have within the past few years been taken for agricultural purposes, the industry must be lessened.

Not so with the ranges suitable for Angoras. There is no scarcity here and flocks may be increased without taking thought of where they are to be kept. I do not wish to be understood by this to intimate that goats require no attention. Every flock of 300 or more goats not kept in an enclosure should be provided with a shepherd. Sheds should also be erected to protect both old and young goats during severe storms. Many beginners in the business have lost heavily of their young kids for want of shelter for them. One hundred dollars expended in sheds may save \$1,000 worth of kids in one season. Young kids are much more delicate than young lambs, but when once well mothered and a few weeks old they are comparatively out of danger, and will stand more hardship than any other class of young animals.

The chief value of the Angora goat is the long, lustrous fleece that it bears. This brings in the market about three times as much as good sheep's wool. Pure-bred ewes when well kept will average about four pounds of mohair per head, and bucks about six pounds. The best fleeces have been taken from high-grade wethers; many of them yielding from eight to nine pounds of clean mohair. "The expenditure of vital force incident to rearing the young, detracts from the fleece production of breeding animals. The wethers keep in more uniform and better order on the same feed, and their fleece is not only fine and heavy but uniform in its growth and texture during the entire year."

Many have been deterred from going into the business on account of the uncertainty of sales of mohair in our home markets. For the past 50 years, there has been a steady demand and plenty of purchasers in the Liverpool market for mohair. The production of it in this country has created a demand for it here, and we now have quite a number of factories in our Eastern cities competing for our mohair. H. M. Farr, Superintendent of Farr Alpaca Mills, Holyoke, Mass., writes to a firm shipping mohair from San Francisco as follows:

You speak of shipping from 15,000 to 30,000 pounds this season. We can take it all, and could probably use 10 times 30,000 pounds if we could get it. I am glad to see that you are endeavoring to stimulate the growth of mohair in good qualities. This is right and we will second your efforts in every possible way. Our interest lies strongly in this direction. The mohair we paid you 90 cents for last fall, was more profitable to us than that we paid you 20 for. The sooner your producers understand the great importance of breeding up, the quicker and the faster will they make money. There are millions in mohair on the Pacific coast if your producers will only go to work in the right way; but there is nothing but disappointment for the man who raises kemp.

Mr. Hall, of the Jamestown Alpaca Mills, wrote me more than two years ago that they could work 300,000 pounds per year if they

could get it in quality to suit their uses. In Mr. Hall's recent letter to the RURAL PRESS he says:

The experimental days of Angora raising are past, and as an experiment they were successful. It now remains to apply the rigid rules of trade to its growth and distribution; to bring the producer and consumer where they will know each other's wants instantly; and finally to encourage the transfer of those branches of industry which depend upon mohair as a material from foreign shores to our own.

Mr. Hall further suggests that there is a pressing need of a staple house at the commercial center of the Angora district, to collect, grade, classify and distribute to each manufactory that portion of the fleece adapted to its style of goods.

Many of our largest breeders of Angoras have felt this necessity, and at our solicitation Messrs. Falkner, Bell & Co., of San Francisco, in February last established such a house, and have graded and classified the mohair received by them and sent it forward to the well-known wool commission house of Morse, Dennie & Co., of Boston. Our mohair producers have all confidence in the undertaking and look for the most favorable results.

In Falkner, Bell & Co.'s wool and live stock circular for July, under head of "Mohair," they say:

The production is on the increase, and already a marked improvement is shown in the clips that have passed through our hands. A few more years of careful breeding will give results that compare favorably with those from Asia. We have sorted and shipped to Boston 30,000 pounds.

Robert B. Tetley, the Bradford manufacturer, who bought 30,000 pounds of mohair in San Francisco last year, wrote to the RURAL PRESS as follows:

There is no longer any doubt, from the years of experience the goat breeders have now had and from the number of clips from every part of the State that I have received, that mohair of a very good quality can be raised. The industry is one of very considerable importance already, and I believe will rapidly extend when it is found that there is a market on the spot for the fleece.

The Angora Robe and Glove Company, of San Jose, bought and manufactured about 15,000 goat skins last year, and they expect to use from 20,000 to 25,000 this year. The demand for Angora fleeced skins for robes, coats, parlor and carriage mats, saddler's uses, etc., has been larger than they could supply. The fine fleeced well-cured Angora skins that have cost from \$1 to \$1.50 each have been entirely more profitable to them than the sun-dried, ill-cared-for, common skins, that have cost from 15 to 25 cents each. There is an improvement of fully 30% in grade and quality of the skins received this year, over those received three years ago. This not only shows that the flocks are improving in grade, but that the breeders have come to know the wants of the manufacturers and are taking better care of their goat skins.

"Hard times," in his tour around the world, has visited our coast, and although often admonished by us that his visit is becoming too extended, has persisted in staying till he has taught us some lessons in prudence and economy hitherto unheeded by us. Political economists have different theories of the reasons of these stringent times here. One writer in a leading San Francisco paper advances the idea that the Angora goat is the cause of a large share of all this trouble, and advises its readers to take care to have nothing to do with Angoras. We think that the writer of the above-mentioned article had not measured the strength of his adversary, and the result is that he has been pretty "thoroughly butted." I hope that he will see his mistake and be willing to acknowledge it, and hereafter lend his assistance in advancing one of the most promising industries of this coast.

C. P. BAILEY.

San Jose, Cal.

## THE PUBLIC LANDS.

### Paying for Government Timber.

J. A. Williamson, Commissioner of Public Lands, has issued the following circular, showing how those who have cut Government timber may escape prosecution. The instructions are addressed to registers and receivers in the land offices:

The fact having been brought to the notice of the Department that many parties who have cut railroad ties, cordwood and logs upon the public wooded domain, are desirous of relieving themselves of liability to prosecution for violating the statutes relating to illegal cutting of timber, by paying for the same, you are hereby authorized and instructed to make settlement with all persons who have trespassed upon the public timber lands in your district, prior to the 17th of June, 1879, by cutting railroad ties, cordwood, or logs therefrom, and who propose to settle therefor, upon the following terms, viz.:

1st. For all railroad ties, two and one-half cents per tie. 2d. For cordwood, 50 cents per cord. 3d. For logs, one dollar per 1,000 feet (board measure).

As a condition precedent to such settlement, you will require each and every person seeking the same, to submit to you a full statement, under oath, showing the time and place where the trespass was committed, and the quantity of ties, wood or logs by him, or them, taken and removed from the public lands.

If a proposition is accompanied with the statement that a portion of the ties, wood or logs was taken from railroad lands, you will not allow any deduction for that reason, except it be conclusively shown that all the trespasses for which settlement is desired were within railroad

limits. You will also make special reports of each settlement thus made to this office, and will also forward a consolidated monthly report of the same.

The foregoing instructions do not apply to cases where criminal or civil suits have been instituted against the parties in interest. In such cases you will receive the propositions to settle, when conforming to the requirements above set forth, and transmit them to the U. S. District Attorney having charge of the suits, accompanying the reference with a copy of these instructions, and a report of facts as you may find them; at the same time forwarding to this office copies of all papers sent to the U. S. Attorney, and in your monthly consolidated statement of cases noting those so referred. Nor are they to be construed as conflicting with the provisions of the act authorizing the citizens of Colorado, Nevada and the Territories to fell and remove timber on the public domain for mining and domestic purposes, approved June 3d, 1878.

In cases involving a conflict of identity as to the proper party or parties to pay the stumpage rates, and in all cases of illegal cutting of logs, ties or wood upon government lands, you will seize the same and hold the property until the stumpage rates above announced are paid.

In all cases where there are costs of watching over and caring for the property, they must be embraced in the settlement and liquidated by those seeking it.

You are further instructed to report, with as much detail as practicable, any and all trespasses upon timber lands, committed after the 17th of June, 1879, that may come to your knowledge, in order that criminal proceedings may be instituted to punish the parties guilty of such trespasses.

## ARBORICULTURE.

### Timber Cutting and Durability.

EDITORS PRESS:—During a residence of about twenty-five years in one of our mountain counties, for the most of the time engaged in the business of mining and ranching, and having occasion to cut and use much timber for fencing, fuel, etc., I experimented for about twenty years in the time of cutting timber, cutting at different seasons of the year, keeping a record of the time when cut, and when set, etc. My object was to see if cutting at a certain time made any difference in the value or durability of wood. From my experiments and observations, I am well satisfied that timber should be cut late in spring after the sap has ascended, but before any new growth of wood has been formed. I found lumber cut at this time to be much lighter, a great deal tougher, and more durable than when cut in fall or winter. Of course, timber which is to be used under cover, or to be put into the ground must be well seasoned before being used. In the case of our common mountain pine, to be cut for fuel, I believe that one cord cut in June is equal to two cords cut in winter.

The theory for this is, in my opinion, that in cutting our timber in fall or winter, the growth of the previous year of new wood is yet soft, spongy and not matured, full of moisture, and remaining in that condition for too long a time, partial decay takes place, destroying the vitality of the wood, but being cut in early summer the new wood has well matured and hardened, and the moisture is quickly evaporated, leaving the wood in good sound condition, and ready for use.

C. W. HASKINS.

Oakland, Cal.

A BOTANICAL USURPER.—A curious instance of the invasion of a country by a plant of foreign origin is seen in the history of the mango in Jamaica. In 1782 specimens of the cinnamon jack-fruit and mango were sent to the botanic garden of the island. There the cinnamon was carefully fostered, but proved to be difficult of culture in the island; while the mango, which was neglected, became in 11 years as common as the orange, spreading over lowlands and mountains, from the sea level to 5,000 feet elevation. On the abolition of slavery, immense tracts of land, especially coffee plantations, relapsed into a state of nature, and the mango being a favorite fruit with the blacks its stones were flung everywhere, giving rise to groves along the roadsides and around the settlements; and the fruit of these, again, rolling down hill, gave rise to forests in the valleys. The effect of this spread of the mango has been to cover hundreds of thousands of acres, and to ameliorate the climate of what were dry and barren districts by producing moisture and shade, and by retaining the rainfall that had previously evaporated; all this, besides affording food for several months of the year to both negroes and horses.

PALMETTO FIBER FOR PAPER.—The Fernandina (Fla.) Mirror reports that the machinery, lately brought to that place by Prof. Loomis, for the preparation of palmetto fiber is working satisfactorily, and that the experiment is an assured success. The stalks of the scrub palmetto are used. It is said that the fiber is likely to prove useful for cordage, paper, tubs, pails, flour barrels, boats, powder kegs, and no end of other articles of general use.

## HORTICULTURE.

### Notes on Gooseberries.

EDITORS PRESS:—In response to your call for reports of successful cultivation of gooseberries, I will give you a few items:

Several years ago I had the charge of a garden here, in which there were some English gooseberry bushes from Elwanger & Barry's nursery, at Rochester, New York. They bore good crops of fine large, light green fruit, and rarely showed any signs of mildew. I gave some of the stock to my neighbor, John Kelsey, and he has had wonderful success with it, considering it the best gooseberry for this climate that he knows of.

The soil in my garden was a dark loam, about three feet deep, with subsoil of yellow hardpan. Mr. Kelsey's is, I think, about the same thing. Our climate is that of the east side of the Bay of San Francisco, modified by the fact that we are about 250 to 300 feet above tide water, in fact, in the warm belt. We have frequent dews and some fog—a sort of medium between the true coast climate and the extreme heat of the interior. This climatic condition undoubtedly has much to do with the thrift of the gooseberries.

The native country of the gooseberry is the north of Europe, and it reaches its greatest perfection in the cool, moist climate of England. Drouth and a poor, thin soil, seem to be the causes that make it so frequently a victim to mildew, very likely by reducing its vitality so that it cannot resist the fungus. Having a suitable climate, and a good variety of the berry, the next care should be to see that the soil is deep and rich. The depth helps to guard against drouth and adds to the foraging ground. If preparing land especially for this fruit, it would be well to plow deep, and follow with a subsoiler—not a trench plow. If the soil is at all worn, it can hardly be fed too liberally with the best of old compost.

In starting cuttings, my neighbor and I both tried Downig's plan, and cut out all of the eyes that were to go below the surface of the ground, to avoid suckering. We found, however, that a very large part of the cuttings failed to root, while if the eyes were left on very few missed striking.

The bushes produced by the latter method are not as handsome as by the former, but they bear well, which is the object aimed at. For a small family garden where the tree form is desired, enough cuttings could be trimmed, as mentioned above, to allow for failures, and still give the desired number. Cuttings should be of the last year's wood, say 10 inches long, about six of which is buried. Set in January. The main pruning needed here is keeping down suckers. Probably the best way to do this is to pull them off while young; but in doing so the hand must be protected by a heavy glove.

A few weeks ago I saw two varieties of English gooseberries in bearing at Mr. Robt. Ashburner's, at Baden station, San Mateo county, raised from stock brought by him from England. They were both in fruit and thrifty. The climate is cooler and moister than here, and the soil much lighter. It is pretty safe to assume that as the bushes are on Mr. Ashburner's premises they have been well fed.

The gooseberry is one of the small fruits that should be found in the family garden wherever it will grow. It gives liberal returns for the pains bestowed upon it, and great satisfaction to the consumer, whether he eats it fresh or as put up for winter use.

C. H. DWINELLE.

University of California, Berkeley.

### A Peculiar Asiatic Fruit.

A writer in the *Gardener's Chronicle*, in an article on the edible fruits of the forests and gardens of the Eastern tropics, gives a long and interesting account of that singular fruit, the durian, which the *Scientific American* condenses as follows: He says that the regal durian (*Durio zibethinus*), like the finest of nectaries or melting pears, must be eaten fresh and just at one particular point of ripeness, and then it is a fruit fit for a king. So highly is this vegetable custard valued that as much as a dollar each is often paid for fine specimens of the first fruits of the durian crops brought into the Eastern markets. It is a universal favorite with both Malays and Chinese, but the opinions of Europeans vary as to its merits. It is a paradox, "the best of fruits with the worst of characters," and, as the Malays say, you may enjoy the durian, but you should never speak of it outside of your own dwelling. Its odor is so potent, so vague, so insinuating, that it can scarcely be tolerated inside of the house. Indeed nature here seems to have gone a little aside to disgust us with a fruit which is, perhaps, of all others, the most fascinating to the palate when once we have "broken the ice," as represented by the foul odor at first presented to that most critical of all organs of sense, the nose. As a matter of course, it is never brought to table in the usual way, and yet the chances are that whoever is lucky enough to taste a good fruit of it to begin with, soon develops into a surreptitious durian eater. There is

[CONTINUED ON PAGE 74.]



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### The Grange and the State Fair.

EDITORS PRESS:—The old adage runs "business first, pleasure afterwards." The Sacramento Grange recognizing the fact put the precept in practice last Saturday, the 27th. As a portion of their work in the field and garden was over, they thought an interlude would be appropriate, so they voted themselves a social feast—as it naturally would collect the stray sheep to enjoy the "good things" that the sisters get up as extras not found in every day life. The hint took. It is not worth the time to mark the doings, as such episodes are never failures with such a class. After putting in our double best, and refreshed from the outlay, [in-lay? EDS. PRESS] a call was made to "enter within the gates," those not passing muster quietly retired.

Under the head of "Good of the Order" a discussion came up as to the way to make the State fair more of a success—uniting the farming element closer, and drawing out a feeling of recognition of duty in sustaining and building up the institution to a higher degree than ever before. Our worthy brother I. N. Hoag, gave us an outline of work up to the present time. The outlook is promising, application for room in all departments is daily made. The managers are studying how to make the fair attractive. The citizens are at work and business men are taking hold. The farm element is entering, and a general feeling is rising throughout the State for its success. Bros. Larue, Flint, Worthy Master Manlove and others, counting the sisters, spoke to the point.

The subject in debate brought out aid and help by way of appointing a committee to urge the support of the fair throughout the Granges of the State as well as those outside the gates. The Grange appointed a committee consisting of Dr. W. S. Manlove, George T. Rich, James Rutter, Daniel Flint and C. A. Hull, to issue a circular letter to all the Granges in the State, urging the importance and benefits to the members of taking hold and assisting to make the State fair a good and creditable exhibition of all agricultural products of the State. The committee were also instructed to attend a State Convention of Grangers to be held at Martinez, on Friday and Saturday, Aug. 22d and 23d, to present the same subject personally to the Grangers present. Among other interesting and useful features it is proposed by the Grangers to secure the exhibition of a large number of samples of wheat, both good samples and those affected and injured by the rust, from every section of the State, and have statements of their growth, etc., to the end that the various kinds of wheat, as adapted to localities, may be investigated, and the rust problem studied up thoroughly. G. R.

Sacramento, Cal.

### Grange Suggestions.

The following are from the *Grange Bulletin*:

It is a common opinion that the Order of Patrons of Husbandry had too rapid a growth, and that like the growth of products of the farm, the more rapid the less firmness of fiber and durability. We deny the correctness of the opinion and the analogy. The Order spread over 35 States and Territories like fire on a Western prairie. Reaction was to be expected, and the zeal of many waxed cold, but in the space of two years, from the time its roots began to take possession of the soil, its principles, purposes, and objects were known to two-thirds of the farmers of the country. It was not compelled to fight its way for a long series of years as other societies have done, with a precarious existence and ready at any time to die, but strong, vigorous and aggressive from the start. One-third may have gone back to the "heggarly elements of the world," but the Grange has made its mark, and if nothing more be done, will be felt during this generation.

We have yet to see the Patron who would not consider the decline of the Grange a misfortune. It has already done so much for the farmer, its possibilities in the future are so grand, that we do not wonder at the hold it has taken. Yet, with all this, too many are ready to let work and other things, which might have been laid aside for the time, interfere with the Grange night. Now, this is hardly consistent. You would not have the Grange break down, yet do the very thing best calculated to cause its failure. To be efficient, there must be attendance. A full house will ensure the best and most profitable work. You cannot afford to let the Grange fail, and you know it. Don't then make excuses for absence. Make it a rule to be there, and resolve to get good enough out of each meeting to repay you. With this spirit to animate all, the common thought will be, "we had a grand meeting last night."

Has the Grange any cause of discouragement? None in the world. Its principles underlie all progress. It is especially adapted to the wants of the farmer. It has come up out of surrounding conditions—a necessity of the times—just as the engine necessarily followed the discovery of

the power of steam, or the markets of the world followed the steamboat and the telegraph. It is no exaggeration to say that only recently has the farmer come to the front and kept step with the world. Nature's laws work in his favor. The Grange is only part of the developments of the age. It has in its favor what other social organizations have not—a necessity, an adaptation to surrounding circumstances, and an outcome. We cannot believe that the farmer can be so blind to his own interests and the future of agriculture as to throw away his chauce.

### The Insurance Company Matter.

EDITORS PRESS:—There was a meeting of citizens at Enterprise Grange hall last evening, to take steps to defend ourselves against the suits that are to be brought against us by the California Mutual Fire Insurance Co., and the following parties signed an agreement to fight the company to the end: L. H. Fassett, Wm. Farrer, Phil Oyer Hasness, J. M. Bell, John D. Morrison, A. Root, T. B. Fitch, Oliver Plummer, Y. L. Coey, A. M. Gutes, H. Konkite, M. H. Bayliss, S. A. Nott, J. H. Hamilton, Mrs. Sprig, T. N. Fassett, J. C. Sherwood, A. Faranbaker, E. G. Morton, Wm. Baker, M. Toomey, S. B. Moore, D. Reese, Charles Hull, Mrs. C. Bates and Wm. Johnson. The signers desired me to send a copy of the proceedings to you for publication. M. TOOMEY, Sec'y.

Brighton, Cal., July 22d.

### Questions as to Action.

EDITORS PRESS:—I send you a notice calling for payment of assessments which will explain itself. Many others with myself wish to know if it is lawful and right that we should pay the assessment. We paid all that we agreed with the agent to pay, when we insured. The directors have ordered business suspended; our policies are worthless. I ask you for the information that it may come before the public. We will pay cheerfully if lawful. D. DOOLY.

Sanel, Mendocino Co., Cal.  
[We have received several such inquiries. We would like to help our readers in this matter if we could see any way to do so. The question asked is one which depends for answer upon the decision of the Court, as we have said before, and the only opinion which will be authoritative will be that involved in the decision of the Court when it is handed down. We shall advise our readers of this decision as soon as it can be had.—EDS. PRESS.]

THE GRANGE IN MAINE.—When we come to the Order of Patrons we can't be beaten. We have some 12,000 members, are well organized and earnest. Three county Granges have been organized the past winter, quite a large number of Grange halls have been dedicated, and things are looking prosperous all round. Why is it, Mr. Editor, that every farmer, farmer's wife, and son and daughter does not enter the Grange, and make it what for thousands of years the world has needed and what it is susceptible of being made, a medium through which to raise themselves to the standard to which honest labor should attain?—*Grange Bulletin*.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### CONTRA COSTA.

GOOD CROPS ON A LIGHT RAINFALL.—*Gazette*, July 26: From Mr. Barry Baldwin, and others, we have obtained a few items illustrating the good results realized at the Point of Timber—where the total rainfall of the season, including that of October, did not exceed five and a half inches—from summer fallowing and after plowing the land. Messrs. Porter & Burdewick, farming upon the land of J. H. Baldwin, and summer fallowing one-half each year, had in this season 405 acres, from which they sacked 408 tons of plump, bright wheat of first quality. The land was plowed twice, harrowed before sowing, and the seed drilled in at the rate of eighty pounds to the acre. Messrs. Volney and Vernon Taylor, of the same neighborhood, had a yield of twenty-two cents per acre. Messrs. J. P. McCabe, E. D. Grigsby, Huey & Hoffman, Dumont, Berkeley, Stedding, Gilchrist and others of that vicinity, are reported to us as among those who have good crops this season from summer fallowed land, with only the light measure of rainfall above mentioned, while the winter plowed seedings have been almost total failures. Captain Baird has wheat upon tule front lands which is said to have turned out well, and Mr. Roberts is reported as having had a very good turnout of wheat and barley on his reclaimed tule land. Nearly all the Point of Timber farmers have thrifty alfalfa fields, Mr. Berlinger having set an encouraging example by his success in this line of farm culture several years ago.

#### EL DORADO.

HEMP.—*Republican*, July 26: It has been practically demonstrated that hemp attains to a remarkable growth here in the foothills. We have often seen specimens of it here from eight to ten feet high, and was shown a stalk on Saturday last, grown in Mr. Ditson's garden, that was fully ten feet high, and it had not yet attained its full growth.

#### LASSEN.

HARVESTING.—*Advocate*, July 26: The cutting of wheat in the vicinity of Janesville and Milford has commenced. The crop will be far short of that of last year.

#### LOS ANGELES.

RAPID GROWTH.—*Outlook*, July 26: The country around Downey now presents a most luxuriant appearance. The corn is very thrifty, giving promise of a large yield. The alfalfa is a marvel in the way of rapid growth. A lazy man would find it very burdensome to keep it properly mowed.

#### MENDOCINO.

THE HOP CROP.—*Ukiah Press*, July 25: Our hop crop bids fair to be excellent and remunerative this year. Fourteen cents offered for the new crop so early indicates that some serious drawbacks have been experienced by Eastern or foreign growers. Burke's field is getting old, and is therefore thinly set with hops; Mewhinney's, in Potter, are remarkably heavy; White, Neece, Ruddick and Cowser all have small yards of excellent vines; McClure has over 50 acres of very heavy; Bartlett's are over average, covering the poles and twining thickly. With hops up, grain fair, and wool booming, our county ought to come out fairly in a financial way, though the lumber interest is exceedingly depressed.

HAY.—Norton Wagenseller has just baled 34½ tons from six and three-fourths acres of land, hay weighed and land measured—the former full and the latter scant. W. D. White cut ten tons of alfalfa from two and one-half acres, and a second crop of two and three-quarters tons, and a third crop under way, with no irrigation.

POTATOES.—The *RURAL PRESS*, by correspondence, reports the Mendocino potato crop an almost total failure from blight. Not so; with the exception of some early planted fields, which wet weather and consequent neglect naturally handed over to blight, the crop never promised better.

#### MODOC.

POOR CROPS.—*Independent*, July 19: J. R. Franklin this week informed an *Independent* reporter that the hay crop in the neighborhood of Lendale would be very light this season, and the grain crop was far below what was expected.

HAY AND WEATHER.—Hay harvesting on Clover Swale is now going on in earnest, despite the high winds which have prevailed here for some days past. The stacking of hay is made very difficult on account of the wind, very often the stackers having to lay over, especially afternoons, on account of the wind blowing too hard to haul or stack. The hay this season, I think, is of a better quality than it was last year, owing to the fact of there being more clover and fine grasses with it; but the yield will fall a little below what it was last season, I think. Other crops, such as grain and garden vegetables, look quite promising so far as I have noticed them, notwithstanding the great backwardness of the season. The present season has been one of the frostiest and most dilatory ones I have ever experienced in my life. The weather has been so exceedingly changeable—from heat to cold, from cold to heat, that no crops have prospered as they should.

#### MONTEREY.

SALINAS VALLEY.—*Index* July 24: Harvest is now in progress all over the Salinas Valley, and reliable reports place the yield much larger than was anticipated. The Spence ranch and the Alisal district are turning off about 12 sacks to the acre; Chualar, at least 8 sacks, while the region from Salinas City to Castroville and Moss Landing and northward, including Pajaro Valley, will yield from 20 to 25 cents per acre. The barley crop is one of the best ever known in the valley.

#### NEVADA.

WHEAT GROWING ON THE MEADOWS.—*Reno Gazette*: The price of hay is quite low this summer, and it is quite probable that a good deal of ground will be sown down in grain next season. Heretofore it has been supposed that alfalfa was the cheapest crop raised and the most profitable, but experiments have proved that wheat is equally profitable. A number of farmers sowed small patches this year to test the question whether wheat can be grown with profit in this valley. In every instance the result has been entirely satisfactory. Wheat grows well and the yield is very good. A wheat field of 40 acres on M. C. Lake's farm, four miles from town, will produce at least 30 bushels to the acre. Smaller wheat fields in the vicinity will yield fully as well. Now that a first-class mill has been built here, Reno furnishes a ready market for the wheat grower, and the cultivation of that grain will, very likely, largely increase.

#### SACRAMENTO.

INCUBATION AT THE STATE FAIR.—EDITORS PRESS: Among the attractions that will be presented at the next State fair will be the process of incubation. Each day a brood of chickens will come out. The exhibitor is Mr. Fitch, late of Reno, Nevada, and now a resident of our county, having bought a small parcel of land near the city limits. Mr. Fitch at present has but one incubator, but will soon have half a dozen on hand. He has one brooding house built, divided into many partitions; in one was a brood of chicks just hatched, looking in fine order. He has also a number of duck eggs nearly ready to come out, the shells being broken. He intends to enlarge his capacity as time permits. This winter he will set out trees, sow grass seed and engage in the business on a

large scale. The advantages he claims by the incubation process is, that 90% of chicks are obtained, while in the usual way the gain is but 60%. Again, the chicks come out free from all vermin, healthy and strong, and by good attention mature without any drawback. As a heater he simply uses kerosene and lamp with apparatus to regulate heat, keeping his incubator at from 103° to 105° Fah.—G. R.

SACRAMENTO VALLEY RAISINS.—*Valley Agriculturist*: The Sacramento Valley raisin yield will be large this season. Mr. Blower, of Woodland, has this season twenty-eight acres of Muscatels in nearly full-bearing condition. He expects to be able to market 6,000 boxes of good salable raisins, each holding 20 pounds. That is a raisin product of two and one-seventh tons per acre. Near Davisville, Mr. Briggs has a five hundred acre vineyard of raisin grapes, from which he expects to put up 100,000 boxes a year. Ultimately this will doubtless rank as the largest raisin-producing vineyard in the State, if not in the world.

#### SAN BENITO.

GRAIN.—*Hollister Enterprise*, July 26: Nearly all the grain of the valley has been cut and threshers are busy in every direction. Some of the new wheat has already found its way into market, and the samples we have seen thus far are of an excellent quality. Except in the San Juan and San Felipe sections and possibly a few other small localities, the wheat crop of the county is light, but the quality this season goes a good way towards making up for the deficiency in quantity. There is also, owing to the failure of crops in portions of Europe, a promise of good prices.

#### SAN DIEGO.

TEA.—*News*, July 18: Very little of the tea planted in this city and county has done much good. Mr. Asher, the last time we examined them, had the thriest plants. Most others died out. The other day, at Mr. John C. Moore's nursery, we found he had a few still living. The frost was rather heavy on them. Still the plants of Mr. Moore were recovering from it, and exhibiting good-sized leaves, as though the stalks would yet do something. But they are a tender, difficult article.

#### SAN JOAQUIN.

ALFA POTATOES.—*Lodi Review*, June 26: The following figures are from Mr. Robt. Taylor, who has a ranch on the bank of the Mokelumne river a mile and a half south of the railroad bridge. Last year he was given 20 pounds of Alfa potatoes, the seed having been sent from the Patent Office the year before. He planted these on the low or bottom land the 1st of August, and in the fall harvested 290 pounds. This spring, in March, he planted 100 pounds and has harvested 1,922 pounds. These were grown on the upland. Early Rose planted at the same time, on the same kind of soil and receiving the same care will not average over half as good a yield. They are of a fair and uniform size, white, mealy-meated and keep well. He kept a few from last harvest till the 1st of July. He has just planted 2,000 pounds on low land. He has also planted two tons of the new variety, fearlessly as an experiment.

#### SAN LUIS OBISPO.

GOOD FEED.—*South Coast*, July 23: Farmers and stock-raisers agree that feed is better this season than it has been for years. San Luis Obispo county is one of the most favored localities in this respect.

#### SAN MATEO.

BARLEY.—*Redwood Times*, July 26: The farmers are having a more cheerful look since barley is selling for better figures. We have some fine large crops of grain in the valley. Tim Conlin has a stand of some 85 acres of Chev barley. John Lock has a large crop of the same article, and Alvin Marsh has over 90 acres in the same, besides a large acreage in barley and oats. Prospects are bright.

FLAX.—The flax crop on the ranches near Pescadero is looking well and will soon be ready to harvest. In fact some has already been cut.

WHEAT AND BARLEY.—The grain harvest in this region, as well as in the vicinity of Searsville and Woodside, is about over, and the threshers are already at work. The yield of both wheat and barley is fully up to the average in quantity, and the quality is excellent. Indeed the farmers of this county have nothing to complain of. Singularly enough, just across the creek in Santa Clara county, the yield will scarcely exceed half a crop.

#### SANTA CLARA.

THE CROPS.—*Mercury*: It is safe to assume that the grain and hay crop of this county will be a fair average. Of hay, especially, the yield will be unusually large, the price now ranging lower than we have ever before known it to be. Wheat and barley may be a little short, but we doubt if there will be much falling off in the aggregate yield. Of small fruits—cherries, strawberries, raspberries and blackberries—the yield has been very great. Of blackberries, especially, at ruling prices the crop will hardly pay for picking. In fact, with all of our small fruits the business has been overdone in this county, as the Chinese producers, who work the land on shares, are beginning to find out to their sorrow. Some of the bosses are unable to pay their hands, and are throwing up their contracts in disgust. Of large fruits—apples, pears, peaches, etc.—the prospect is most encouraging, and our canneries are likely to find their hands full, with perhaps 100 car loads of pears to spare. The apricot crop has been light, and the canneries have gobbled all of this fruit they could find.



It is found to be one of the most marketable of all our fruits for canning, and there is no reason why our orchardists should not give it more attention. A few years ago, before the fruit canneries were erected here, there was but little demand for the apricot, and the orchards were suffered to fall into decay. It will pay to replace them.

#### SOLANO.

**BUGS.**—Dixon *Tribune*, July 26: A large part of the apricot crop in this valley was destroyed by striped bugs, which devoured it when it was ripe or shortly before. They also attacked the peaches, but have not damaged them so seriously. Pleasant valley was not visited by the insect.

**GRAPES IN PLEASANT VALLEY.**—Two carloads of grapes have been contracted for to be shipped to Chicago. The price received by the farmers for their grapes this year is unusually low, because the grapes are not allowed to get ripe but picked prematurely, with the anticipation of getting fancy prices for them.

#### TEHAMA.

**EDITORS PRESS:**—Never having seen anything in your valuable paper from this out of the way place, I thought that perhaps a few lines from here would not be uninteresting to your many readers. Our settlement, which is known as Red Bank, is in the foothills about 16 miles west of Red Bluff, the county seat of Tehama county. This has been a very prosperous year to farmers in this section, whose ranches are small on account of the valleys being small, or in other words the cultivated portions are small. There is no hope of princely fortunes being made by farming these lands, but the hope of a pleasant home that can be improved, and beautified year by year, where something can surely be depended on every year, is something to be looked forward to with pleasure amid the toil and hardwork of improving our 160-acre homesteads. One thing very much in our favor is a healthy climate, especially for persons suffering with asthma. Some of the worst cases of that disease have been cured in a few months by our pure air and healthy climate. The productive capacity of the soil here has not yet been fully tested, owing to several reasons. The principal one is that it has been held by stock and sheep men until within the last four or five years. It was said and fully believed by some that the land was almost entirely worthless for farming purposes. But as there was considerable government land here, permanent settlers have come in, and the last two years have shown what can be accomplished by energy, perseverance and hard work. Wheat this year has yielded in this valley from 15 to 20 bushels to the acre; barley and rye have also yielded remarkably well, especially rye which seems particularly adapted to this soil, as it will make a heavy growth on late winter plowing. We had an exceptionally cold and rainy May but since then even the habitual grumbler could have no fault to find with the weather. We have had but very few hot days, and very little hot north wind. As many of the settlers have only been here about five years, there has been but little done in the line of fruit raising. What orchards and vineyards have been put out are doing well, and we can see no reason why an abundance of fruit may not be raised here. Turkey raising has been almost an entire failure here this year, owing, I think, principally to the cold rainy weather in May. Chickens have done better.—Mrs. O. H. R., Red Bank, July 10th.

#### WASHINGTON.

**IMMIGRANTS' AID SOCIETY.**—An immigrants' aid society has been organized at Port Townsend, W. T., for the following purposes: 1st. To diffuse, by means of a free pamphlet, reliable information concerning the natural resources, climate, industries, society, etc., of the lower section of Puget sound, comprising the counties of Jefferson, Clallam, Island, San Juan and Whatcom; also such information as may be beneficial to those seeking homes, or a change of residence, or contemplating emigration to this Territory. 2d. To aid immigrants in procuring cheap yet comfortable and safe transportation to their destination. 3d. To assist them on arrival in selecting desirable homes in any of the above counties, and in such other ways as the society may deem proper. The officers of the society are: Dr. T. T. Minor, President; Gen. D. W. Smith, Vice-President; W. H. Roberts, Secretary; Dr. N. D. Hill, Treasurer.

**NEW USE FOR OLD CLOTHES.**—A manufactory in Germany turns out 1,000 pounds of grape sugar a day, made from old linen. The old linen, which is pure vegetable fibrine, is treated with sulphuric acid, and converted into dextrine. This is washed with lime water, and then treated with more acid, and almost immediately changes and crystallizes into glucose or grape sugar—which is highly valued in the making of rich preserves and jellies. And this is the material which smart New York merchants put up and label "California Honey"—the rascals.

**A USEFUL PAMPHLET.**—The Pacific Coast Postal Index, compiled by John P. Mains, and published by L. P. McCarty, 604 Commercial street, San Francisco, contains full information concerning postal regulations, rates of postage, and a complete directory of Pacific coast offices. Just the pamphlet needed by all.

#### Distinguishing Butter from Lard, Beef Fats, etc.

Mr. William Gustavus Crook, public analyst for Norwich, England, describes a method which will in a few minutes distinguish butter from the fat of beef, mutton, or pork, or mixtures of them.

The sample to be examined (if in the form of butter) must be first melted and rendered pretty free from water and salt, by filtration if necessary; 10 grains are then to be put into a test tube and liquified by placing the tube in hot water at about 150° Fah.; remove the tube when ready, and add 30 minims of carbolic acid (Calvert's No. 2 acid, in crystals, one pound; distilled water, two fluid ounces). Shake the mixture, and again place it in the water bath until it is transparent. Set the tube aside for a time. If the sample thus treated be pure butter, a perfect solution will be the result; if beef, mutton, or pork fat, the mixture will resolve itself into two solutions of different densities, with a clear line of demarkation; the denser of the two solutions, if beef fat, will occupy about 49.7%; lard, 49.6%; mutton, 44% of the entire volume; when sufficiently cooled, more or less deposit will be observed in the uppermost solution. If olive oil be thus tested, the substratum will occupy about 50%; with castor oil, there is no separation. With some solid fats (not likely to be used fraudulently) no separation whatever takes place; the addition of a minute portion of alkane root will render the reading of the scale extremely distinct by artificial light. The author states that the above method (although not intended to surpass other processes) is capable of wide application, the saving of a large amount of time, and the reliability of its results will at once recommend it as a "first step" in butter analysis.

**PACIFIC COAST PRODUCTS AT THE MECHANICS' FAIR.**—Messrs. W. B. Ewer and W. H. Murray of the *Journal of Commerce* Publishing Co., have been requested by the managers of the Mechanics' Institute fair to secure a display of California products for exhibition. The displays made by these gentlemen with the aid of producers in former years, have attracted much attention, and given visitors a much better idea of the quality and variety of California products than they could otherwise have obtained. This year it is hoped a much better and larger display will be obtained, and all producers are requested to contribute material which they regard worthy of exhibition. A circular has been issued which announces that the display will consist of cereals, wine, wool, minerals, ores, tobacco, silk, flour, woods, and other objects, natural or cultivated, of curiosity or importance. A special feature of this exhibit will be a magnificent display of tropical and semi-tropical fruits and fruit-bearing trees, raised in California. All who are able to furnish anything worthy of display in any of the above lines are requested to ship per Wells, Fargo & Co., who will deliver them to the Mechanics' fair building, Mission and Eighth streets, S. F. All matter should be way billed "S. C." Credit will be given to each party contributing to the exhibition, and all are requested to be particular in giving name of grower, and place where grown.

**A LARGE SUGAR MILL.**—One of the largest sugar mills in the world is soon to be erected in St. Charles parish, Louisiana. The total weight of this mill, including engine, will be 300,000 pounds. The latter will be of about 300 horsepower. The rollers are to be seven feet long and 40 inches in diameter, weighing each 18,000 pounds, or all 54,000 pounds. The shafts are of wrought-iron, 18½ inches in diameter and 20 inches long. The housings, made of the best gun-metal, are each 14 feet long, with 18-inch face, and will weigh 54,000 pounds. The mill will be double-g geared—that is, run with two sets of pinions and spur-wheels of enormous size and weight. The shafts of all these wheels, with that of the fly-wheel, will be of the best wrought-iron, while the journal bearings of the roller shafts in the housings will be manufactured of the purest Babbitt metal. It is estimated that with this machinery there will be a gain of more than 30% on the work of the ordinary mills. A number of single or three-roller mills and a few five-roller mills have been erected in the State recently.

**THE NEW ROUTE TO BODIE.**—The Pioneer Stage line travel over the new road to Bodie, which is the shortest from San Francisco by 170 miles. The stages connect with the railroad at Milton. Passengers from here leave on the 4 P. M. boat for Stockton and leave Stockton at 8 A. M. the following morning, connecting with the stage at Milton at 9:30 A. M., and arriving at Bodie at 4 P. M. next day. The advertisement in another column gives the days of departure, and the agents, Messrs. T. J. Matteson and Edward Harrison, at No. 3 Montgomery street, will give all the information desired. Both time and distance are shortened by the new route, which is a desirable one to travel over, and the company are well provided with easy coaches and good stock, so the ride is one to be enjoyed. Our correspondent, Mr. Wheeler, recently passed over this route on his way to Bodie.

#### PATENTS AND INVENTIONS.

##### List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS TO DEWEY & CO.'S MINING AND SCIENTIFIC PRESS PATENT AGENCY.]

By Special Dispatch from Washington, D. C.

FOR THE WEEK ENDING JULY 15TH, 1879.

217,510.—FRUIT DRIER.—Wm. Butts, Petaluma, Cal.  
217,514.—BAND SAWMILL.—S. G. Crawford and E. C. Jackson, Oakland, Cal.  
217,518.—QUICKSILVER FURNACE.—J. W. Epley, Pope Valley, Cal.  
217,474.—MACHINE FOR CRUSHING ROCKS.—W. C. Morrison, S. F.  
217,547.—TOE-WEIGHT FOR HORSE SHOES.—A. J. Packard and C. P. Harris, Hill's Ferry, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

##### Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

"HOTEL AND RESTAURANT WAITER."—L. Garrigan, S. F. Dated June 17th. This is a novel device intended to facilitate the delivery of dishes in restaurants and hotel dining-rooms; and it consists of a series of shelves mounted upon a set of wheels, the whole forming a car which is easily moved about. The front wheels are small enough so that they may turn under the lower shelf, thus allowing the car to be turned in a small space. In connection with this car is used a bulletin or card made of any suitable material, on which are placed small checks or cards, each bearing the name of some dish. When an order is given the waiter puts the cards bearing the dishes ordered upon the bulletin and carries it with other orders to the kitchen, when the order is filled by the cook. The waiter has no trouble in readily delivering it to the right person who ordered, as on the bulletin is placed a series of numbers corresponding with similar numbers on the chairs at the tables, and the cards are placed opposite these numbers. This arrangement will be found very convenient in large dining-rooms, and will avoid annoying mistakes which are common with overburdened waiters.

**CONSTRUCTION FOR WHEELS.**—L. B. Laurence, Monticello, Napa Co., Cal. Dated June 10th. This improvement in the construction of wheels consists more especially in a novel construction of the hub of the wheel, and in the employment of a compressed rubber or other elastic holder or socket for the spokes, in combination with a stationary and a movable flange, one being secured to and forming a part of the hub or axle-box, while the other moves upon a screw-thread upon the inner end of said box, and may be set up against the elastic spoke socket disc so that the spokes will be firmly held in place. The invention further consists in the employment of an expanding ring, which is fitted to the exterior of the axle box, so that it may be forced beneath or within the elastic spoke-holder, and when the flanges are screwed up the expander will force the spokes outward, so as to tighten the tire when loose. In wet weather, or when the tire is re-set, the expander can be removed, and the wheel will be prevented from becoming warped by the contraction. Slight impressions in each of the flanges receive the sides of the spoke tenons, which may also be protected by their elastic side washers. The expanding ring may also be steadied by extending it beneath the stationary flange.

**BUTTON-HOLE MACHINE.**—Justin J. Graft, S. F. Dated June 17th. This invention relates to certain improvements in machines for sewing button holes, and is more especially adapted to be used upon a machine previously patented by the same inventor. It consists in so constructing the movable cloth plate and an attached arm together with a supplementary adjustable holding plate, that the button-hole may be finished by hemming it, so that the stitching at the point shall be in line with the bottom-hole instead of across it.

**TOE-WEIGHT FOR HORSE SHOES.**—A. J. Packard and C. P. Harris, Hill's Ferry, Stanislaus county, Cal. Dated July 15th, 1879. The object of this invention is to produce a toe-weight which will adapt itself to any form of hoof and not necessitate cutting the hoof to secure it. The construction is simple, and the parts are self-binding so that they may be easily attached or removed. Weights of different sizes may be used with the same clamps if desired, thus making a very convenient and practical article.

**PROPELLER PUMP.**—Geo. Norton, Stockton. Dated May 20th. The peculiar construction of this propeller pump consists in the construction of a single straight cylinder having a shaft extending longitudinally through the center, and provided with propeller blades at intervals along its length. In order to avoid the employment of more than one set of screw propellers, the inventor conceived the idea of employing a longitudinal diaphragm or series of diaphragms which shall prevent any rotation and twisting in the stream.

#### News in Brief.

The Spanish Cortes will soon abolish slavery in Cuba.

EASTERN advices report the outlook of trade as generally good.

The people of Cincinnati have been defrauded by a crooked election.

A VIOLENT hurricane last Sunday in the Adriatic damaged 20 vessels.

NIHILISTS have burned 17 houses at Katlaoff, on the Dnieper.

THE harvest in southeastern France is barely an average, but better than last year.

AT Sierra City, a few days ago, the thermometer marked 101° in the shade.

THE increase of revenue receipts for the year ending June 30th, 1879 is \$2,820,740.

TENNESSEE being penniless, Memphis will be obliged to obtain relief from other cities.

MINISTER WELCH having resigned the English mission, immigration to Washington is immense.

THE Bonapartist party of France invites the secession of those who do not support its head.

THE members of the French Corps Legislatif are quarreling over Jules Ferry's educational bill.

THE temperance question has been solved by the burning of Leight's brewery at East Williamsburg, N. Y.

THE 31st anniversary of the independence of Liberia was celebrated at Savannah July 28th, by 3,000 people.

COONS are making much trouble for ranchers along the American river, especially those who are raising melons.

THE present government of Italy have sought the aid and protection of Garibaldi, who is the D. K. of that country.

THE Free library bills have at last been paid, and the sum of \$24,000 will be used this year for library purposes.

SOME of the Paris streets which have Bonapartist names are to have them changed, and one will be called Lincoln.

THE Evangelists, Moody and Sankey, had a very successful meeting Sunday evening, at Cooper Institute, New York.

A PROPOSITION has been made to exhibit a trick monkey on the Kansas Pacific railroad for the amusement of the passengers.

THE Congressional Committee on Trade and Industry, are busy at Chicago trying to find out what causes dullness of trade.

AMERICAN vines are to be largely introduced in France, in consequence of the ravages of the phylloxera in French vineyards.

AN international exhibition of fishes and fisheries is contemplated at Berlin next year. The Pacific coast fishes should be represented.

LAST Saturday a destructive storm in Monongahela and Alleghany valleys destroyed, at Petrolia, \$200,000, many people being left destitute.

SHREVEPORT has quarantined against New Orleans. The situation at Memphis is unchanged. Great fear of the yellow fever exists everywhere.

M. de LESSEPS is astonished that Americans oppose his Darien canal scheme, since he offers to make Gen. Grant honorary president of the company.

A FRENCH engineer now offers to build a ship railway across the Isthmus of Darien for \$5,000,000, one-tenth of the sum Capt. Eads agrees to do it for.

COUNT ZICHY, Secretary of the Hungarian Ministry of Public Worship and Instruction, having been accused of corruption has tendered his resignation.

THE Grand Vizier of Turkey has resigned and his office has been abolished, the office of Premier and Minister of Foreign Affairs being substituted for the Grand Vizierate.

A MATCH game, for a ball and bat, was played last Sunday, between the Lone Star Club, of Visalia, and the Farmersville club. The former made a score of 33 and the latter 22.

A MECHANIC at the Sacramento railroad shops, named J. A. Douglas, has invented a glass ball trap that is said to have much merit.

A GEYSER was struck on the 2000 level of the Julia mine last week, which spouted a scalding hot stream of water equal to 24 miners' inches. [They are getting near the place.]

DAVIS and Williams ran a 100-yard race at Los Angeles, July 20th, the former winning in 12 seconds. Five thousand dollars changed hands on the result, one man losing \$2,500.

THE clipper freight market at New York, is quiet. Available tonnage is scarce. Steamer freights are lively, and the departure of 1st of August will have a full cargo for California.

A STEAM trainway from Rome to Tivoli was recently opened with a large popular demonstration. Tivoli, it will be remembered, is where the finest Pinafore ship ever put upon any stage, etc., is to be seen.

M. GILMORE has recently discovered a ledge of kaolin in Washoe county, Nevada. Kaolin is a clay from which porcelain is manufactured, and found principally in Cornwall and China. The ledge is three feet wide at the croppings.

THE *Hankeye* says the new comet will only be visible from the second peak of Mount Aytchimbogundalahasta, in Central Asia. [This is where the comet of 1856 lost its tail, and the mountain has retained it ever since.]

BIDS for supplying the U. S. mints with silver bullion were opened on the 24th inst., 600,000 ounces were offered. San Francisco bids were declined, being in excess of market rates. The largest proportion of silver coinage during the month of August will be done at the Philadelphia mint, owing to the inability to procure silver at market rates for the Western mints.





### What Then?

An old man crowned with honors nobly earned,  
Once asked a youth what end in life he sought,  
The hopeful boy said, "I would first be learned,  
I would know all that all the schools e'er taught."  
The old man gravely shook his head,  
"And when you've learned all this, what then?" he said.

"Then," said the boy, with all the warmth of youth,  
"I'd be a lawyer, learned and eloquent;  
Appearing always on the side of truth,  
My mind would grow as thus 'twas early bent."  
The old man sadly shook his head,  
"And when you've done all this, what then?" he said.

"I will be famous," said the hopeful boy;  
"Clients will pour upon me fees and briefs.  
'Twill be my pleasing task to bring back joy  
To homes and hearts near crushed by darkest griefs."  
But still the old man shook his head;  
"And when all this is gained, what then?" he said.

"And then I will be rich, and in old age  
I will withdraw from all this legal strife;  
Known in retirement as an honored sage,  
I'll pass the evening of an honored life.  
Gravely again the old man shook his head;  
"And when you've done all this, what then?" he said.

"And then!—why, then I know that I must die  
My body then must die, but not my fame;  
Surrounded by the fallen great I'll lie,  
And far posterity will know my name."  
Sadly the old man shook again his head,  
"And after all of this, what then?" he said.

"And then, and then," but ceased the boy to speak;  
His eye, abashed, fell downward to the sod;  
A silent tear dropped on each blooming cheek.  
The old man pointed silently to God,  
Then laid his hand upon the drooping head,  
"Remember there's a place beyond," he said.

### Getting Married.

It is very unfortunate for many that a subject so practical and important as marriage is often spoken of as if it were a mere jocular incident in human life. The opportunity to fill young minds with just and pure ideas concerning it is partially lost, and from the habit of treating matrimony as a comedy it is sometimes turned into horrible tragedy.

Marriage has its social side. Persons rise or fall or are kept from rising or falling, in a great measure, by the companions for life whom they select. Mr. Small would never by himself have amounted to much, but he had the good fortune to marry a capable, educated, energetic girl, and the result is that the Small family stand among the foremost in the town.

Marriage has its prudential side. When the young people set out in disregard of the first principles of honest living, they lay the basis of many a bitter sorrow. When self-denial, forethought, and careful calculation are made at the beginning, and even over-mastering affection is made to bend to practical wisdom, they have laid a foundation for safe future prosperity. Tom Fawcett was desperately in love with Miss Greer, but he knew just how much it would take to "set them up," however modestly. He told her his ideas and plans; he got a savings bank book; she kept it for him; it was a salutary check on any little extravagancies to which she might have been tempted. Mr. Fawcett is now a bank president, and Mrs. Fawcett keeps four domestics, and makes everyone of them keep a savings bank book.

Marriage has an intellectual side. A man with a handsome face and fine figure, but without brains or any wish for knowledge, makes it hard for a wife of average capacity to maintain the "looking up" attitude. On the other hand, a refined and educated woman with an active mind lifts up a man who has inherent force, though, perhaps, without early advantages. A wise young fellow ought to say to himself: When that hair is less thick and glossy, when that cheek is paler, when that eye has less luster than now, will there still remain a mind that will stimulate and strengthen mine?

Marriage has a moral side. Harry Bell admired his "girl," but he did not respect her. There was nothing wrong about her, but he did not in his heart do homage to her principle. She dazzled others; she fascinated him; he was proud of her in society. But that was all. When he had his home and his wife in it he did not keep away the men whose looseness or coarseness would shock a good woman. Wit might be wicked, but she enjoyed it, if it was witty. So his tone was not kept up, but let down; and, unfortunately, the "boys" are bad, and the girls are "not turning out well." It might have been different if Mrs. Bell had set up a higher standard of goodness.

Marriage has a personal side. A little high temper, a little dull moroseness, a little looseness of the tongue, a little—a very little—jealousy of disposition may be the ruin of two lives that ought to have been happy as one. Dear Edith was a lovely girl, but her girl friends knew that she had a "temper of her own," and unfortunately now that she—temper and all—is Charlie's he knows it likewise. He is most cautious in her company. A man who carries

about a bag of gunpowder needs to avoid sparks. She might blow him up. On the other hand Dick Brown is, in many respects, a nice fellow, extremely precise in manner, but so jealous that his wife's own relations are watched, snubbed and at length driven from his house by him, lest they should get the affections of his wife. He has in various small ways, "cribbed, cabined and confined" her, till a sprightly, warm-hearted girl, with frank manners and an honest nature, is changed into a restrained, timid, hesitating woman. It is pitiable to see her sidelong glance at him, that she may find out whether, unobserved, she may cordially receive an old friend of her childhood. Dick might scold her, sideways, all evening, if she showed too much warmth.

These and many such matters are little thought of by too many young persons, and hence the "incompatibility," the "unpleasantness" and quarrels, ending too often in separation. The union was formed under the influence of admiration, or self-love, or ambition, or sordid gain, and it was not happy. Ah, Mr. Looker, you may buy gold too dear.

There are cases in which marriages not abstractly wise, are yet robbed of their evil in a good degree by prudent friends. A young girl becomes interested in some one; commits herself, and when he comes to ask permission of her parents to address her, every one knows that it is of no use for them to refuse. She will have him whether they like it or not. The parents are reflecting, self-controlled persons. They say to one another, "this is not the wisest choice that poor Mattie has made, but she has made it, and we must make the best of it." So he is brought to the house; arrangements are prudently made for them; he is conciliated; influenced; guided. His respect and confidence are secured, so that instead of his standing on his insulted dignity and defiantly employing his power, he becomes ambitious to win the esteem and affection of his wife's "folks," so he is lifted up and saved. The relations of young married people can do much to make or mar them.

There is a curious felicity some have in the circumstances of their marriage, which gives them a good "send off." They do not surprise any one when it is announced. People say it is just the thing. They do not run about the town telling everybody of the "catch," but they cement the friendship of many years by timely courtesies which say, informally, "I wish you as one of my friends to know it." Their wedding is nice; there is no meanness, and no "splurge." "Her own minister," who has long known her, watched over her, who shares in her hopeful satisfaction, marries her, and his voice trembles a little as he says, "The Lord bless you!" He feels as if giving his own child to another's custody, and the bridegroom knows again from the very tones of the clergyman that he would be bad and base beyond expression if he held lightly that sacred trust. Quietly and naturally the young couple settles down into their new life, forgetting no civilities, taking on no airs, and provoking no criticism. They are beginning as they mean to end. They will not be the "talk of the town;" they will never occupy the time of a divorce court.—*Rev. John Hall.*

A LESSON FOR PARENTS.—A pretty little story in *Harper's* reminds us of a habit which parents have, which is the cause of many a bitter pang to the hearts of their little ones. A little five-year-old asked her mamma to let her run across the way to visit a playmate. As she saw a refusal in her mamma's face, she put her little rosy lips up for a kiss, and said:—"Please don't say no; think a minute first." Oh, the wisdom contained in those simple words! How common it is, when a little one asks a favor which to us seems but a trifle, but to their vision is a matter of great moment, to thoughtlessly, hastily, snap out a "No!" Nor could we, did we pause to inquire of ourselves why we refused, give a satisfactory reason. It has become a habit, perhaps, to deny their wishes, until it must seem to them that we take delight in thwarting their innocent requests. The little girl desires to go and see a playmate, the boy wants to go into the woods for a holiday. There is no possible objection to either, but the hasty "No!" rises to the lips; the child, hurt, and smarting under a sense of injustice, "teases" or else goes away in sullen silence. The parent feels that he or she has been too hasty, but believes it beneath their dignity to retract now. Besides, "What right has a child to persist, when they are told no?" is the question that comes uppermost. So the child is robbed of a pleasure, the parent is wounded at its lack of dutiful feeling, all of which might be avoided, if parents would only heed the little mentor's counsel—"Please think a minute first!"

DISTRIBUTION OF BIBLES.—A careful estimate respecting the circulation of the Bible during the past century places the total at the enormous number of nearly 150,000,000 copies. The British and foreign society is in advance of any other institution of the kind as regards the number of copies issued. It was founded in 1804, and has circulated upward of 82,000,000 copies. The American society, founded 13 years later, has caused a circulation of 35,000,000. These organizations are far in advance of all others. Next in respect of copies circulated are the German societies, which together have issued 8,000,000. Then comes the national society of Scotland with nearly 4,768,000, then the Hibernian with 4,189,000, the Swiss with nearly 2,000,000, and the French with 1,600,000. The national society of Scotland has circulated its 4,768,000 since 1861, the year in which it was founded.

### Learning How to Rest.

Mrs. Harbert writes to the *Inter-Ocean*, addressing her words "to tired mothers," and then takes this ground concerning housework: Let us watch our tired friend while she prepares breakfast. Every dish has been put carefully away the night before, so that she must begin at the very foundation, by removing the table-cover from the dining table, replacing it with a table-cloth, and entirely setting the table—a process that requires many steps, owing to the inconvenient distances intervening between ice chest, pantry, sideboard and table. Potatoes are to be pared and sliced, and during the 10 minutes required for the preparation, our tired mother stands before a low table. Breakfast is eaten in a hurry, and then the table is again entirely cleared; salt-cellars, castor, etc., are placed to rest until noon; the dishes are carried to the kitchen, and during the long process of washing, draining and wiping them, the weary woman stands at her post. Finally, when the last dish is washed, she actually sinks into the nearest chair, sighing, "Dear me, this is almost the first moment that I have been able to sit down since I awoke." Tired out, and the day's work just commenced. After resting a moment, she remembers that there are peas to shell, and berries to pick over, and she returns to the heated kitchen, as if determined to work in the most uncomfortable manner.

Now, let us watch the housekeeper who is able to accomplish so much work with so little apparent weariness. When she commences her work the table is set, having been easily arranged the previous evening by the mere removal of the soiled dishes, and carefully covered. While preparing her potatoes she takes them onto a cool, shaded porch, where, seated comfortably, she can enjoy the fresh beauty of the morning, and at the same time perform her work as rapidly and deftly as though standing up in a heated kitchen. After breakfast, she arranges to be comfortably seated at the low table during the process of dish-washing, and, by the lavish use of water, renders the entire process far more endurable than the cold and greasy abomination of the friend "who is actually too tired to walk across the kitchen for the fresh supply of hot water."

After the dish-washing is concluded, our wise friend takes the peas and berries into the very shadiest spot of the yard, and calling the children, gives them their share of shelling peas, hulling berries, or reading the morning paper aloud, and thus the work of the day is well begun with but very slight weariness. Similar restful methods adopted in regard to the entire duties of the day will produce a surprising difference in the resulting weariness.

INTELLIGENCE AND ECONOMY.—The 10 ladies who are county school superintendents in Illinois have managed the financial parts of their business particularly well. Not one cent of the large sums over which they have had supervision has been lost, either through dishonesty or ignorance of business. In many of the counties the school finances were in a state of confusion when the ladies came into office. They have straightened everything, and put all school affairs on the most prosperous basis. Several of these lady superintendents regularly hold meetings of their school officers and talk about school work, with very useful results. These superintendents have also succeeded excellently in the legal part of their work, in school visitation, and in influencing and instructing teachers. Even those male educators who opposed the law making women eligible to this office, now pronounce their work a success, after the five years' experience.—*New York Tribune.*

VENTILATION BY THE CHIMNEY.—A parlor-fire will consume in 12 hours 40 pounds of coal, the combustion rendering 42,000 gallons of air unfit to support life. Not only is that large amount of deleterious product carried away and rendered innocuous by the chimney, but five times that quantity of air is carried up by the draft, and ventilation thus effectually maintained. The ascent of smoke up a chimney depends on the comparative lightness of the column of air within to that of an equal column without; the longer the chimney, the stronger will be the draft, if the fire be sufficiently great to heat the air; but if the chimney be so long that the air is cooled as it approaches the top, the draft is diminished.—*Faraday.*

MUSIC OF THE FLUTE.—That it is really the air which is the sounding body in a flute or other wind instrument, appears from the fact, that the materials, thickness, or other peculiarities of the pipe, are of no consequence. A pipe of paper, and one of lead, glass or wood, provided the dimensions be the same, will produce, under similar circumstances, exactly the same tone as to pitch. If the qualities of the tones produced by different pipes differ, this is to be attributed to the friction of the air within them, setting in feeble vibration their own proper materials.—*Sir John Herschel.*

TO HARDEN THE SKIN.—The constant use of the fingers in practicing the violin, piano and guitar, or kindred instruments, frequently become very tender and sore. The skin may be hardened by applying a strong solution of alum in water, or the tincture of white oak bark. A still better lotion would be a solution of tannic acid. Any drug store can furnish the acid, which should be dissolved in water.

### Tribute to Rural Life.

At a Fourth of July celebration in Connecticut the Governor of the State, Hon. C. B. Andrews, delivered an oration in which occurred these paragraphs:

Rural life should be fostered and cultivated, because it tends to promote that love of one's country. I mean country in the broader, grander sense of nationality, which in its development constitutes patriotism. Whatever attaches the individual to his native soil strengthens the nation. All our greatest men have cherished with the tenderest sentiments the memory of their birthplace. Daniel Webster—you all remember with what filial, reverent and patriotic duty he made those annual pilgrimages to the spot where he was born; how all his tastes and recreations announced the same type of character. His love of agriculture, of sports in the open air, of the outward world in starlight and storm, the sea and boundless wilderness—partly a result of the influences of the first 14 years of his life, partly the return of an unsophisticated and healthful nature, tiring, for a space, of the idle business of political life—its distinctions, its artificialities—to employments, to sensations which interest without agitating the universal race alike (in which one feels himself only a man, fashioned from the earth, set to till it, appointed to return to it); and all this displayed a man whom the most various intercourse with the world left, as he was at first, natural, simple, manly, genial, kind.

Washington—with what eagerness he ever returned to his delightful home at Mount Vernon, from the cares of state. Jefferson, at Monticello. John Randolph—how he chided his man because he had cut off from a large oak tree that stood near his house the branch which in storms seemed likely to break in a window. "Why didn't you move the house?" was his indignant exclamation. And the list might be extended indefinitely.

There seems to be something in the hills, in the landscape, in the rocks, in the waving trees, in the running shadows, and in the sparkling brooks which kindles and keeps bright that love of home and country, which no time nor distance can quench. How can there be anything like this in a city?

Rural life, too, commends itself for its healthfulness. The pure air, the fresh breezes of the country literally bring healing on their wings. And then the beauty of rural life and scenery! I might spend an hour dwelling on this. And then its profitableness! All these I must pass at this time.

I hail it as a most encouraging sign that at present not only do we find individuals who have acquired wealth and eminence in the more crowded walks of life returning to honor and beautify the homes which, dear to them in childhood, grow dearer in middle life with each passing year; but that there exists a strong and increasing sentiment in favor of organized work for the same purpose.

Such individuals and organizations might widen their scope, so as to cherish and perpetuate the memory of local events and traditions; to preserve mementoes of historic and antiquarian interest; while they might serve also to encourage intellectual, as well as physical improvement and progress. Organizations for such purposes have been formed and are in successful operation in our State. In developing a proper public spirit, in directing and stimulating the aims of social life, and in uniting a people in a common purpose for the common good their beneficent office would seem almost without limit.

But my purpose will not be fully accomplished unless I can inspire within you something more than a love for mere village improvement or rural improvement in the limited use the word seems to have. I urge you not to forget these. I urge you still more to go somewhat further, and take in all agriculture. Teach all men that the tilling of the earth is the noblest as it was the first of human employments. Do something to drive out the idea, now altogether too prevalent, that the cultivation of the soil is disreputable. Make all men to know that "they are fashioned from the earth, that they are set to till it, and that they are appointed to return to it."

And let this teaching go on till, in very truth,

"The hills,  
Rock-ribbed and ancient as the sun; the vales,  
Stretching in pensive quietness between;  
The venerable woods; rivers that move  
In majesty, and the complaining brooks,  
That make the meadows green; and poured round all  
Old Ocean's gray and melancholy waste"  
shall be  
"But the solemn decorations all  
Of the great 'Hone' of man."

THE RURAL IN THE HOME.—Robert Roberts, Grafton, Yolo county, writes: "We should find it difficult to get along without the RURAL PRESS. We have had it in the family for a number of years, and it has become one of the household pets."

AN English showman's version of the story of King Darius, Daniel and the lions, was as follows: "At him," says the king. "We won't," says the lions. "At him again," says the king. "Blowed if we will," says the lions—which was a sell for the great King Darius, and wery wexatious."



## Chaff.

FOR rest, go to the forest.  
ALWAYS some hitch about it: A harness.  
THE man who chased a sailor said he was making a target.

THE man who lays by any "dust" must wade through considerable mud.

A BIG head is no more an evidence of brains than a paper collar is of a shirt.

A COUNTRY girl, getting off a train at Cape May, was asked if she might be helped to alight, and she replied that she did not smoke.

A YOUNG lady of New Fairfield, Conn., last year made three-quarters of a ton of butter and disposed of it herself.—*Cincinnati Gazette*.  
Thunder, what an eater!—*Boston Post*.

THERE was a man in Paris who, when he went out, was always robbed. Somebody said: "Why don't you carry pistols?" He replied, "Suppose I did—why, the robbers would take them too."

A MAN asked Mr. Pitt for a certain place. "I should have thought," said the minister, "that a sinecure would have suited you better." "True," said the applicant, "but if you give me the place I will make it a sinecure."

EVERY man is the architect of his own fortune, and it needs but a glance to convince the most skeptical that some men don't know as much about architecture as a hen does about artificial incubation.

AN old-fashioned minister passing a fashionable church, not long ago, on which a new spire was going up, was asked how much higher it was to be. "Not much," he answered; "that congregation don't own much higher in that direction."

AN African lion hunter contributes the following: How to catch lions. The desert is composed of sand and lions. Take a sieve and sift the desert. The lions will remain. These you place in a bag, which you carry with you for the purpose.

A LONDON newspaper relates that when a Frenchman, who fell overboard from the steamer which took the Cobden Club back from Greenwich, was rescued and returned to the deck, the first thing he courteously said was that he hoped he had not kept the steamer waiting.

A LISPING boy was out in the back yard pounding on a tin pan. The father came in tired and sullen, and being disturbed by the noise, cried out: "What is turned loose in the back yard, a wild animal?" The little fellow replied: "Yeth, thir; it's a pan thir."

SCHOOLMASTER: How dare you tell me such a lie, sir? I will give you a sounder thrashing than you have ever had in your life. Boy: I did not tell you a lie, sir. Schoolmaster: What do you call it, then? Boy: Only a fulminating enlargement of elongated veracity, sir. [Escapes his thrashing.]

"BUB, did you ever stop to think," said a grocer recently, as he measured out half a peck of potatoes, "that these potatoes contain sugar, water and starch?" "No, I didn't," replied the boy, "but I heard mother say that you put peas and beans in your coffee, and about a pint of water in every quart of milk you sold." The subject of natural philosophy was dropped right there.

A GOOD colored man once said in a class-meeting: "Brethren, when I was a hoy I took a hatchet and went into the woods. When I found a tree that was straight, big and solid, I didn't touch that tree, but when I found one leaning a little and hollow inside, I soon had him down. So, when the devil got after Christians, he don't touch dem dat's straight and true, but dem dat lean a little and are hollow inside."

I KNOW, also, a young lady who, on first attempting housekeeping, undertook to roast a pair of chickens, attending to their cleaning and singeing herself. They came to the table a beautiful, delicate brown, and she looked proudly at her husband, expecting his commendation. He waited, however, to test the fowls before praising the cooking, and it was as well that he did so, for at the first cut he made corn went flying all over the table. She had forgotten to take out the crops. In fact, had not known that chickens had crops.

GERMAN WIVES.—The culinary art forms a part of the education of the women in Germany. The well-to-do tradesman, like the mechanic, takes pride in seeing his daughters good housekeepers. To effect this object the girl, on leaving school, which she does when about 14 years of age, goes through the ceremony of confirmation, and then is placed by her parents with a country gentleman, or in a large family, where she remains one or two years, filling what may also be termed the post of servant, or doing the work of one. This is looked upon as an apprenticeship to domestic economy. She differs from a servant, however, in this—she receives no wages; on the contrary, her parents often pay for care taken of her, as well as her clothing. This is the first step in her education as housekeeper. She next passes, on the same conditions, into the kitchen of a rich private family, or into that of a hotel of good repute. Here she has control of the expenditures of the servants employed in it, and assists personally in the cooking, but is always addressed as Miss, and is treated by the family with deference and consideration. Many daughters of rich families receive similar training, with this difference, however, that they receive it in a princely mansion or a royal residence. There is a reigning queen in Germany at the present time who was trained in this way. Consequently the women in Germany are perfect models of economy.

## Young Folks' Column.

## Mrs. Robin Redbreast's Party.

Long before the sun rose on one bright July morning the birds were up and in an unusual flutter. The cause of all their noise and chirping was this: Mrs. Robin Redbreast was going to give her annual party that day. The preparations which were being made denoted something finer than had ever before taken place of the kind. Mrs. Redbreast had just finished her new home in a fine large apple tree, where the ripest and sweetest of apples grew, and as they ripened early Mrs. Redbreast considered this the best time for her party.

About seven o'clock A. M. the invited birds began to assemble. Mrs. Redbreast was of course curious to know who would come first, and wondered if any one would slight her invitation, but she did not care much, as her reputation was well established, and very few tried to look down upon her, or to outdo her fine entertainments.

Mrs. Redbreast was quite delighted to see her most intimate friend, Mrs. Thrush, who said she had come to help her in the finishing touches, if any help was needed. But as there was none, she and Mrs. Redbreast sat down to have a little chat before the other guests began to assemble. Mrs. Thrush said she was afraid her plain brown dress was hardly good enough, and Mrs. R. was about to say it looked very well, when they were interrupted by the arrival of more friends, Mr. Blackbird and his friends the Larks. The former had taken great pains to make his suit of deep black look very shining and nice, as he expected to meet a second cousin of his with whom he was very deeply in love. The Larks always looked well in their dresses of yellow, so elaborately trimmed with brown.

Soon many birds came flocking in together, and Mrs. Redbreast found her hands full trying to entertain them. Mr. and Mrs. Swallow, with their eldest children all dressed alike in dark brown with reddish brown trimmings, came next. The pretty Miss Dove and her parents came later, as they were particular to keep in the fashion. Miss Dove dressed in pure white looked very pretty. Her father walked proudly in by the side of her mother, who, dressed in light lavender, looked exceedingly charming and not old enough to be the mother of a young miss of her daughter's age.

No party was considered a success without the House Finches, and as Mrs. Redbreast and Mrs. House Finch were great friends, of course the whole Finch family honored the party with their presence. Mrs. Finch looked very well in her plain but elegant brown dress, while Mr. Finch was gotten up regardless of time or expense in a vest and tie of deep red, with a turban on his head of the same color.

The Shore Larks of course were there, and looked unusually well. Mr. Lark looked very handsome in a coat and tie of brown, and a yellow vest. Mrs. Lark was pretty, but all considered her husband much better looking.

Mr. Blackbird walked restlessly up and down, now stopping to talk with the House Finches, then conversing with Miss Swallow, whom he considered pretty but rather shy. Next he attempted to make himself agreeable to Miss Dove, who considered him remarkably stupid, and only tolerated his presence because she thought his suit of deep black set off the snowy whiteness of her dress to perfection. At last Miss Blackbird arrived, and after making her obeisance to the hostess, she glanced over to where Mr. Blackbird sat conversing with Miss Dove, and immediately beckoned him to come to her, so making an excuse to Miss Dove he went. "There," exclaimed Miss House Finch, who had been trying in vain to get a word in edgewise, while he had been talking to her companion, "I don't see what under the sun he can find to like in that conceited cousin of his, she dresses so plain and wears the same clothes on all occasions."

Mr. Blackbird, unconscious of all the hard words spoken against himself and his cousin, was in perfect bliss, as might be supposed.

Meanwhile there were far more arrivals than I could tell of. I will, however, mention a few who were noticeable either for their behavior or beauty.

The Orioles with their dazzling beauty had come many miles to enjoy the party, and appeared to do so heartily. The Thistle Birds came in rather late, as they had lingered long in a neighboring bush trying to decide who should first make their obeisance to the hostess, this duty being a very trying one to bashful birds.

Mr. Crow walked in with a very lordly air, making stately bows to those he deemed high enough for him to notice, and utterly ignoring some who hastened to bid him welcome. With his uncle, Mr. Crow, came young Mr. Bluejay, rather agreeable, quite handsome, and said to be his uncle's heir. This created quite an excitement in the corner which contained the Misses Dove, House Finch and their young friends.

Last but not least came Mr. Owl, bearing about his person the mysterious air of one who knows all there is to be known and who cannot stoop to trivial things. He soon entered into a discussion with Mr. Crow about a new constitution which the bird convention had agreed upon. Thus occupied, the time passed usefully if not pleasantly, I have no doubt.

The company was well entertained with a duet by Mr. and Mrs. House Finch. Then followed a song by Mr. Robin Redbreast, a nephew of the hostess, after which they all joined in a song called "Don't kill the Birds," except the

Sparrow Hawks, who had come without being invited, but who were allowed to remain as long as they would be peaceable. These birds considered the song an insult to themselves and left, much to the relief of all.

After dancing and some more singing they all marched out to the dinner, which we will leave them to enjoy.—*A. O. in Work and Play*.

## GOOD HEALTH.

## Labor as a Form of Athletic Exercise.

Open-air labor is the most effective cosmetic, an almost infallible panacea against all kinds of bodily deformity. But the remedial virtue of labor, *i. e.*, sound bodily exercise, is greater than that of open-air life *per se*; for among the rustic population of Scandinavia, Scotland, and Northern Germany, who perform a large portion of their hard work in-doors, we frequently find models of health and vigor; far more frequently than among the inhabitants of Italy, Spain, etc., who pass the greater part of their indolent lives in the open air.

But besides all this, athletic exercises have a moral value, which our social reformers have strangely failed to recognize; they afford a diversion and a vent to those animal energies which otherwise are sure to explode in debauch and all kinds of vicious excesses. The sympathetic thrill by which the mind accompanies a daring gymnastic feat, and the enthusiasm of athletic contests, form the most salutary, and perhaps the only normal gratification of that love of excitement which is either the legitimate manifestation of a healthy instinct, or else a wholly irremediable disease of our nature. The soul needs emotions as the body needs exercise, and the exciting sports of the palaestra met both wants at once. We try to suppress these instincts, but their motives remain, and if thwarted in their normal manifestations they assert themselves in some abnormal way, chemically instead of mechanically, as Dr. Boerhaave would say, by convulsing the organs of digestion, since the organs of motion are kept in unbearable inactivity. In times of scarcity the paupers of China and Siam silence the clamors of their hungry children by dosing them with opium; and for analogous reasons millions of our fellow-citizens seek relief in alcohol; they want to benumb a feeling which they cannot satisfy in a healthier way.

After finishing his day's work the Grecian mechanic went to the gymnasium, the Roman to the amphitheater, and the modern European and American goes to the next "saloon," to satisfy by different methods the same instinct—a longing for a diversion from the dull sameness of business routine. There is no question which method was the best—the only question is which of the two bad substitutes may be the worse: the brutalizing, *i. e.*, soul-hardening spectacles of bloodshed of the Roman arena, or the soul-destroying poisons of the liquor shops?—*Dr. F. L. Oswald, in Popular Science Monthly*.

THE SIGNIFICANCE OF SALT IN WELL-WATER. In Prof. Lattimore's report on the analysis of well-water, which was proved to be the cause of a serious epidemic of typhoid fever in Rochester, he lays special stress on the significance of the presence of common salt in well-water in general. No single indication, he holds, is of so great sanitary importance in judging of the purity or impurity, and consequently of the safety or danger, of any water. He proceeds then to show that, though from the universal diffusion of this substance in the air and in the soil, we should expect to find it in all waters, whether from rain, springs or wells, because of its extreme solubility, nevertheless, he argues, the quantity of salt that should be found normally from the causes named in well-water is extremely small, and therefore, whenever "it rises above a very few grains per gallon, it becomes certain that it comes from some other source than the soil," and he concludes with the logical inference that, as nearly all the salt used for domestic purposes escapes by the way of two channels, the water-closet and the house-drain, we should therefore expect, "what is always found on examination to be true, that, whatever sewage may or may not contain, it always contains salt." A fuller abstract of this portion of Prof. Lattimore's report will be found in the *Popular Science Monthly* for July.

MUCOUS MEMBRANES.—Dr. Rollin R. Grigg says there is no one medicine that can cure all cases of irritated and abraded mucous membranes and stop the waste of albumen. A variety of remedies is required to do this, in the different cases, and the treatment must be governed to a great extent by the peculiarities of constitution, and by the condition and the symptoms of each patient at the time the case is taken in hand. Furthermore, this is a diseased condition, where every case should be under the care of an educated, judicious physician, as much as severe cases of typhoid fever, diphtheria, or any of the other most intricate diseases. I will say, however, for the encouragement of all, on this now almost hopeless subject, that there is a series of most reliable physiological facts bearing directly upon the curability of all cases in the first stages, and which shows that of all tissues the mucous membranes are the most quickly and easily healed of any by proper treatment.

## DOMESTIC ECONOMY.

POISON FOR RATS AND MICE.—Carbonate of baryta has been found to be a most efficient poison for rats and similar vermin. Indeed, at a special series of trials by the Zootechnical Institute, in connection with the Royal Agricultural College, at Proskaw, this substance was found to be more efficacious than any other. It occurs as a heavy white powder, devoid of taste or smell. In the Proskaw experiments it was mixed with four times its weight of barley meal, and pellets of the paste were introduced into the holes of the rats, house mice, and field mice. A small quantity proves fatal. It appears to cause immediate and complete paralysis of the hind extremities, so that it may be assumed that mice eating of it in their holes will die within them, and so not prove destructive in their turn to domesticated animals that might otherwise devour the carcasses. It was found in practice that neither fowls nor pigeons would touch the paste, either in its soft state or when hardened by the sun; so that its employment is probably free from danger to the occupants of the poultry yards. Some rabbits, on the other hand, that got access to the paste ate heartily of it and paid the penalty with their lives. Next to the carbonate of baryta paste, the ordinary phosphorus paste proved most destructive, and this, it was found by experiment, is more attractive to the mice in a soft form than when hardened into pills. But it is considerably dearer than the baryta preparation, an important factor in the calculations of the farmer who has to wage war against rodents on an extensive scale.

POINTS ON ECONOMY.—Miss Birney writes to the *Cultivator* as follows: Economy in cooking does not consist in the use of very little of what are called the necessities, but rather in getting up even the simplest dishes in such a manner as not only to taste but to look well. Some housekeepers possess this faculty in a remarkably degree. Others are totally without it. And there is, too often, waste which might be avoided by exercising a little forethought and care. Meat is thrown aside which might be hashed; the flour is sifted in a wasteful manner; soap is left in water to dissolve; sugar is spilled from the barrel; apples decay for want of looking over; pie crust is left to sour; bones, good for soup, are thrown away; pieces of bread go into the swill bucket, and in a hundred such little ways is the substance of the household wasted. The importance of economy in small matters is too little considered. It is seldom that the wife can in any other way help her husband, and it is her duty to lighten his load by exercising economy, if economy is any consideration to him. Under the English housekeeper's management there is no waste. She is economical concerning everything, her care extending even to the drippings. Nothing is too trivial for her notice, and she is ever on the alert to detect an error in the household accounts. It is not surprising, therefore, that English girls, under the supervision of such mothers, are, as a general thing, better fitted to take charge of a household of their own than our average American girl.

TO MAKE BLACKBERRY WINE PROPERLY.—Take of course clean kegs or casks; let the berries be ripe; extract the juice with a small wine or cider press, or it can be done through coarse cotton cloth; then pass the juice through a strainer, to be found in every rural household; let the juice stand for two or three minutes in the kettle or in a tub until the first fermentation is over, then skim off the top carefully, and add to every quart of juice three pounds of the best yellow sugar, and water enough to make one gallon. Put all in a kettle and let it come to a boil, then skim again. When cool put in the keg, fill up to the bung, place in the cellar and let it remain there with the bung off until after the second fermentation, which will be in four or five days. Meantime keep the cask full by pouring in wine that has been preserved for the purpose. After the second fermentation put in the bung tight and let it remain in the cask for several months, say to the following February or March, when it should be carefully drawn off and put in bottles, or, what is better, in demijohns of from one to five gallons. It will keep for any length of time without the addition of a drop of whisky or brandy, and will prove a very agreeable and wholesome drink.—*Germantown Telegraph*.

APPLE SNOWBALLS.—Pare and core some nice medium-sized apples. Boil some rice for ten minutes, then drain and cool it. Spread enough rice on a dumpling cloth to surround one apple, put in the fruit and tie it up. Arrange all in a similar manner, and boil them for an hour; take carefully from the cloths. They can be served hot, with a sauce of butter and sugar mixed to a cream; or, instead, cool them, fill the cavities with jelly, arrange them in a glass dish, and pour over them a nice soft custard, made as follows:—Mix one tablespoonful of corn starch with a little milk; add a beaten egg, two tablespoonfuls of sugar, and a pinch of salt. Heat a pint of milk (in a double saucepan) to the boiling point, then turn it slowly into the eggs and corn-starch, stirring constantly. Return all to the saucepan, let boil for one minute, or until it thickens; cool and flavor to taste with extract of vanilla.





DEWEY & CO., Publishers.  
A. T. DEWEY. W. B. EWER.  
Office, 202 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.  
ADVERTISING RATES: 1 week. 1 month. 3 mos. 12 mos.  
Per line..... .25 .80 \$2.00 \$5.00  
Half inch (1 square).....\$1.00 \$3.00 7.50 24.00  
One inch.....2.00 5.00 14.00 40.00

The Scientific Press Patent Agency.  
DEWEY & CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. G. H. STRONG

SAN FRANCISCO:  
Saturday, August 2, 1879.

### TABLE OF CONTENTS.

EDITORIALS.—Landscape Gardening—No. 1; 65.  
The Week; The Fair Season, 72. A Mammoth Grain Depot; A Spring Horse Shoe; Hop Production and Export, 73.  
ILLUSTRATIONS.—Scene on the Juniata; A Distant Glimpse of Mount Shasta, 65. Ground Plan of Mission rock Grain Warehouse; Yates' Horse Shoe, 73.  
QUERIES AND REPLIES.—Goats with Hydatids on the Brain; Water Required for Alfalfa; Believed to be Glanders; Chicks with Drooping Wings; Wild Morning Glories; Rotten Root in Fruit Trees, 72-73.  
ENTOMOLOGICAL.—Joint-Worm in Wheat, 72.  
CORRESPONDENCE.—Ascent of Mt. Shasta, 66.  
THE VINEYARD.—Remedy for Grape Mildew; A Novel Way of Preserving Grapes, 66.  
SHEEP AND WOOL.—The Angora Goat in California, 67.  
THE PUBLIC LANDS.—Paying for Government Timber, 67.  
ARBORICULTURE.—Timber Cutting and Durability; A Botanical Usurper; Palmetto Fiber for Paper, 67.  
HORTICULTURE.—Notes on Gooseberries; A Peculiar Asiatic Fruit; Ventilating Fruit Cans, 67-74.  
PATRONS OF HUSBANDRY.—The Grange and the State Fair; Grange Suggestions; The Insurance Company Matter, 68.  
AGRICULTURAL NOTES from the various counties of California and Washington, 68-69.  
NEWS IN BRIEF on page 69 and other pages.  
HOME CIRCLE.—What Then? (poetry); Getting Married; A Lesson for Parents; Distribution of Bibles; Learning How to Rest; Intelligence and Economy; Ventilation by the Chimney; Music of the Flute; To Harden the Skin; Tribute to Rural Life, 70. Chaff; German Wives, 71.  
YOUNG FOLKS' COLUMN.—Mrs. Robin Redbreast's Party, 71.  
GOOD HEALTH.—Labor as a Form of Athletic Exercise; The Significance of Salt in Well-Water; Mucous Membranes, 71.  
DOMESTIC ECONOMY.—Poison for Rats and Mice; Points on Economy; To Make Blackberry Wine Properly; Apple Snowballs, 71.  
PISCICULTURE.—Notes on the Fishes of the Pacific Coast, 74.

### Business Announcements.

Delinquent Sale.—Grangers' Business Association of Cal. Phosphate Soap, Standard Soap Co., S. F.  
Regular Republican State Ticket.  
Iron Turbine Wind Engine, D. E. Goldsmith, S. F.  
Well-Auger, W. W. Giles, Chicago, Ill.

### The Week.

Swiftly go the days when all the State is busy. Most parts of the State report the grain well cut and the threshers rapidly devouring the stacks—hardly any other word will express the speed with which the huge masses of grain are whipped through our improved California separators, by the aid of mechanical devices, to bring the material to the cylinder. It may be a silly simile, but we have regarded the machine, which moves over the field reducing the stacks to a mass of rubbish and serried mounds of sacks, as not unlike some rapacious insect which strips our plants of their foliage and passes away leaving masses of beautifully arranged eggs upon the denuded twigs. There is something quite suggestive in the piles of grain rising here and there in uniform style upon the surface of the plain. They are not unlike the sand-bag fortifications which have figured in our history, except that their mission is to sustain life rather than destroy it. It is easy, when the imagination is unchecked, to see solid shot and hollow shells flying from the rude martial architecture of the sand-bag fortification, and shots will come from the grain sacks as well, solid shot and hollow shell—heavy biscuit and feathery "gems"—and when the former lands beneath the waistcoat, how like a dream of meeting a cannon ball will be the reverie. Let those who have battled with either obstacle pursue the resemblance.

The fruit season is at its height, and the orchards and the box factories are full of life. The shipments of pears and plums for Eastern markets are proceeding, and greater amounts than ever before will be sent this year. The first fruits of the vine are also arriving, and soon our peerless grapes will follow the pears and plums overland. If the revival of business at the East will dispose purchasers to our products, it will be fortunate for our growers. Meantime, all California is being regaled with luscious fruits at prices which would make a miser laugh—if he had to buy, but not sell them.

### The Fair Season.

The opening of the Mechanics' Institute fair next week will inaugurate the fair season of 1879. In the city this event will be of unusual significance this year, because it may be hoped that the opening of the fair will bring to a close the era of the foolish, if not demoralizing, contests which have engaged much of the city's mind this summer. The "walking mania," which has afflicted the people, is one of the most ridiculous of the passing whims which periodically gain sway over people's time and purses. Walking is good; speed is desirable; and endurance is often a sign of physical well-being, which is a valuable characteristic of any people. Athletic sports have existed from the earliest times, and have been duly celebrated in song and story. It is an occasion for regret that many exercises and health-promoting pastimes are not as popular as in the darker ages. The old Olympic games which stirred the blood of the old Greeks, and awakened literature to sound the victor's strength and prowess, and called the people from their homes for a sojourn in the pure air and sunshine, and taught them the precept that sound bodies are the fitting tenements for sound minds—what a contrast these splendid games are to the sickly gaslight tramp upon stale sawdust in a reeking atmosphere, amid a throng of feverish wage-holders insulting the glory of true physical contests with their senseless orgies. It is, indeed, well that the city will have some counter charm which will be potent to win them away from debasing follies. The Mechanics' fair will do this work, and will thus, this year more than ever, be an institution for which the people should give thanks. For the Mechanics' fair will be a carnival of industry. Its material exhibits will reflect the thought which planned and the labor which embodied the design. It will be an epitome of the industrial progress of our coast, embracing the productions of workshop and factory, of farm and mine. It will be a grand object lesson to teach the truths of industry and enterprise, and the labors they can accomplish in the utilization and development of our vast natural endowments. The effect will be to enlarge our ideas of the conquering power of intellect and strength, and to increase our admiration for the land of our choice by imparting more adequate conceptions of her adaptations and resources. The thoughts which will be born of examining the displays will be such as tend to the broadening of views and the quickening of conceptions, and will foster aspirations for better individual accomplishment, thus exalting the standard of citizenship and doing the State a grand and needed service.

After the Mechanics' fair in this city, the fairs here and there over the State will hold their accustomed sway over the minds of State, districts and counties. The State fair at Sacramento, beginning September 8th, bids fair to call out this year a wider support from the producing classes. As has been learned from the premium lists which we have printed from week to week, there is encouragement given to all lines of agriculture and allied industries to bring forward their best achievements and test them by competition. We trust that a wide enlistment of producers may be secured, because thus will the influence of the fair as an agricultural and mechanical educator be greatly increased. There is such a variety in our conditions and such a diversity of means employed to turn them to practical account, that the crystallization of experience, which a comprehensive exhibition of products affords, must be productive of good to all who attend the fair either for observation or competition.

And the work which the Mechanics' Institute and the State fairs do for our industrial interests at large, may be supplemented in districts and counties by the building up of local exhibitions. In all our regions there are local questions of practice in production of crops and in the adaptation of machinery to special requirements, which can be best determined by comparison of experience and results by those within the special circles. Therefore we would have all district and county fairs promoted and managed by actual producers. If true productive interests have been subordinated to other ends in the holding of the fairs, the evil should be corrected, and in a general view it would seem that the correction could be effected by putting forward into the management those whose sympathies are fully allied with the interests which should occupy the places of honor. With the right policies prevailing in the management and with disinterested justice in the award of premiums, all our fairs can be made powerful aids in industrial progress and in the promotion of laudable interests.

It is fitting that the fair season should be something of a holiday season, and that the days should be given to pleasant fact-gathering and recreation, that the mind may be stored with useful observations and the body, worn by the busy season, should refresh itself by a respite from toil. The practice of families camping at country fairs is one which often yields much diversion at a little cost, and relieves the visitor from the heat and discomfort of close rooms at over-crowded hotels.

At the fairs, as in most other concerns of life, there is abundant chance for exhibiting sound sense in selecting objects for attention. Naturally each worker in any line will seek first to

see what is shown in his specialty and afterward view the general display. One thing to guard against, and the caution is especially addressed to our young friends, and that is to turn the back upon the baits and snares of the thousand petty vendors and gamblers who infest fair grounds and allure the unwary into wasting time and money on their wares or games. Some young men we know see nothing of the fairs but the devices of the dice throwers and the ring tossers, the lifters and the lung testers, and go home with their heads filled with a hundred worthless, if not evil, notions. If we had our way all such traps and nonsense should be banished from the grounds, but then they waylay the youth all along the approaches to the gates. The only way to partially circumvent them is to impress upon the minds of the youth before hand that such devices are baits to catch gudgeons, and that sense and manhood can be shown by turning away from them.

## ENTOMOLOGICAL.

### Joint-Worm in Wheat.

In many of the wheat fields adjacent to Healdsburg, large patches have developed symptoms of blight, the grain turning white and withering. It is something unusual in this section and has caused our farmers considerable uneasiness and anxiety. "Squire Willson informs us that his wheat yield will be from 10 to 15 bushels per acre less, owing to the visitation of the evil mentioned. Many farmers will be similarly affected. As to the cause of this new evil the majority of our farmers, we presume, are unable to determine. However, William Capell, whose farm is on upper Dry creek, while investigating his blighted grain, found, between the first and third joints below the head, a small worm, very much like the pea worm, the largest being about one-quarter of an inch long, though most of them were considerably smaller. Generally there was one worm in a stalk, but in some places he found two. These worms were found in every blighted stalk examined, and plainly accounted for the disease.—Healdsburg Enterprise, July 12th.

Complying with our request, the editor of the Healdsburg Enterprise kindly secured and forwarded to us some good samples of the infested wheat. So far as we can determine from a study of the larvæ alone the insect is *Eurytoma hordei* Harris, or the joint-worm which has been long known as a pest to grain growers in the Eastern States. The larva is a light yellow maggot about one-eighth of an inch long, and seen with a microscope is smooth bodied and devoid of legs, and of uniform yellow color except its reddish brown jaws. The insect is found enclosed in a cell hardly larger than its body in or near one of the joints of the stem. At the place occupied by the worm the stem becomes solid and hard, and of woody nature. The joint or adjacent part occupied by the grub are also enlarged, and give the stem of the wheat a distorted appearance. It is plain that Mr. Capell was right in regarding this worm as the cause of his wheat losses.

The joint-worm at the East has been known by its injuries for more than 50 years, and has been the subject of much discussion among entomologists for about 25 years. It was found, by hatching out the worm, that a fly was obtained, which evidently belonged to a class of insects which lived upon other insects and not upon vegetable matter. It was, therefore, long thought that the worm found embedded in the stem was parasitic upon the real wheat destroyer and not itself the culprit. It has, however, been now agreed, so far as our knowledge of the discussion goes, that the *Eurytoma* larva is really the wheat killer, and thus belongs to a genus which departs from the customs and traditions of its family. If the larva which we have before us be the *Eurytoma hordei*, it will become ere long a small, slender, black, four-winged insect. But it will remain through the winter in its habitation in the straw or stubble, and the fly will not appear until next spring. Then the fly will deposit its eggs upon the stems of the next crop, they will hatch into another hatch of worms, to continue the evil work which is reported this year from the Healdsburg grain fields. It is plain that the insect is now in a form to destroy, so that its reproduction and multiplication next spring may be averted. The burning of both straw and stubble on infested fields should be thoroughly done. It is probable that the grub will stay where it is until winter if not disturbed, consequently if there should be danger in burning fields now, it may be done when the first rains come. Plowing under the straw or stubble will not kill the insect; the fly will hatch and emerge from the soil. It is quite probable that the practice of burning straw and stubble, wasteful as it may be on economical grounds, has had a great influence in freeing our State from the joint-worm, the Hessian fly and some other wheat-destroying pests. Severe handling of the straw often has no effect upon the worm, for it passes through the threshing machine unharmed in its woody case. Short bits of hard straw, which may sometimes be found in the grain sack, are known to have contained these worms alive, and thus the worm may be introduced to new fields in the seed grain.

The ravages of the joint-worm at the East have extended over a large area, from Canada on the north to North Carolina on the south, the sections most affected being Canada West, central New York, Massachusetts and Virginia, according to a map recently prepared by Prof. Packard, of the U. S. Entomological Commission. From 1825 to 1850, the damage in these regions was much worse than it has been since. In Virginia, there was great excitement over the alarming destruction by the insect. In 1854, a "joint-worm convention" was held by the

growers at Warrenton, Virginia, and resolutions were adopted favoring the use of fertilizers which would stimulate the wheat to rapid growth and early maturity, and urging the burning of all straw, stubble and vegetation contiguous to the grain fields.

From facts brought to light since the publication by the Healdsburg Enterprise three weeks ago, it is probable that this pest has appeared from time to time before in this State. The editor of the Butte Register, commenting upon the Enterprise statement, says: "Fourteen years ago, when farming on the Sacramento river near Chico, we observed our wheat withering and the leaves drying up. Upon investigation we found in the stalk above the second joint from the ground and sometimes in the joint itself, a yellow worm, from an eighth to a quarter of an inch in length. If recollection serves us correctly, the wheat was only in the early stage of filling at the time we made the discovery. The crops of several of our neighbors were affected in a like manner. We farmed the same land the following ten years, without observing any indications of a reappearance of this worm." Thus it would appear that the pest is somewhat fitful in its appearance, and we trust the Healdsburg manifestation may be like that near Chico rather than that of Virginia and other Eastern States, where the pest was a grievous affliction for a term of years. If our readers in other parts of the State have noticed this little yellow worm in or near the joints of their wheat stems, we should like to know it.

## QUERIES AND REPLIES.

### Goats with Hydatids on the Brain.

EDITORS PRESS: Can you inform me (and others who may be interested) through the columns of the PRESS what is the disease which has attacked my flock of goats? The symptoms of the disease are similar to the blind staggers in a horse or hog, as the trouble appears to be in the head. It deprives them of the powers of locomotion. The eye-ball is continually rolling, and a general prostration is the result. At times they appear to be dead; none, however, have yet died. One has been in that condition for two weeks. At times it seems better and eats, but very sparingly. One of its eyes is much swollen, and protrudes from the socket. When it does make an effort to feed, it goes around in a circle continually. I am considerably alarmed lest my whole flock may become affected in like manner, and hope that you will be able to name the disease and its remedy.—JOHN F. TODD, Ukiah, Cal.

EDITORS PRESS:—The goats of Mr. John F. Todd, of Ukiah, are suffering from hydatids on the brain. A hydatid is a thin, delicate membrane having attached to it a number of heads, and full of an albuminous fluid which gradually accumulates, producing pressure on the brain which causes absorption of brain and of the skull immediately over the vesicle. It is produced by the animal picking up segments of tape-worm dropped by dogs or foxes. There is no remedy, unless you can discover the exact location of the hydatid; then, by boring down on it with a gimlet, or, better still, a trepanning instrument, and by that means evacuate the contents of the vesicle, you may perhaps effect a cure. You can tell which side of the brain the hydatid is situated by the animal turning round; he will always turn towards the side affected. Then by pressing with the fingers you will sometimes be able to find a part of the skull that will give way under pressure. That will be the point at which to introduce the instrument. Tie the animal's legs and place him on a table with the affected side down. Then divide the skin by two incisions, one crossing the other; introduce the instrument, taking care not to wound the brain. If the operation is successful a quantity of fluid will run out. No after-treatment will be necessary, except bringing the edges of the wound together by means of sutures. The remedy is a desperate one, but if the animals are valuable it is worth trying, and it is the only method by which you can hope to effect a cure.—JNO. CASEWELL, M. R. C. V. S., Petaluma, Cal.

### Water Required by Alfalfa.

EDITORS PRESS:—As you desire information in regard to amount of water required for irrigating alfalfa, etc., I will give you my experience in that line. For several years I have experimented in raising alfalfa on a dry soil and irrigating by water raised by windmill power. Several of my neighbors have done the same and here is the result: Were it not for the "insignificant gopher," all would be plain sailing. One inch of water, or about 28,000 gallons to the acre, would give a fair irrigation. But alfalfa on a dry soil is especially troubled by that pest. To grow this crop with success on dry land there must be enough water to flood the ground thoroughly, unless the gopher can be squelched in some other effective manner, and this I and my neighbors have failed to do. Water, and that in abundance, is, I believe, the only radical cure. Capacious reservoirs, good wells and pumps, and powerful mills, will, of course, furnish water in abundance for a few acres, but these require more capital than we have been able to invest; and consequently we have so far failed. Alfalfa seems to attract gophers. They so burrow and undermine the soil that thousands of gallons will run into a single gopher hole unless closely watched, and the time and attention required to do this will make the crop unprofitable. I have an idea that sunk fences may be constructed to keep gophers out, and then those inside the enclosure once exterminated, there would be no further trouble on that head. The best plan, where water is scarce, would be to have a raised tank and pipes, to give a sufficient head, and irrigate by means of



lawn sprinklers. Watering by lawn sprinklers has this advantage, that the surface need not be made nor kept level, and even where gophers are present the water will be so evenly distributed that existing holes will not be enlarged, and the whole will be thoroughly wet as by a heavy rain. I have so far been unable to thoroughly test the above.—J. J. BODKIN, Savannah, Cal.

#### Believed to be Glanders.

EDITORS PRESS:—I have taken this opportunity of writing to you to inquire about the "horse disease" that is now prevailing in this region. My horses have had the disease for about six months, and three have died, and several others are very bad. I would like to know if the disease can be successfully treated. I do not know what to call the disease, although at first we thought it was glanders, we do not think so now. I will describe the disease as our horses are affected. They begin by having severe bleeding from the nose and afterward runs a great deal of matter, and there are lumps up in the nose—apparently festering lumps; their appetite is usually as good as ever, but after some weeks they become very weak, but their appetite is always good. Along to the last the breathing is very painful, and they will hold their mouth open and their tongue out, and breathe through their mouth. Some of the horses seem to have the disease wholly in the head, while others have had it in the head and also have had the right hind leg swelled. A few days before death there were a great many lumps come all over the body under the skin, and I do not know whether they were festering lumps or not as they did not break, and we did not cut them open. I would like to hear from others who have had experience with the disease. There are a great many horses in this locality that have had the disease; and the people do not seem to know anything about the proper way of treating it.—READER, Solano Co.

EDITORS PRESS:—In answer to your request to determine the above-described disease, I would state that the first surmise as to the nature of it was evidently the correct one, although some of the symptoms described are not characteristic of glanders. In a case of so much importance the services of a competent veterinarian should be obtained, as he could, by a personal examination, determine the exact nature, and be better able to suggest measures, "which should be taken at once" for the extermination of the malady.—JNO. CASEWELL, M. R. C. V. S., Petaluma, Cal.

#### Chicks with Drooping Wings

EDITORS PRESS:—There has been something a little singular with some of my young chicks that I have been unable to account for, and if any of your numerous readers can give me any light on the subject it will be gratefully received. The difficulty is this: When the chicks are about two or three weeks old, their wings grow very much faster than their bodies, and nearly drag on the ground; while the chicks droop around a few days and then die. Some of my neighbors suggested that perhaps it was chicken lice, but I know that is not it, as I have raised something over 300 this year, and have not seen a dozen of those little pests, and I have watched very close for them.—MRS. O. H. R., Red Bank, Tehama Co.

EDITORS PRESS:—If Mrs. O. H. R. will look carefully on the heads of the chicks, she will find a large tick or louse adhering to the head; casually glanced at they appear like small pinfeathers. The presence of this louse causes the chick to droop, and its wings hanging, to assume a bedraggled appearance, oftentimes with diarrhoea and excrements adhering to the fluff. There is also another louse, a small reddish one, quick in movement, which runs on the body. It is not the mite which may be found on the roosts and ground, but a large louse. The head louse may be got rid of by the use of the ointment described in my letter on page 18 of the RURAL of July 12th, 1879. For the other the carbolic powder must be used. I have previously described this powder in the RURAL. It is also described on page 5 of my pamphlet on "Domestic Poultry." Without this ointment and powder I find it almost impossible to raise chicks in our dry weather, unless with many deaths; since I have used these preventives I do not lose any.—M. EYRE, JR., Napa, Cal.

#### Wild Morning Glories.

EDITORS PRESS:—Mr. Robert Roberts, of Grafton, in your last paper desires to know how to get rid of a small patch of morning glories in his garden. I tried every expedient I could hear of without success, and then thought of the following which succeeded. A package of fine table salt and an ordinary case-knife; take each separate plant by the top near the ground, run the case-knife through the root about an inch below the surface, throw away the top that has been cut off, and while the case-knife is still in the ground after having cut off the top, lift the earth and put a large pinch of salt on the top of the root where it has been cut; withdraw the knife, put your foot on the ground, bring the earth back into its place, and so on until every separate plant has received its dose of salt. Of course this will only do for a garden. I effectually killed a quarter of an acre in my garden by this process.—B. B. R., San Francisco, Cal.

#### Rotten Root in Fruit Trees.

EDITORS PRESS:—Recently visiting Ukiah, I found many cherry trees, in Mr. Wagneller's orchard, dying unaccountably. From the surface of the ground downward for several inches, the bark of the root was completely rotten. I searched for insects in vain, but a microscope apparently revealed the cause. The tissues were everywhere invaded by a microscopic fungus, resembling the *Botrytis infestans* of potato-rot. The soil was a rich, very moist loam; low, valley land. The rainfall in that region is very great. Probably the excessive humidity is favorable to the development of fungi. What shall we do for this root-destroying fungus? I presume tile-draining, with local applications of sulphur, would be beneficial.—H. B. NORTON, San Jose, Cal.

We presume our correspondent strikes the correct diagnosis of this trouble. It is probable that the fungus but follows the rot caused by excess of water in the soil, and if the water be removed the fungus would have no chance. All orchards on low, moist grounds should be drained; continued "wet feet" are as dangerous to trees as to animals.

SEND in exhibits for the Mechanics' fair to open on Tuesday, Aug. 5th, and be prepared for a revival of trade.

#### A Mammoth Grain Depot.

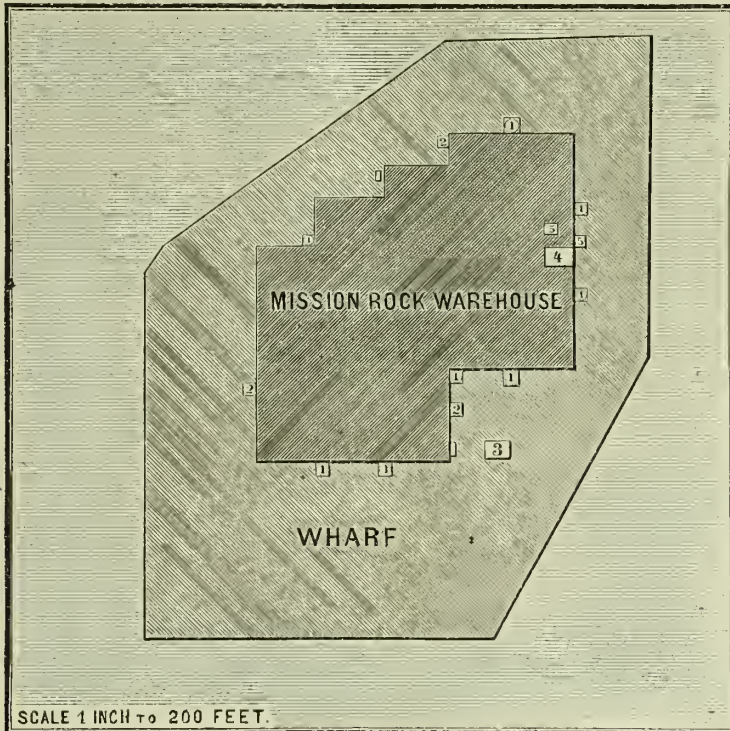
We have a reputation in California for doing things on a large scale, but in no other branch are affairs carried on so extensively as in those matters pertaining to the raising and shipment of wheat, which constitutes the chief wealth of the State. Farms measured by the thousands of acres, with crops measured by the hundreds of tons; immense gangs of men and animals for putting in and harvesting the grain, and long trains of cars for carrying the products of single ranches to the sea board; whole fleets of ships coming from all parts of the world to carry our surplus products by the thousand tons to circles of denser population in Europe. In fact, our wheat business in all its departments is on a grand scale which has demanded adequate convenience in the matter of warehouse room and depots for storage.

In San Francisco, from which point the bulk

first class, three of second, eight or nine of the third, and so on. The proportionate quantity of each lot is put into the grader. This machine takes the grain, mixes it thoroughly, takes out more or less dirt, chaff, straw, etc., so as to bring the batch to the required grade. If it is wanted thoroughly clean, it can be made so. If only a second or third grade is wanted, the machine is arranged to take out more or less foreign substances as desired.

The wheat is put into a hopper and elevated to the top, where it falls into a series of shaking screens where it is cleaned and mixed, and comes out below again prepared to required grade, and is then sacked for market. Buyers can in this way average their purchases so as to bring them to suitable standards. This machine is also available for cleaning wheat where it is not desired to grade it.

Grain stored in these warehouses is always accessible to market and high rates may be obtained at all times. The warehouses are light, airy, clean and free from rats. Danger of fire is very slight, the fire insurance being only 1% per



GROUND PLAN OF MISSION ROCK GRAIN WAREHOUSE.

of the grain is shipped, huge warehouses are placed at available points on the city front, convenient to the shipping, and in positions where grain may be landed from barges without too much handling. The most extensive and complete enterprise of this character is the warehouse and grain depot, owned by the California Dry Dock Company, and situated on Mission rock, an island about 600 yards from the city front, near the Pacific Mail Steamship Co.'s wharves.

The whole property owned by the company aggregates 14 acres, of which 8½ acres are covered by wharves, the warehouses covering over 2½ acres. At any point of the wharf there is sufficient depth of water to load and float the largest ships at extreme low water, and the warehouses are accessible to receive or ship grain from all sides. There is room at the wharves to accommodate a dozen large ships at one time. The company have a small steam ferry boat, making half-hourly trips, free, to and from the landing at foot of Second street.

We made a visit to the warehouses recently and were impressed by their great size and the extreme neatness and thoroughness of the structures and all their appointments. An engraving showing a plan view is given herewith, which will give an idea of the position of buildings, etc., to those who have not seen it. At convenient points encircling the warehouses are placed tanks, numbered 1 in the engraving, which are kept filled with water for the extinguishment of fire. Rows of fire buckets are placed about in different directions. The engine houses (marked 2) are intended for sheltering the hoisting engines when not in use, these engines being used for loading or discharging cargoes. The office of the Superintendent is marked 3. The grader is marked 4, and engine and boiler rooms for grader 5.

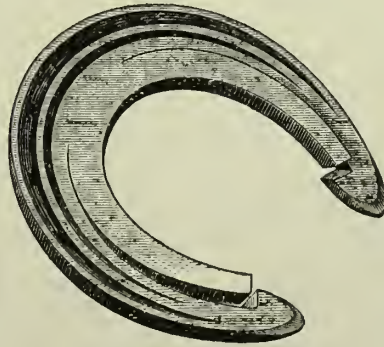
This grader, as it is called, is the only appliance of the kind on the coast, and was but recently introduced here. This new and improved machinery, for cleaning and grading wheat for export, has a capacity of 50 tons per hour.

It is well known that the San Francisco Produce Exchange have a standard of Nos. 1, 2 and 3, by which grain is bought and sold, according to quality. This grader is intended for producing either of these grades, according to the desire of the owner. For instance, a buyer purchases a number of lots of wheat, some good and some poor, some dirty and some clean. He may have seven or eight varieties. From his samples he makes a grade which suits him, and then directs the Superintendent of the warehouse to grade the wheat in accordance with the samples sent. That is, take two sacks of the

annum. Grain consigned to this company by water is insured in open policy at special rates. Wheat shipped by railroad via Stockton care of the California Steam Navigation Company will be received by them at Stockton and delivered at Mission Rock Warehouse at same rate of freight as to Oakland wharf.

Season storage ending June 1st, 1880, is \$1 per ton. Short rates of storage are, for first month, 30 cents per ton, or 40 cents per ton, if delivered. Each month thereafter, 20 cents per ton. The weighing in, is free, but weighing out is charged 10 cents per ton.

The company are prepared to advance money at bottom rates, with interest payable at end of loan. Freight is paid, and fire insurance and loans are effected free of commission. The



YATES' HORSE SHOE.

premises of this company are a model of neatness, and it is really worth a visit to inspect the mammoth warehouse and grain depot of the coast. The little ferry steamer carries passengers free, and Mr. Sinclair, the Superintendent, will take pleasure in showing visitors around. The wharves are built over the old Mission rock, and the area under the warehouses is filled in so that the superstructure is solid and substantial. The officers of the company owning this property are, Oliver Eldridge, President; W. C. Gibbs, Secretary; and Chas. H. Sinclair, Superintendent. The office is 318 California street. The entire storage capacity for grain, at present, is 40,000 tons, which can be easily increased.

MRS. VAN COTT will not preach the gospel for \$3 per day. She lately returned \$36 for 12 days' services, saying the amount was an insult to a widow.

A SEVERE shock of earthquake was felt at Watsonville on last Thursday evening.

#### A Spring Horse Shoe.

This progressive age suggests another valuable invention in the form of a steel spring horse shoe, that has been thoroughly tested on a number of valuable horses, having various shaped hoofs, in good as well as sore condition, and found to have had a very beneficial effect in every instance. Horse shoeing in general must be regarded as a necessary evil to enable the horse to perform his duty on the artificial, hard, stony roads and streets, and the art of successful horse shoeing consists in surmounting the obstacles nature has thrown in the way. Very little attention has, as a general thing, been paid to the peculiar growth of the hoof. The gradual transformation from the normal to the abnormal form caused through domestication and violation of the laws of nature, such as confinement in stables, lack of moisture in hoofs, owing to the dryness of climate and inattention, as well as wrongly calculated proportions of metal improperly distributed over the foot in the form of shoes, is the main cause of so many hoof evils, which ruin many horses. If reform is needed in anything, it is in the art of horse shoeing, to benefit man's best and noblest animal friend.

The new spring heel shoe, herewith illustrated, was recently patented through the MINING AND SCIENTIFIC PRESS Patent Agency, by Mr. H. G. Yates of this city. There is every reason to believe that this device will set every intelligent friend of the horse to thinking. Such is its peculiar construction that with every step it gives a yielding resistance, and arrests the vibration caused by jarring or pounding on hard roads, this vibration usually having a very destructive effect on the nervous system and muscular action of the animal. The severe concussion following the blow of every step upon the old style of horse shoe is entirely obviated. The new shoe gives an equal bearing around the wall of the hoof. After the yielding resistance of the downward blow, there follows a lifting power, estimated by Mr. Yates at over 200 pounds, at every step of each front foot. The increased weight in the toe of the shoe gives a fine knee action to reach out further, calculated to materially improve the gait of the horse.

This shoe is made by hand of a good tough quality of steel, by Paul Friedhofer, a skilled, practical and pathological horse shoer, of this city. It must be put on cold, as it is tempered in oil, and a man without experience could not re-temper it with any certainty of success. In ordering these shoes therefore, parties at a distance should send a paper pattern made from an old shoe.

A shoe of this kind is a cheap remedy to apply to horses' feet. The inventor states that by its use he expects to see horses trot a mile in two minutes on a hard track. He informs us that Mr. Solomon, of the Grand Central market, declares that his horse has been benefited \$75 in a month by using these shoes. And also that a three-minute horse has gained 28 seconds on spring shoes, with a decidedly improved action, increasing his value some \$200. Mr. H. G. Yates, the inventor, may be addressed at No. 263 Clementina street, in this city.

#### Hop Production and Exports.

It now seems that the turn has come in hop values. As noted in our "Market Review" last week, bids of 15 cents per pound have been made for the new crop and refused. We have heard that sales in advance of harvest have already been made at a much higher figure. The reduction in acreage has been notable, and many fields not plowed up have been allowed to go with scant culture because of the deadness in the market. A better feeling now will doubtless lead growers to harvest all that they can, and it will be wise to exercise as great care as possible in picking and curing that nothing may interfere with gaining the best figures.

Philip Neis, hop dealer, in this city, in his annual hop circular announces that this year's crop will be but little more than half as large as that of 1878. He says: "The prospective crop on this coast, founded on reports from my correspondents, all growers, points to a five-eighth yield on last year's which reached 14,000 bales. Many yards, Willow Grove included, have been plowed up, and oftentimes cultivation neglected, farmers lacking the means. San Jose district, which every year sent a thousand bales to market, will not produce a single bale this season. Stock in first hands in city and country, 400 bales, which is partly of low quality; prices range from two to eight cents per pound."

Mr. Neis gives the following summary of the hops received in this city and exported hence since this date last year:

Receipts since August 1st, 1878, to July 25th, 1879—California, 5,368 bales; Washington Territory, 4,643; Oregon, 2,284; total, 12,295 bales. Exports per C. P. R. R., from San Francisco, 7,079 bales; from Sacramento (Growers' account), 1,164; from San Jose, 355; total overland, 8,598 bales. From San Francisco to Australia, 747 bales; to New Zealand, 289; to South and Central America, and other countries, 193 bales; total exported by sea, 1,229 bales; total by rail and sea, 9,827 bales.



## A Peculiar Asiatic Fruit.

[CONTINUED FROM PAGE 67.]

scarcely any limit to durian eating if you once begin it; it grows on one like the opium habit or other acquired taste; but, on the other hand, the very suggestion of eating such an "uneatable fruit," is to many as intolerable as the thoughts alone of supping off cheese and spring onions, washed down with beer, and following it by a whiff from a short "dhudeen," by way of dessert.

About the middle or end of July, durian fruits are very common in Singapore, and their spiny skins lie about the streets in all directions. As you pass along you become aware of a peculiar odor all around you—an odor like that of a putrid sewer when half suppressed by holding a perfumed handkerchief to the nose—a blending of a good deal that is nasty with a *soupeon* of something rather sweet and nice. On opening a fruit for yourself, you find that the perfume, like that of musk plant, ceases to be evident after you have once had a fair whiff at it at close quarters. The flavor of the straw-colored, custard-like pulp surrounding the large chestnut-like seeds is perfectly unique; and to taste it, as Wallace tells us, is a "new sensation worth a journey to the East to experience." The pulp is sweet, rich and satisfying, but never cloying; the richness seems counteracted by a delicate acidity, and the want of grape-like juiciness is supplied by the most creamy softness of the pulp as it melts away, ice-like, on your tongue. The durian is one of Dame Nature's "made dishes," and if it be possible for you to imagine the flavor of a combination of corn flour and rotten cheese, nectarines, crushed filberts, a dash of pineapple, a spoonful of old dry sherry, thick cream, apricot pulp and a *soupeon* of garlic, all reduced to the consistency of a rich custard, you have a glimmering idea of the durian, but, as before pointed out, the odor is almost unmentionable—perfectly indescribable. The fruit itself is as large as a Cadiz melon, and its leathery skin is protected by sharp broad-based spines similar to those of a horse-chestnut. There are many varieties in the Bornean woods some but little larger than horse-chestnut fruits, and having only two seeds; others larger but with stiff orange-red pulp, not at all nice to eat, however hungry you may be, and even the larger kinds, with creamy pulp and many seeds, vary greatly in flavor. The trees vary from 70 to 150 feet in height, with tall, straight boles and spreading tops, and the foliage is oblong acuminate, dark green above, paler and covered with reddish hairs or scales below. The fruits of the finer varieties fall when ripe, and are often the cause of serious accidents to the natives. The clusters of large white flowers are produced about April, and form a great attraction to an enormous species of bat, a kind said to be one of the greatest pests of Eastern fruit groves. The finest fruits are obtained from cultivated trees.

The tree does well in Sumatra, Java, Celebes and the Spice islands, and even as far north as Mindanao. Forests of it exist on the Malay peninsula, and very fine fruit is brought to Singapore from Siam about July or August. It does not succeed well in India, and cannot be grown in the West Indies.

## Ventilating Fruit Cars.

We learn from the Sacramento Record-Union that C. W. Reed, the well-known fruit grower, has devised a way to ventilate the cars in which he ships fruit to Eastern markets. It is curious that in all the inventions heretofore having for their object the thorough displacement of impure air in fruit cars and the substitution of new and pure air in its place, the true principle of ventilation has been almost entirely overlooked, and this is the real reason success has not been attained. It is well known that all heated and impure air is lighter than pure cold air, and will rise and give place to cool air if there is any way for the cool air to get into the place where there is a tendency to form a vacuum. Heretofore the fruit cars have been provided with abundant means and openings for the impure air to escape, but they have not been supplied with the means or openings for the pure cool air to enter and crowd out the impurities. This defect has now been discovered, and the remedy applied by Mr. Reed. He has had the siding of the front and back ends of a number of cars cut out about two feet from the floor up, and in place of the board siding has substituted an open wire cloth well secured. On the inside of the car iron bars are secured across the opening for the safety of the fruit, and the improvement is complete and ventilation secured throughout the car. When the car is in motion a constant and rapid current of cool air enters the front opening, find its way through the car between each and every tier of boxes and passes out at the back opening and at the openings at the top of the car. It is believed that this improvement solves the problem of ventilation of fruit cars, and that hereafter success in this business will depend on the care with which other requirements are attended to. If this belief should prove to be well founded, California grapes, and indeed nearly all kinds of fruit, can be laid down in the Eastern markets at a cost, and with a certainty as to condition, that will make the shipment of them highly remunerative.

## PISCICULTURE.

## Notes on the Fishes of the Pacific Coast.—No. 2.

We continue below Mr. Lockington's notes on the new and rare fishes of the Pacific Coast as read by him before the California Academy of Sciences, at the last meeting:

*Glyptocephalus zachirus*. Nov. sp.—This species is remarkable for the great length of the pectoral fin of the right or colored side of the body. This fin is longer than the head and about equal to one-fourth of the total length of the fish, but only the central rays are thus lengthened, the others decreasing rapidly on each side. This long pectoral, together with the blunt shape of the front part of the head, sufficiently distinguish it from its congener, *G. pacificus*, and from all our other flat-fishes. It is of a uniform grayish color, formed by black points on a brownish round. The blind side is beset with dark points on a white ground, as is the case with *G. pacificus*. The first of the season were in the market March 21st, and since then it has been of tolerably regular occurrence, but not abundant. It does not appear to be taken in the Bay. The largest I have seen was a little more than 14½ inches long, but only 4½ deep, so that, for a flat-fish, it is very slender. In flavor it excels most of the other Pleuronectidae of this locality.

The species of *Glyptocephalus* mentioned in my last paper (*G. pacificus*) has not been of uncommon occurrence during the last few weeks among the heaps of small flat fishes exposed for sale in the Clay-street market. The largest I have yet seen measured only 11½ inches in length, and I am rather inclined to think that it does not attain much larger dimensions. In flavor I believe this fish to be inferior to its congener.

The curious "Bastard Turbot," as the dealers call it (*Pleuronichthys ctenosus*), has been rather common lately. It is believed by many of the dealers to be, as the name they give it imports, a cross between a turbot and some other species; but of course this idea is inadmissible.

Leaving the Pleuronectidae, I will now give a few notes upon other species.

*Stereolepis gigas*, Ayres, Jew Fish.—This large species was supposed by its describer to be seldom found to the northward of Point Conception, which is about 40 miles west of Santa Barbara.

The individuals upon which his description was founded were taken in San Francisco bay, but their rarity here, together with the fact that many other southern species appear to make that point their northern limit, induced him to consider as stragglers, all specimens taken to the north of it.

It appears, however, that the Jew fish, though not very common, is regularly taken in the neighborhood of Monterey and Santa Cruz, so that Monterey bay must be included in its normal range. During the present summer I have seen three small specimens (about two feet long) which were taken in Monterey bay. These individuals give no idea of the size attained by the species. The two caught in our bay weighed, as stated by Dr. Ayres, 187 and 360 pounds, and measured 5 feet 8 inches and 7 feet in length respectively; Messrs. Spence and Johnson received last year from Monterey an individual weighing 412 pounds; and one as large, or even larger, was sold in Clay Street market. Mr. Johnson and the dealer in Clay-Street market both assure me that the fish is excellent when cooked; yet buyers do not appear to take to it, on account of its decided ugliness. It is stated to be of sluggish habits, and to live in deep water hidden among the rocks.

This fish belongs to the *Serranidae* or marine *Percidae*. It is a stout, deep fish, its greatest depth equal to nearly a third of its total length; the head is large, equal to a quarter of the total length; and there are two dorsal fins, the first large with nine stout spines; the second shorter but rather higher with three spines and eight soft rays. The scales are small; and the teeth very numerous and small.

*Anoplopoma fimbria* (Pallas), Ayres, Candle-fish.—This species is very rare in the markets of San Francisco, but appears to have been more abundant this year than at any previous period.

Dr. W. O. Ayres (Proc. Cal. Acad., 1859) states that in his time stragglers only occurred in the markets; and the fish-mongers call it a "new" fish, and declare they have never seen it before. Dr. Ayres gives the number of rays in the first dorsal as 23, but I can only find 21 in the specimens I have examined. Probably the number varies slightly. The outline figure in the Proc. Cal. Ac. vol. I, 1859, shows 22. The tail is much more deeply emarginate than is shown in the figure, as the central rays are only about half as long as the outer ones. Most of the individuals brought to the markets are not over ten inches in length, but Dr. Ayres states that he saw one that measured eighteen inches. A specimen procured in May for the Cal. Acad. Sci. measures twelve inches in length. The fishermen call this species candle-fish, but whether on account of its oiliness, of its length and slenderness, or of a fancied resemblance to the species called candle-fish in Oregon and

northward I cannot tell. The last-named candle-fish (*Ammodytes personatus*, Grd.) is not at all nearly related to the present species; it is so only that it is said that the Indians make their candles by pulling their yarn through its flesh. Between October and May *A. fimbria* did not occur in the markets, but it is not unlikely that the severe weather which prevented the fishermen from trawling was the cause of this.

This species was described by Dr. Ayres (Proc. Cal. Ac. Sci., 11, 27, 1859) under the name of *Anoplopoma merlangus*; but Dr. Steindachner identifies it with a species described by the old Russian naturalist, Pallas. In color it is plain greenish brown, becoming lighter beneath; the fins colored like the body. Traces of lighter blotches may be observed on the sides of some fresh specimens. The body is long and slender; the scales small and ciliated; the teeth small and numerous; and there are two dorsals, distinct and remote from each other, a character by which it may readily be known from the other *Chiroids*. Dr. Ayres was puzzled to tell whether its affinities were with *Percidae*, *Chiroide* or even with the *Gadoid* or cod-fish tribe, to which it has a general resemblance. Dr. Gill, however, classes it with the *Chiroids*.

Probably San Francisco lies very near the southern limit of the range of this species, which becomes more abundant northwards, and is found along the northern coast of Eastern Asiatic Russia.

*Chitonotus megacephalus*, Nov. sp.—Three individuals of this species are all that I have as yet seen, and one of these was picked out from a heap of prawns (*Pandalus danae*), crustaceans which are trawled from rather deep water. I conjecture that its rarity may be accounted for by its habitat and by its small size, which does not tempt the fishermen to procure it. Those which come to market are accidentally taken while trawling for prawns. It is a very singular little fish. The head is immense in comparison with the rest of the fish, occupying nearly a third of the total length, tail-fin included; and the mouth is half as long as the head. The eyes, close together on the top of the head, are very large, nearly one-third of the length of the head, and between one-tenth and one-eleventh of the total length of the fish. The first or spinous dorsal is divided into two portions, the first containing three, the second ten spines. The first spine is almost as long as the head, but the third is shorter than the anterior spines of the second portion of the spinous dorsal. But the greatest peculiarity of the fish is in the scales, which are entirely confined to the upper part of the body, leaving the lower undefended. Each scale is etenoid or spinous on its posterior margin, and along the lateral line runs a row of larger scales set with spines on both their upper and hinder margins. The head has sundry spines by way of defense, the largest being a compound four-pointed affair on the upper angle of the preoperculum. The total length of the fish is about five inches, its color olivaceous, becoming whitish below.

*Caulolatilus princeps*.—This has been one of the most puzzling of the marine fishes of this coast, and the puzzle, which consists in ascertaining whether there are one or two, or three species of the genus *Caulolatilus* on the Pacific coast, is not yet solved. *C. princeps* was first described by Jenyns, an English naturalist, from the Galapagos islands, a little south of the equator, and opposite the coast of Peru.

In the Proc. Cal. Ac. Sci., vol. III., Dr. Cooper described, under the name of *Dekaya anomala*, a species which was afterwards ascertained by Prof. Gill to belong to his genus *Caulolatilus*. Dr. Cooper's specimen was from Santa Catalina island, where the species is known as "White-fish." Finally, Prof. Gill described a *C. affinis*, from a small specimen (three feet long) obtained at Cape St. Lucas. The examples described under these various names differed considerably in shape, fin-rays and color, and the localities, as will be seen, were so far apart that, as the examples did not agree, it was natural to suppose them separate species. We have lately obtained two individuals in the markets of San Francisco, both probably brought from near Monterey; one is an adult, 17½ inches long, the other, half-grown, and 10 inches long. The first is very deep in front, owing to the development of fat upon the back of the head and anterior dorsal region; thus approaching Jenyns' form; while the second resembles Cooper's specimen, and has a black spot above the pectoral fins, as in Gill's *affinis*. The difference between these two specimens, both from the same locality, and that a locality from which the fish has not previously been recorded, leads me to believe it probable that there is in the Pacific only one species of the genus *Caulolatilus*, with a known range extending from the Galapagos to near San Francisco, and probably a further extension southward. This is the only species of its family that occurs on this part of the coast. The scales are etenoid, as in the perch tribe, but very small; the preoperculum set with small teeth on its edge; and the dorsal and anal fins very long, the soft portion of the former much more developed than the spinous portion.

RAILROAD CURVES.—When a train of cars is rounding a curve the greater weight is on the outside rail. The centrifugal force of the train round a curve tends to overturn the cars upon the outer rail, as the center of gravity of the mass is some distance above the top of the rail.

The Siberian cattle plague has made its appearance in the district of Nova Sotoga.

## Lands for Sale and to Let.

## LOMPOC

## Temperance Colony.

45,654 49-100 ACRES.

## Cheap and Desirable Homes.

TERMS OF SALE—25% cash, and the remainder in eight equal annual installments with interest at 10% per annum, or full payment and Deed immediately.

## Rich Soil and Healthful Climate.

Located in the Western part of Santa Barbara County, California, embracing 10,000 acres of the Finest Bean Land in the State; as high as 3,700 lbs. of Beans to the acre have been raised the present year, while 3,000 lbs. to the acre is not an uncommon yield.

## DAILY MAIL

And Telegraphic Communication with all parts of the State. The Telegraph Stage Co.'s Coaches now run daily, each way, directly through the town of

## LOMPOC.

E. H. HEACOCK, President.

IRVING P. HENNING, Secretary.

November 6th, 1878.

## Farm For Sale.

## Yields an Income of \$4,000 a Year.

Price, \$10,500.

My Farm and Poultry Business yield over \$4,000 a year. The place—118 acres—with orchard, vineyard and improvements, has cost me \$15,000. The good will of the business is worth fully \$6,000. I will sell the business and farm for \$10,500, half cash, or exchange for San Francisco property. It is a bargain such as is seldom offered.

M. EYRE, Napa, Cal.

Law Office in San Francisco, No. 636 Clay St., Room 25.

I am in Napa each Saturday and Sunday; other days in San Francisco.

## FOR SALE.

700 Acres. The Finest Stock and Grain Farm in Northern California.

Price, \$25,000, including Farming implements. The whole under fence.

The Stock upon this farm, all thoroughbred and graded, embracing some of the finest in the State, will be sold at private sale. Among the stock is some that has been awarded different premiums at State and County Fairs.

This is one of the finest opportunities for a man of means in the State. For full particulars apply to

D. B. HAYS,

Real Estate Agent, Oroville, Cal.

## C. C. RODGERS,

## CALIFORNIA LAND AGENCY,

Office, 276 First St., San Jose, Cal.

GENERAL LAND, REAL ESTATE, U. S. PENSION AND BOUNTY AGENT.

Will buy and sell Land Warrants; Locate and Survey Public Government Land, Pre-emption Homesteads, Soldiers' and Sailor's Homesteads, Timber and Wood Lands, Desert Lands, Etc.

## FARMING LAND

For Sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

## LAND

Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

## Anderson's Springs,

LAKE COUNTY, CAL.

Nineteen miles from Calistoga, five miles from Middletown, and ten miles from the Great Geysers; between which and Anderson's Springs there is a good stage road.

## HOT SULPHUR WATER

For Rheumatism, Paralysis, etc.; Cold Sulphur for Dyspepsia, Diseases of the Stomach and Bowels. Scenery unsurpassed. Climate mild and equable. Consumptives generally improve in health, and asthmatics are invariably relieved.

## TROUT FISHING ON THE GROUNDS.

## Deer Hunting in the Immediate Vicinity.

Accommodations and Cookery good. Board from \$10 to \$12 by the week.

ANDERSON &amp; PATRIQUIN, Prop's.

## California Inventors

Should consult DEWEY & CO., AMERICAN AND FOREIGN PATENT SOLICITORS. Established in 1860. Their long experience as journalists and large practice as patent attorneys enables them to offer Pacific Coast inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING AND SCIENTIFIC PRESS AND PACIFIC RURAL PRESS, No. 202 Sansome St., San Francisco.

YOUR NAME PRINTED ON Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

50 Perfumed, gilt edge & chromo Cards, elegant case, name in gold, 10c. ATLANTIC CARD CO., E. Wallingford, Ct.



BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS.

OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

CATTLE.

PETER SAXE & SON, 520 Bush St., S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magic Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Ducks, etc. Eggs for hatching. Send for price list.

SWINE,

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Thoroughbred Berkshire and Poland-China Swine. Light Brahma and Black Cochon Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

BEES.

JOS. D. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

Thoroughbred Berkshire Swine.

A few very choice specimens of the

CROWN PRINCE and COMET FAMILY,

Of various ages, for sale at Reasonable Prices by

A. L. SAYRE, Borden, Fresno County, Cal.

Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$2,500,000,

In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

OFFICERS:

PRESIDENT.....G. W. COLBY.

MANAGER AND CASHIER,

ALBERT MONTPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

Grangers' Co-operative Business Association, of Sacramento Valley.

Location: K & 10th Sts., Sacramento, Cal

Dealers in GENERAL PRODUCE, RETAIL GROCERIES, and sale of FRUITS. Desire the co-operation and trade of farmers in general. Pay the highest market rates for all produce, and sell for the smallest profit. Our orders are cash on delivery. Goods shipped; marked C. O. D.

W. H. HEVENER, Manager.

GENERAL INSURANCE

— AND —

Commission Agent.

FERDINAND K. RULE,

310 Pine Street, Room 31, San Francisco.

Special attention to Fire, Marine and Life Insurance business.

Insurance placed in none but first-class Companies.

50 CHROMO, Gold Border, etc., 10c., no 2 alike, or 20 Cupid Cards, 10c. J. B. HUSTED, Nassau, N. Y.

PIANOS

FOR EVERYBODY!

WE WILL SELL THE

CELEBRATED

FISCHER PIANO

At Prices that Nobody can beat!

THE "FISCHER"

Is one of the leading Pianos, and has been before the Public For Forty Years.

We Sell no Bogus Instruments.

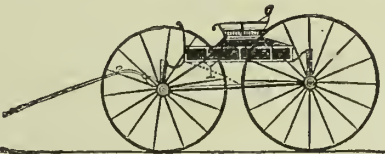
SEND FOR CATALOGUE AND TERMS TO

KOHLER & CHASE,

Post Street, near Dupont,

SAN FRANCISCO.

H. J. HASKELL,



MANUFACTURER OF

CARRIAGES,

BUGGIES,

— AND —

SPRING WAGONS,

At the Lowest Rates.

Corner of Alameda and White Streets,

SAN JOSE, CAL.

THE WILSON ADJUSTABLE CHAIR,

With 30 Changes of Position.

Patented in the United States and Foreign Countries.

BEST CHAIR IN THE WORLD.

Parlor, Combining

LIBRARY, Beauty,

Invalid Chair, Lightness,

Rocker, Strength,

BED or Simplicity

and

LOUNGE, Comfort.

READING POSITION.

Same Chair in Canoe Seating, very desirable for summer.

Manufactured of the best of wrought iron and rivets.

Castors made purposely for the Chair. Everything to an exact science. **IT WILL LAST A LIFE-TIME.**

Has been awarded Medals, Prizes and Diplomas for its superiority and merit wherever it has been exhibited.

Orders by mail promptly attended to. Goods shipped to any address. C. O. D. Send for Illustrated Circular.

Address the WILSON ADJUSTABLE CHAIR MFG CO., 535 Washington St., Boston

Contents of Pamphlet on Public Lands of California, U. S. Land Laws, Map of California and Nevada, Etc.

Map of California and Nevada; The Public Lands; The Land Districts; Table of Rainfall in California; Counties and Their Products; Statistics of the State at Large.

Instructions of the U. S. Land Commissioners.—Different Classes of Public Lands; How Lands may be Acquired; Fees of Land Office at Location; Agricultural College Scrip; Pre-emption; Extending the Homestead Privilege; But One Homestead Allowed; Proof of Actual Settlement Necessary; Adjoining Farm Homesteads; Lands for Soldiers and Sailors; Lands for Indians; Fees of Land Office and Commissions; Laws to Promote Timber Culture; Concerning Appeals; Returns of the Register and Receiver; Concerning Mining Claims; Second Pre-emption Benefit.

Abstract from the U. S. Statutes.—The Law Concerning Pre-emption; Concerning Homesteads; Amendment Act Concerning Timber; Miscellaneous Provisions Additional Surveys; Land for Pre-emption; List of California Post Offices. Price, post paid, 50 cts.

Published and sold by DEWEY & CO., S F

50 Elegant Perfumed Cards, Chromo, Motto, Lily, Etc., 15c. Gift with each pack. H. M. SMITH, Clintonville, Ct.

Educational.

Washington College.

The Fifteenth Semi-Annual Term of this Institution will commence on

Thursday, July 31st, 1879.

Catalogues can be had at Bancroft & Co.'s Bookstore, San Francisco, and at Hardy's Bookstore, Oakland.

For further information address

S. S. HARMON,

Washington, Alameda County, Cal.

HEALD'S BUSINESS COLLEGE,

21 Post Street.

Near Kearny, San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD President Business College, San Francisco, Cal.

E. CHAMBERLAIN, JR. THOS. A. ROBINSON.

PACIFIC Business College,

320 POST ST.

SAN FRANCISCO.

SEND FOR CIRCULAR

Seedsman.

SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses.

RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco

BLISS SELECT GARDEN SEEDS

B. K. BLISS & SONS,

Importers, Growers and dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address

B. K. BLISS & SONS, 34 Barclay Street, N. Y.

FENCING—CHAPARRAL SEED.

Parties wishing to experiment in the cultivation of Chaparral as an economical and valuable substitute for fencing, can obtain the seed in 50 Cts. and \$1 packages, at W. R. STRONG'S, Sacramento. Sent by mail.

EXOTIC GARDENS.

F. A. MILLER & CO., Mission St., opposite Woodward's Gardens. Send for Catalogue and Price List.

M. COOKE. R. J. COOKE

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,

AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOK & GREGORY.

\$500 PRIZE BUTTER

MAKERS THAT TOOK THE TEN FIRST PRIZES (\$500 in all), at the great Dairy Fair, USE OUR PERFECTED BUTTER

It was awarded International Diploma for "Superior Purity, Strength, Perfect Color, and Permanence."

Always gives gift-tinted color. Ask your druggist or merchant for it; or to know what it is, what it costs, where to get it, write to WELLS, RICHARDSON & CO., Props., Burlington, Vt.



## The Iron Turbine Wind Engine.

A new style of windmill lately introduced to this coast, is attracting considerable attention from those desiring wind-power. A large number are now in the hands of users, and thus many will be informed of its working from observation. We believe it will be also shown at the State fair and perhaps other fairs, and an opportunity will thus be afforded for examination. It is called the Iron Turbine Wind Engine, and the style of it may be seen from the engraving in our advertising columns. The following points among others are claimed for the machine by the manufacturers: "The entire machine is made of iron. The wheel and vanes are made of No. 24 sheet iron, well bound and braced with the best quality of wrought bar-iron, and so well put together that it is impossible for the wind to tear it to pieces or injure it in any way. The wheel being constructed on the turbine principle causes it to give more power than any other wheel of the same diameter in the market, and as there is no wood about it to swell, shrink, rattle and be torn to pieces by the wind, it is certainly much more durable. It weighs no more than the ordinary wood wheel, hence there can be no objection on that score. Special attention is paid to the construction of the machinery or engine proper, only the very best materials are used. Polished shafting and rabbit-lined boxes with cavity between the bearings in which is placed packing to hold oil, to prevent the necessity of very frequent oiling. The pitman bearing is provided with a glass oiler that will hold a week's supply, so it is necessary to oil only when you can see from the ground that the glass oiler is empty. We use a pitman of malleable iron with a hardened wrist-pin and adjustable brass boxes, so that all wear or slack may be easily taken up to keep the engine running smoothly and prevent knocking and unnecessary wear. The quality of workmanship is equal to the best steam engine." Mr. E. Goldsmith, at 419 Sansome St., the agent for the Turbine, has also the Buckeye force pumps, which are highly commended.

"Enthusiasm," to quote our author, "is the birthright of youth," but we defy anyone, though he may long have passed the period of such heritage, to seat himself to a careful perusal of these pages without becoming enthusiastic. Their merit lies in literary worth as well as in horticultural lore. The voice of experience speaks through gracefully turned sentences, which abound with sentiments of culture and refinement, and thrill with the accents of one whose heart is in his work. We read, and we long for the wings of a dove that we might fly away to that golden land where the fertile valleys, mysterious store-houses of boundless treasures, are lifting their flower-garlanded faces beneath the protecting shadows of the everlasting hills. The work is especially designed to aid the cultivator of the Pacific coast, but scores of useful hints can be gleaned from it that will prove applicable to our own colder climate.—*Prairie Farmer, Chicago.*

This valuable work was written especially for the publishers of the PACIFIC RURAL PRESS. It is purely a California book, fresh and interesting to rural readers at home and abroad.—*Reading Independent.*

MR. SHINN treats his subject in a practical and pleasing manner, and offers hundreds of valuable hints to the plant-growers of this State, which can be found in no other work.—*Livermore Herald.*

The "PACIFIC RURAL HANDBOOK," written by Chas. H. Shinn for the publishers of the PACIFIC RURAL PRESS, will be sent, post-paid, in substantial cloth binding for \$1; in full leather, \$1.50; in cloth, interleaved with fine ruled paper for memoranda, \$1.50. Address

DEWEY & CO., PUBLISHERS,  
No. 202 Sansome Street, San Francisco.

## Books on Agriculture, Etc.

The following among other books will be sent post-paid on receipt of publishers' prices, annexed:—Tobacco, its culture, manufacture and use, 500 pages, \$3.50;—The Patrons of Husbandry, 500 pages, \$3.75;—The Women of the Bible, 77 engravings, \$4;—Wells' Every Man His Own Lawyer, 612 pages, \$2.75;—American Husbandry, 2 vol., \$1.50;—Gray's Agricultural Essays, \$1;—Langstroth's Honey Bee, \$1.50;—Randall's Sheep Husbandry, \$1.50;—Agricultural Engineering, \$1.50;—New Bee-keepers' Text Book, \$1;—Pacific Rural Handbook, \$1;—Ropp's Easy Calculator, \$1;—U. S. Land Law, 50 Cts.;—Woodward's Grapes, Etc., \$1;—Sugar from Melons, 25 Cts.;—Strawberry Culture, 50 Cts.;—Layre's Belles Lettres, \$1;—Holt's Map of California and Nevada, to subscribers, \$1;—Back Volumes PACIFIC RURAL PRESS (bound) \$5; unbound, \$3;—Pietreque Arizona, \$2. Address DEWEY & CO., Publishers, 202 Sansome St., S. F.

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

SETTLERS and others wishing good farming lands for sure crops, are referred to Mr. Edward Frisbie, of Anderson, Shasta County, Cal., who has some 15,000 acres for sale in the Upper Sacramento valley. His advertisement appears from time to time in this paper.

HOW TO STOP THIS PAPER.—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes before the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate this copy sent.

EXTRA COPIES can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.

For information in music matters send a postal to Kobler & Chase.

SEND to the Great Music House of Kohler & Chase for anything in the music line. 137 and 139 Post street, S. F.

## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, July 30th, 1879.

The Grain trade has apparently taken a little rest from the revival of last week, and sales are few, because holders do not concede the decline which is demanded. There are signs that those interested in Bags and in Grain vessels, are disposed to appropriate all the margin there is in the trade—in other words, to get all they can out of the advance which is anticipated. This is wrong, for the advance properly belongs to producers, who have been held, for more than a year, close to the actual cost of production.

The cable shows a slight decline for average California Wheat, as may be seen by the following.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday....	8s	8d	9s	8d	9s	7d	9s	10d
Friday.....	8s	8d	9s	8d	9s	7d	9s	10d
Saturday....	8s	8d	9s	8d	9s	7d	9s	10d
Monday.....	8s	8d	9s	8d	9s	7d	9s	10d
Tuesday....	8s	8d	9s	8d	9s	7d	9s	10d
Wednesday..	8s	8d	9s	8d	9s	7d	9s	10d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1877.....	8s	8d	9s	8d	9s	7d	9s	10d
1878.....	8s	8d	9s	8d	9s	7d	9s	10d
1879.....	8s	8d	9s	8d	9s	7d	9s	10d

## The Foreign Review.

LONDON, July 29.—The *Mark Lane Express* says: The ground was still sodden from violent storms at the commencement of the week, but since Tuesday the weather has been fine. The condition of the Potato crop will almost certainly be disappointing, and even under favorable circumstances a loss may be expected equal to millions of pounds sterling. The ears of Wheat are generally small, but mostly satisfactory and free from blight and vermin. The state of the ground, however, is evidently unfavorable to maturing the grain. In the south of Scotland and north of England the harvest is not likely to commence before September, and there is thus time during which improved weather may do much for Wheat and something for Barley. In other parts of the country there is less time for recovery, and more injury has been suffered. Oats appear to be in better condition than Wheat or Barley. The markets, which were active early in the week, became comparatively sluggish with the finer weather. The Wheat trade has not been seriously affected by advances of foreign business and shipments; for, if American exports for the United Kingdom are rather heavy, the quantity of grain now at sea and the supply of American here are somewhat reduced. The imports during July were good, but not at all above the country's wants. Wheat is about 1s per quarter higher than the previous week; but, with this improvement, the impetus in favor of a rise appears to be exhausted. English White Wheat ranges 50s to 55s per quarter at a large number of country markets, compared with 45s to 52s per quarter before the improvement commenced. Samples of Red Wheat, which were vainly offered at 40s per quarter a month ago, have recently sold at 45s. The finest lots of Red have not made so great improvement. Samples which were quoted at 48s per quarter at the beginning of July, are now quoted at 52s. The trade in foreign Wheat has been fairly brisk at many markets, though the total absence of excitement caused the advance to be confined within moderate limits. Barley has been firmly held, and a slight advance occurred. Oats have been salable at about 6d improvement, and inquiry has been fairly active. There has been a good, steady demand for Malze, and it generally improved 6d on the week. Imports into the United Kingdom for the week ending July 19th were 305,033 cwt. Wheat, and 153,079 cwt. Flour. In Mark Lane to-day (Monday) English Wheat was held for full prices, but the inquiry was inert. Foreign was rather depressed, owing to the large supply of New Zealand and Australian heavy. Merchants were willing to accept 1s per quarter decline. American Red Winter was held for full prices. Barley was in fair request at 60s 6d advance. Oats were firmer. Maize was fairly active at 1s per quarter advance. Trade in Flour was quiet, but prices were well supported.

## Freights and Charters.

The *Commercial News* comments upon the freight market as follows: The disengaged tonnage in port remains about the same as it was last week, now footing up 35,717 tons. The engaged Wheat tonnage is 25,577 tons, most of which is loading rapidly. The tonnage on the way is 169,410 tons. In 1878 at this time we had 216,635 tons headed for this port, 54,270 tons disengaged, and 53,100 tons loaded in Wheat. There was then a rush for Wheat to load ships chartered to arrive, whose lay days were rapidly slipping; this year there are few ships in port that were fixed to arrive, and few to come. Wooden ships are firmly held for £2 5s to Liverpool or Havre. Iron ships are quotable at £2 7s 6d to Liverpool, with the usual advance in both cases for orders. Some of the iron vessels are held at much higher figures.

## Eastern Grain Markets.

NEW YORK, July 29.—The general markets are quiet. Flour is dull, easier; Wheat is active, 1c lower, closing steady, there being a good export demand. Crop and weather reports from abroad are very favorable, while accounts from the West are in favor of buyers. Pork is quiet, 60c lower; Lard is fairly active, 2 1/2c lower.

CHICAGO, July 26.—The markets have been active, but have not followed ordinary influences, and seem to be at the sport of the clique, whoever they may be. Wheat would appear to be cornered for August, but all operators are at sea, and prefer to do a small scalping business rather than take chances on long and heavy deals. Sales of August Wheat have been at 92 1/2c, closing at 94 1/2c; Corn has been steady and pretty firm, but closed easier, with sales of August at 35 1/2c, closing at 36c; Oats have been weak and easy, 24 1/2c, closing at 24 1/2c. In fact, the exceedingly favorable crop reports have had a tendency to depress the markets, which was barely overcome by news from Europe, favorable to holders. Rye, 51 1/2c, for cash; Barley, nominal at 70c; Provisions have been strong and higher each day, on account of diminishing stocks and exceedingly light receipts of hogs. Sales of August Pork at \$8.10, closing at \$8.60, nearly the outside price. Sales of August Lard, \$5.62 1/2 to \$5.90, closing firm. The closing cash prices were: Wheat, 94c; Corn, 35 1/2c; Oats, 26c; Rye, 52c; Barley, 70c; Pork, \$8.60; Lard, \$5.82 1/2c.

## Eastern Wool Markets.

NEW YORK, July 29.—Wool is in moderate demand at former rates. PHILADELPHIA, July 29.—Wool is quiet; supply ample. Quotations are nominally unchanged. BOATON, July 26.—The transactions in Wool for the week indicate a fair business, comprising 1,382,000 lbs of do-

mestic. Fine Wool is still neglected, and the demand runs on medium grades; Combing and Delaine fleeces are quite steady, and are held firm, but have been quiet. There is very little disposition to force sales, as the principal holders feel that every pound of Wool will be wanted before the year closes. Sales comprise Ohio No. 1, at 36 1/2c; Michigan X and No. 1, 35 1/2c; New Hampshire, 30 1/2c; Delaine and Combing, 40 1/2c; unwashed Combing, 29 1/2c; 33c; unwashed and unmerchanted fleeces, 24 1/2c; Territory, 23 1/2c; Colorado, 18 1/2c; Georgia, 31 1/2c; Missouri, 21 1/2c; Texas, 15 1/2c; Kentucky, 25 1/2c; Lake, 31c; Eastern Oregon, 25 1/2c; scoured, 35 1/2c; tub washed, 37 1/2c; super and X pulled, 34 1/2c; 45c. California is comparatively quiet, sales comprising only 280,600 bales, mostly from 25c to 30c for Spring.

## New York Dried Fruit Markets.

NEW YORK, July 26.—Raisins are firm but less active; Turkish Prunes are excited and firmer, 5 1/2c for Bosnia, 6 1/2c for Serbia. Other Fruits are dull.

## Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon to-day as compared with the receipts of previous weeks:

ARTICLES.	WEEK.	WEEK.	WEEK.	WEEK.
	July 9.	July 16.	July 23.	July 30.
Flour, quarter sacks....	16,672	25,864	23,033	33,910
Wheat, centals.....	113,961	120,468	139,776	28,630
Barley, centals.....	25,482	20,090	22,643	49,666
Beans, sacks.....	531	855	1,814	1,239
Corn, centals.....	4,058	777	1,879	2,032
Oats, centals.....	5,742	4,096	1,729	4,441
Potatoes, sacks.....	9,276	15,219	1,248	16,330
Onions, sacks.....	1,929	1,585	14,251	703
Wool, bales.....	4,523	6,145	3,140	2,218
Hops, bales.....	41	89	75	96
Hay, bales.....	729	1,142	1,798	1,753

BAGS.—Our list of Bags and Bagging shows the advance, forced by the combination, to which allusion has been made. So far as we can learn lists, outside the combination, are also held at these figures.

BARLEY.—Barley prices are about the same as last week, although a decline is talked of, and the trade is rather dull. We note sales: 200 cts New Bay feed, 82 1/2c; 600 cts Old Coast do, 1,800 and 300 cts New do do, 77 1/2c; 720 do Old Coast feed, 72 1/2c.

BEANS.—The low range for Beans still continues, and the trade is without notable features.

CORN.—Corn is at a standstill at last week's prices.

DAIRY PRODUCE.—Receipts of fresh roll Butter are falling off rapidly, and an advance is confidently expected during the week to come. It comes late, but will have a prospect of permanent improvement for the balance of the season. Cheese is unchanged.

EGGS.—Eggs are selling quickly, and choice California's are 1c higher than last week.

FEED.—Hay and Ground Feeds are unchanged. We note a sale of 40 tons new Wheat Hay at \$9.59 per ton.

FRUIT.—The Fruit list has been increased by new arrivals, and nearly all sorts are now in. The era of low prices has also set in and the canners, both domestic and commercial, are at work. Prices ruling to-day may be found in our list.

FRESH MEAT.—There is a still farther drop in live Hogs and the end cannot yet be seen according to city receivers. Veal enjoys an advance of a fraction. Other Meats are unchanged.

FLOPS.—The local market is now about cleared of the old stock, all the low grades being sold. One or two good lots are now held at 10c. For the new crop, as noted in an editorial printed elsewhere, sales have already been made, on prospect, at close to 20c per lb. The New York market reports, by telegraph, a good export demand, and Enmet Wells' circular, for the week ending July 18th, says:

A call from London this week for 1,400 bales of our flops, together with continued unfavorable crop accounts, has added new strength to our market, and sent the price up 1c per lb. on all descriptions. Present appearances do not give hope for a yield of much over 100,000 bales in America, and these will all be wanted for home consumption; but, of course, should prices run much higher in England than here, a few of our choice New flops may find their way over there; but it is rather early to speculate on the chances of an export trade; in fact, it looks more now as though we might become importers of flops next fall, and if so, Germany will be the only country we can look to for a supply.

OATS.—Oats have been drawn in by the late advance rather in excess of requirements, and the trade is now dull, with prices slightly lower. Choice Surprise which sold last week at \$1.65 are now nominal at \$1.55 to \$1.60. We note sale of choice Oregon Feed at \$1.45.

ONIONS.—White or Yellow Onions have been in short supply, and rates have advanced; some selling as high as 90c per cwt. Red Onions are plenty and lower.

POTATOES.—The forlorn spud has done no better; in fact is hardly quotable as high as last week. The best have sold at 30c per sack, and second best down to 25c and 20c. Sweet Potatoes are now in and sell at 1 1/2c per lb. They are very small.

PROVISIONS.—The low price of Pork has forced California Cured Meats down a fraction, as noted in our price list.

VEGETABLES.—Tomatoes have struck bottom, and some from Vacaville have sold as low as 5c per box, and many will be thrown away. River Tomatoes rate at 20c to 25c per box. Changes in market rates for other Vegetables will be found in our list.

WHEAT.—Wheat prices are being talked down, but holders are firm, and we retain prices same as last week. Sales have been made as follows: 260 tons good Shipping, 400 cts do, and 100 tons good Milling, \$1.72; 1,200 cts good Shipping, \$1.70, and 350 cts off grade, \$1.52 per cwt.

WOOL.—Wool is quiet and hard to sell, except at a reduction from prices of last week. There is, however, little doing except in Oregon Wools, of which we note sales of 100,000 lbs at 20c per lb for Eastern and 25c for Valley.

## BAGS AND BAGGING.

[JOBBER PRICES.]

WEDNESDAY M., July 30, 1879.	
Eng Standard Wheat, @11	Eighties, 60 in, @14
California Manufacture, @11	45 in, 60 in, @14
Hand Sowed, 21 1/2c, @11	40 in, 60 in, @14
24 1/2c, @12	40 in, 60 in, @14
22 1/2c, @12	40 in, 60 in, @14
23 1/2c, @13	40 in, 60 in, @14
24 1/2c, @14	40 in, 60 in, @14
25 1/2c, @14	40 in, 60 in, @14
26 1/2c, @14	40 in, 60 in, @14
27 1/2c, @14	40 in, 60 in, @14
28 1/2c, @14	40 in, 60 in, @14
29 1/2c, @14	40 in, 60 in, @14
30 1/2c, @14	40 in, 60 in, @14
31 1/2c, @14	40 in, 60 in, @14
32 1/2c, @14	40 in, 60 in, @14
33 1/2c, @14	40 in, 60 in, @14
34 1/2c, @14	40 in, 60 in, @14
35 1/2c, @14	40 in, 60 in, @14
36 1/2c, @14	40 in, 60 in, @14
37 1/2c, @14	40 in, 60 in, @14
38 1/2c, @14	40 in, 60 in, @14
39 1/2c, @14	40 in, 60 in, @14
40 1/2c, @14	40 in, 60 in, @14
41 1/2c, @14	40 in, 60 in, @14
42 1/2c, @14	40 in, 60 in, @14
43 1/2c, @14	40 in, 60 in, @14
44 1/2c, @14	40 in, 60 in, @14
45 1/2c, @14	40 in, 60 in, @14
46 1/2c, @14	40 in, 60 in, @14
47 1/2c, @14	40 in, 60 in, @14
48 1/2c, @14	40 in, 60 in, @14
49 1/2c, @14	40 in, 60 in, @14
50 1/2c, @14	40 in, 60 in, @14
51 1/2c, @14	40 in, 60 in, @14
52 1/2c, @14	40 in, 60 in, @14
53 1/2c, @14	40 in, 60 in, @14
54 1/2c, @14	40 in, 60 in, @14
55 1/2c, @14	40 in, 60 in, @14
56 1/2c, @14	40 in, 60 in, @14
57 1/2c, @14	40 in, 60 in, @14
58 1/2c, @14	40 in, 60 in, @14
59 1/2c, @14	40 in, 60 in, @14
60 1/2c, @14	40 in, 60 in, @14
61 1/2c, @14	40 in, 60 in, @14
62 1/2c, @14	40 in, 60 in, @14
63 1/2c, @14	40 in, 60 in, @14
64 1/2c, @14	40 in, 60 in, @14
65 1/2c, @14	40 in, 60 in, @14
66 1/2c, @14	40 in, 60 in, @14
67 1/2c, @14	40 in, 60 in, @14
68 1/2c, @14	40 in, 60 in, @14
69 1/2c, @14	40 in, 60 in, @14
70 1/2c, @14	40 in, 60 in, @14
71 1/2c, @14	40 in, 60 in, @14
72 1/2c, @14	40 in, 60 in, @14
73 1/2c, @14	40 in, 60 in, @14
74 1/2c, @14	40 in, 60 in, @14
75 1/2c, @14	40 in, 60 in, @14
76 1/2c, @14	40 in, 60 in, @14
77 1/2c, @14	40 in, 60 in, @14
78 1/2c, @14	40 in, 60 in, @14
79 1/2c, @14	40 in, 60 in, @14
80 1/2c, @14	40 in, 60 in, @14
81 1/2c, @14	40 in, 60 in, @14
82 1/2c, @14	40 in, 60 in, @14
83 1/2c, @14	40 in, 60 in, @14
84 1/2c, @14	40 in, 60 in, @14
85 1/2c, @14	40 in, 60 in, @14
86 1/2c, @14	40 in, 60 in, @14
87 1/2c, @14	40 in, 60 in, @14
88 1/2c, @14	40 in, 60 in, @14
89 1/2c, @14	40 in, 60 in, @14
90 1/2c, @14	40 in, 60 in, @14
91 1/2c, @14	40 in, 60 in, @14
92 1/2c, @14	40 in, 60 in, @14
93 1/2c, @14	40 in, 60 in, @14
94 1/2c, @14	40 in, 60 in, @14
95 1/2c, @14	40 in, 60 in, @14
96 1/2c, @14	40 in, 60 in, @14
97 1/2c, @14	40 in, 60 in, @14
98 1/2c, @14	40 in, 60 in, @14
99 1/2c, @14	40 in, 60 in, @14
100 1/2c, @14	40 in, 60 in, @14

## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., July 30, 1879.

Beans, 10 @ 15	Soft sh., 16 @ 18
Butter, 75 @ 80	Brazil, 12 @ 13
Castor, 300 @ 350	Peanuts, 12 @ 13
Peas, 20 @ 25	Peanuts, 12 @ 13
Pink, 20 @ 25	Peanuts, 12 @ 13
Small White, 215 @ 315	Peanuts, 12 @ 13
Lima, 600 @ 675	Peanuts, 12 @ 13
Field Peas, 125 @ 150	Peanuts, 12 @ 13
BROOM CORN.	Peanuts, 12 @ 13
Southern, 2 @ 21	Peanuts, 12 @ 13
Northern, 2 @ 21	Peanuts, 12 @



## GENERAL MERCHANDISE.

(WHOLESALE.)

WEDNESDAY M., July 30, 1879.

CANDLES.	
Crystal Wax.....	17 @
Eagle.....	12 @
Patent Sperm.....	30 @
CANNED GOODS.	
Assorted Pie Fruits.....	2 1/2 @
2 1/2 lb cans.....	2 1/2 @
Table do.....	3 @
Jams and Jellies.....	3 75 @
Pickles, 1/2 gal.....	3 25 @
Sardines, qr box.....	1 67 1/2 @
Hf Boxes.....	2 50 @
Merry, Paul & Co.'s.....	2 50 @
Preserved Beef.....	3 75 @
2 lb doz.....	3 75 @
do Beef, 4 lb doz.....	6 50 @
Preserved Mutton.....	3 75 @
2 lb doz.....	3 75 @
Beef Tongue.....	6 50 @
Preserved Ham.....	6 50 @
2 lb doz.....	6 50 @
Deviled Ham, 1 lb.....	5 50 @
do Ham, 4 lb doz.....	3 00 @
Boneless Pig Feet.....	4 50 @
3 lbs.....	4 50 @
2 lbs.....	3 75 @
Sliced Fillets.....	4 25 @
Head Cheese.....	4 25 @
COAL-Jobbing.	
Australian, ton.....	6 00 @
Oos Bay.....	5 50 @
Seattle.....	5 50 @
Cumberland.....	12 00 @
do Diablo.....	4 75 @
Lehigh.....	11 50 @
Liverpool.....	6 00 @
West Hartley.....	8 00 @
Scotch.....	8 00 @
Vancouver Id.....	6 00 @
Charcoal, sack.....	75 @
Coke, bush.....	60 @
COFFEE.	
Sandwich Id, lb.....	16 @
Costa Rica.....	16 @
Guatemala.....	16 @
Java.....	25 @
Manila.....	17 @
Ground, in cs.....	25 @
FISH.	
Sac to Dry Cod.....	5 @
do in cases.....	5 @
Eastern Cod.....	7 @
Salmou, bbls.....	8 00 @
Hf bbls.....	6 00 @
1 lb cans.....	10 @
Pkld Cod, bbl.....	11 @
Hf bbls.....	11 00 @
Mackerel, No. 1.....	9 50 @
Hf Bbls.....	10 00 @
In Kits.....	1 85 @
Ex Mess.....	3 25 @
Pkld Herring, bx.....	3 00 @
Boston Smoked.....	70 @
LIME, ETC.	
Plaster, Golden.....	3 00 @
Gate Mills.....	3 00 @
Land Plaster, in 100.....	12 50 @
Lime, Sta Cruz.....	1 25 @
Cement, Rosen.....	4 00 @
Portland.....	2 00 @
NAILS.	
Assorted sizes, keg.....	2 70 @

## LEATHER.

(WHOLESALE.)

WEDNESDAY M., July 30, 1879.

Sole Leather, heavy, lb.....	22 @
Light.....	20 @
Jodot, 8 Kil, doz.....	48 00 @
11 to 13 Kil.....	65 00 @
14 to 19 Kil.....	80 00 @
Second Choice, 11 to 16 Kil.....	55 00 @
Cornellian, 12 to 16 Kil.....	57 00 @
Females, 12 to 16 Kil.....	63 00 @
14 to 16 Kil.....	71 00 @
Simon Ulmo, Females, 12 to 13 Kil.....	58 00 @
14 to 15 Kil.....	66 00 @
16 to 17 Kil.....	72 00 @
Simon, 18 Kil.....	61 00 @
20 Kil.....	65 00 @
24 Kil.....	72 00 @
Robert Calif, 7 and 8 Kil.....	35 00 @
Kips, French, lb.....	1 00 @
Cal, doz.....	40 00 @
French Sheep, all colors.....	8 00 @
Eastern Calf for Backs, lb.....	1 00 @
Sheep Roans for Topping, all colors, doz.....	9 50 @
For Linings.....	5 50 @
al. Russet Sheep Linings.....	1 75 @
ool. L egs, French Calf, pair.....	4 00 @
BGood French Calf.....	4 00 @
Beat Jodot Calf.....	5 00 @
Leather, Harness, lb.....	15 @
Fair Bridle, doz.....	48 10 @
Skirting, lb.....	35 @
Welt, doz.....	38 @
Buff, ft.....	38 @
Wax Side.....	07 @

## LUMBER.

WEDNESDAY M., July 30, 1879.

CARGO PRICES OF PUGET SOUND PINE	
REDWOOD.	
Rough, M.....	13 00 @
Refuse.....	9 00 @
Clear.....	23 00 @
Clear Refuse.....	13 00 @
Rustic.....	23 00 @
Refuse.....	18 00 @
Surfaced.....	20 00 @
Refuse.....	14 00 @
Flooring.....	20 00 @
Refuse.....	12 00 @
Beaded Flooring.....	23 00 @
Refuse.....	13 00 @
Half-inch Siding.....	16 00 @
Refuse.....	14 00 @
Half-inch Surfaced.....	20 00 @
Refuse.....	14 00 @
Half-inch Battens.....	16 00 @
Pickets, Rough.....	11 00 @
Rough, Pointed.....	12 50 @
Fancy, Pointed.....	18 00 @
Shingles.....	1 75 @

## Signal Service Meteorological Report.

San Francisco.—Week ending July 29, 1879.

HIGHEST AND LOWEST BAROMETER.						
July 23	July 24	July 25	July 26	July 27	July 28	July 29
29.065	29.066	29.064	29.078	29.839	29.002	29.034
29.899	29.926	29.865	29.809	29.789	29.873	29.892
MAXIMUM AND MINIMUM THERMOMETER.						
65	63	63	63	64.5	64	64
53	53	53	53	56	55	54
MNAN DAILY HUMIDITY.						
84.3	83.3	83.7	86	86.7	82.3	84.3
PREVAILING WIND.						
W	W	W	SW	W	W	W
WIND—MILES TRAVELLED.						
203	307	234	285	246	270	245
STATE OF WEATHER.						
Fair.	Fair.	Fair.	Cloudy	Fair.	Fair.	Fair.
RAINFALL IN TWENTY-FOUR HOURS.						
Total rain during the season, from July 1, 1879, 0.01 in						

## Grangers' Business Association of California.—Location and Principal place of business, 106 Davis street, San Francisco, Cal.

NOTICE.—There are delinquent on the following described stock on account of assessment (No. 2) levied on the 8th day of April, 1879, the several amounts set opposite the names of the respective shareholders:

Names.	No. Certificate.	No. Shares.	Am't.
Gartman, Daniel.....	904	2	5 00
Gartman, Daniel.....	1001	2	5 00
Gaulding, W W.....	801	10	25 00
Garfield, Ureilla.....	1521	2	5 00
Gamble, Abram.....	578	20	50 00
Gates, T M.....	602	1	2 50
Geopier, H.....	744	1	2 50
Glover, A B.....	794	2	5 00
Goff, J H F.....	389	2	5 00
Gould, J D.....	1408	1	2 50
Gosling, C.....	628	4	10 00
Greenwood H A.....	1169	4	10 00
Gridley, Daniel.....	1046	4	10 00
Grangers' Business Association, Dixon.....	1604	71	177 50
Grover, C D.....	1532	2	5 00
Groves, J M.....	952	2	5 00
Groves, H S.....	1463	4	10 00
Hall, A S.....	1242	5	12 50
Hall, M W.....	1142	1	2 50
Hanschil, Tim.....	1504	4	10 00
Harris, Mrs L.....	127	2	5 00
Harris, H H.....	125	2	5 00
Haskell, H W.....	1058	2	5 00
Harsha, J B.....	1007	1	2 50
Henry, J R.....	337	4	10 00
Hendrix, Lewis.....	1081	4	10 00
Herrling, D H.....	1480	1	2 50
Hills, H E.....	1174	4	10 00
Holton, S B.....	458	2	5 00
Holland, Joseph R.....	1444	2	5 00
Holliday, J A.....	1439	3	7 50
Holliday, B R.....	1438	2	5 00
Hooper, W H.....	688	5	12 50
Hudson, T W.....	1475	5	12 50
Hudson, T W.....	1098	4	10 00
Hunter, A B.....	749	4	10 00
Jameson, J B.....	672	10	25 00
Jameson, S J.....	240	4	10 00
Jahant, P F.....	590	4	10 00
Jackson, W M.....	440	4	10 00
Jasper, Ch.....	1206	1	2 50
Jansen, Jessie.....	1508	1	2 50
Johnston, Mrs J W.....	147	1	2 50
Johnson, John.....	660	2	5 00
Johnson, Wm.....	801	1	2 50
Jones, J W.....	618	10	25 00
Jones, Nettie.....	654	1	2 50
Jones, R M.....	655	1	2 50
Jones, Kate.....	1072	1	2 50
Jones, J P.....	1491	10	25 00
Judson, Homer W.....	1248	5	12 50
Judson, Homer W.....	793	2	5 00
Kendrick, M.....	1168	4	10 00
Kirkpatrick, C J.....	306	2	5 00
Knoves, J.....	745	4	10 00
Knox, Mrs R.....	536	1	2 50
Knox, Lewis.....	539	10	25 00
Knox, Lewis.....	565	10	25 00
Knox, Wm.....	560	15	37 50
Knight, T J.....	882	1	2 50
Lander, Israel.....	221	1	2 50
Lacque, Aaron.....	487	6	15 00
Lacque, Andrew.....	495	5	12 50
Lacque, B.....	496	10	25 00
Lattin, Amy.....	582	1	2 50
Lattin, Amy.....	1633	1	2 50
Lewis, Chas F.....	262	4	10 00
Lewis, David.....	344	4	10 00
Leonard, H M.....	1310	40	100 00
Leighton, E.....	375	2	5 00
Lillick, Henry.....	736	2	5 00
Lindner, Lucinda.....	837	10	25 00
Lindner, John D.....	988	3	7 50
Longmire, Joseph.....	1010	1	2 50
Longmire, Joseph.....	1034	6	15 00
Longmire, Joseph.....	1086	10	25 00
Longmire, S G.....	1591	5	12 50
Long, E O.....	943	2	5 00
Long, E O.....	336	2	5 00
Love, R B.....	1148	1	2 50
Lynch, Wm.....	1359	10	25 00
Lyman, Calisto.....	499	4	10 00
Lyman, Charles.....	498	10	25 00
Manly, W L.....	1170	4	10 00
Mahler, Henry.....	684	10	25 00
Manning, And.....	1264	5	12 50
Mayfield, J M.....	99	10	25 00
Mayfield, J M.....	1040	20	50 00
Mayfield, J M.....	175	6	15 00
Mayfield, Rosalie.....	121	10	25 00
May, Mrs Geo.....	1250	5	12 50
Marlin, John.....	540	20	50 00
Manu, D D.....	566	5	12 50
Marshall, Arch.....	439	1	2 50
Malsbury, J.....	415	2	5 00
Mast, James.....	1346	5	12 50
Menzie, Thos.....	75	1	2 50
Merritt, A P.....	185	7	17 50
Merritt, James.....	190	5	12 50
Meyers, George.....	927	2	5 00
Meyers, Mary J.....	59	1	2 50
Miller, Mrs D E.....	501	5	12 50
Moore, T S.....	1635	2	5 00
Moore, Alex.....	371	10	25 00
Morris, Miss E G.....	1372	8	20 00
McCabe, H C.....	1482	4	10 00
McCullough, C.....	309	1	2 50
McCampbell, S S.....	1623	5	12 50
McPherson, K.....	284	2	5 00
McPherson, D R.....	1164	1	2 50
Newton, Hollis.....	1017	2	5 00
Nebas, H F.....	555	8	20 00
Oiler, J M.....	773	1	2 50
Oldham, Wm.....	359	2	5 00
Oldham, Frank W.....	1008	2	5 00
Ormsby, J H.....	1126	10	25 00
Ormsby, Mrs.....	1372	2	5 00
Parker, Catherine.....	1223	1	2 50
Parker, Nellie.....	1224	1	2 50
Parker, James.....	1225	1	2 50
Parker, F W.....	829	1	2 50
Patterson, C H.....	945	4	10 00
Perham, Liberty.....	535	9	22 50
Perham, Liberty.....	1010	1	2 50
Perdue, Mary.....	599	1	2 50
Pena, D.....	814	4	10 00
Pena, D.....	765	10	25 00
Pengh, James A.....	1202	10	25 00
Pilkington, Thos.....	897	2	5 00
Pilkington, Thos.....	358	2	5 00
Pomeroy, H.....	1338	10	25 00
Pomeroy, M.....	1683	4	10 00
Pollard, B H C.....	92	2	5 00
Prince, R H.....	870	2	5 00
Prince, R H.....	646	2	5 00
Ralston, Geo.....	13	2	5 00
Ramage, Sam'l F.....	1384	1	2 50
Reed, John A.....	1453	2	5 00
Reed, John A.....	402	2	5 00
Reed, J T.....	376	1	2 50
Reed, W H.....	1085	8	20 00
Rhodes, John M.....	881	10	25 00
Riley, Franklin.....	816	2	5 00
Ripley, J M.....	445	2	5 00
Ripley, S E.....	275	1	2 50
Robinson, Joseph.....	261	1	2 50
Rodgers, C E.....	338	2	5 00
Roadhouse, J J.....	229	10	25 00
Rush, R R.....	8	1	2 50
Rush, R R.....	1073	1	2 50
Service, John.....	890	2	5 00
Shedd, E D.....	351	2	5 00
Slayton, O O.....	546	10	25 00
Smith, James.....	721	1	2 50
Smith, W C.....	1350	2	5 00
Smith, W C.....	1504	2	5 00
Smith, Jeremiah.....	240	5	12 50
Smith, W W.....	1167	10	25 00
Soule, A J.....	502	5	12 50

Names.	No. Certificate.	No. Shares.	Am't.
Soule, A J.....	1032	5	12 50
Still, James W.....	96	2	5 00
Stern, John.....	1147	2	5 00
Story, Stephen C.....	491	5	12 50
Stearns, W.....	682	5	12 50
Stearns, Mary J.....	685	3	7 50
Stalcy, Theo.....	1075	10	25 00
Stephens, A.....	761	4	10 00
Steuben, H W.....	1263	4	10 00
Still, Jas E.....	96	2	5 00
Stone, Wm Z.....	1368	1	2 50
Sutton, H D.....	665	10	25 00
Swift, Mrs H.....	1042	1	2 50
Swift, J J.....	1043	4	10 00
Teague, C P.....	1080	4	10 00
Thompson, A W.....	1471	20	50 00
Thompson, A W.....	1047	2	5 00
Thompson, J M.....	1135	10	25 00
Thompson, Mrs A W.....	1472	10	25 00
Tillotson, G W.....	698	1	2 50
Turner, W H.....	1503	25	62 50
Veal, Thomas.....	1257	2	5 00
Veerkamp, Francis.....	679	10	25 00
Wallace, G P.....	702	2	5 00
Wallace, Mrs G P.....	703	1	2 50
Wallace, Miss A E.....	704	1	2 50
Walters, J J.....	709	1	2 50
Walters, Fannie.....	710	1	2 50
Walker, L W.....	1191	10	25



Agricultural Articles.

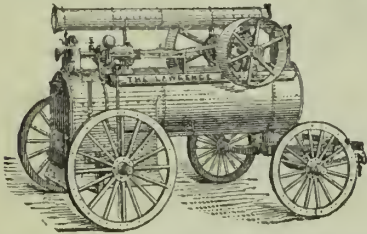
The Famous "Enterprise,"  
PERKINS' PATENT  
Self Regulating  
WINDMILLS,  
Pumps & Fixtures.

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babbitted boxes. Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,



HORTON & KENNEDY,  
GENERAL OFFICE AND SUPPLIES, LIVERMORE,  
ALAMEDA CO., CAL. Also, Best Feed Mills for sale,  
San Francisco Agency, LINFORTH, RICE  
& CO., 401 Market Street.

The LAWRENCE ENGINE.

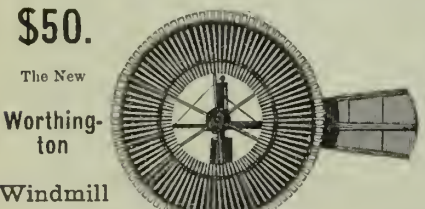


The Best Farm Engine in the World.  
AUTOMATIC CUT-OFF,  
Less Fuel, Less Water, Less Repairs than  
any other Portable Engine.  
No Commission to Agents! Bottom Price to Purchasers!  
Engines for all purposes, with and without Wagons.  
You can save money by buying direct of us. Order early  
for next season's use. Send for illustrated Catalogue and  
Price List.  
ARMINGTON & SIMS, Lawrence, Mass.  
ARMINGTON & SIMS were lately with the J. C. Hoadley Co

MATTESON & WILLIAMSON'S



AMERICAN CHIEF  
GANG PLOW.  
Took the Premium over all at the great plowing Match  
in Stockton, in 1870.  
This Plow is thoroughly made by practical men who  
have been long in the business and know what is required  
in the construction of Gang Plows. It is quickly adjusted.  
Sufficient play is given so that the tongue will pass over  
cradle knolls without changing the working position of the  
share. It is so constructed that the wheels themselves  
govern the action of the Plow correctly. It has various  
points of superiority, and can be relied upon as the best  
and most desirable Gang Plow in the world. Send for  
circular to  
MATTESON & WILLIAMSON,  
STOCKTON, CAL.

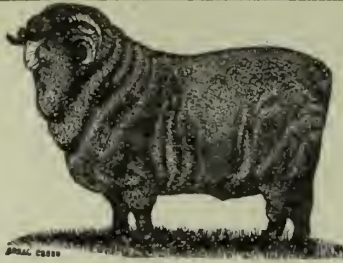


\$50.  
The New  
Worthington  
Windmill  
Manufactured  
by  
W. D. PARSON,  
1364 San Pablo Avenue, Oakland, Cal.  
Also, maker of the "Colorado Wind Engine," Wind Grist  
Mills, Town Water Works, Irrigating and Drainage Pumps.  
A very heavy and superior pattern of Deep Well and Artesian  
Lift Pump Cylinders. Circulars free.

SEND FOR THE  
\$1.50  
Homœopathic Medicine Case.  
Containing 12 principal remedies, with directions for  
use. Also Veterinary cases and books. Send for cata-  
logue. Address  
BOERICKE & TAFEL,  
Homœopathic Pharmacy, San Francisco.

ASK YOUR PLUMBER FOR  
SPIDER HOSE.  
The best Rubber Hose in market. Every  
foot guaranteed.  
H. P. GREGORY & CO.,  
General Agents, San Francisco, California.

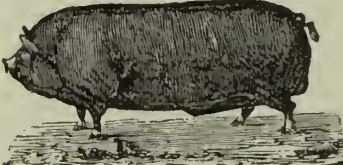
Stock Notices.



SPANISH MERINO SHEEP.

Choice stock of thoroughbred Bucks and Ewes, guaran-  
teed free from disease. Purchasers are invited to exam-  
ine. About 10 minutes' walk from the Railroad terminus,  
adjoining State University.  
E. W. WOOLSEY,  
Berkeley, Alameda County, Cal.

BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with  
great care from the best herds of imported stock in the  
United States and Canada, and for individual merit can-  
not be excelled. My breeding stock are recorded in the  
"American Berkshire Record," where none but pure bred  
ffogs are admitted. Pigs sold at reasonable rates. Cor-  
respondence solicited.

JOHN RIDER,  
15th and A Streets, Sacramento City, Cal

ANGORAS AT THE FAIRS.

The undersigned would announce to those interested in  
ANGORA GOATS, and the public generally, that he will  
have a lot of

Choice Angora Bucks

On Exhibition at the State and District  
Fairs

This fall, namely: At the State Fair at Sacramento, the  
Golden Gate Fair at Oakland, the Nevada State Fair at  
Reno, and the Oregon State Fair at Salem.

These Bucks will be sold at fair rates.

JOHN S. HARRIS,  
Hollister, San Benito Co., Cal

Thoroughbred Spanish Merino Sheep  
FOR SALE.



Wool Growers and  
Sheep Breeders desir-  
ous of improvement are  
invited to examine the  
Banner and Premium  
flock of the State.  
All 1st Premiums  
taken at State Fair  
in 1878, with strong  
competition. No  
sheep superior in  
the world.  
100 head yearling  
and 20 head 2-year  
old Rams for sale,  
large sized carcasses  
free from wrinkles. Heavy shearers, long staple of white  
glossy wool. A few young Ewes also for sale. All Sheep  
warranted free from Disease. Send for circular and price  
list or come and see us at once. Laurel Ranch, Hayward,  
Alameda County, Cal. One mile from depot on C. P. R. R.  
J. H. STROBRIDGE.

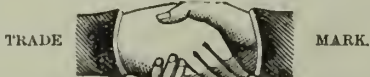
RAMS FOR SALE.



400 THOROUGHbred  
And Graded  
SPANISH MERINO  
Rams For Sale.  
Bred from the first impor-  
tation of Spanish Merino  
Sheep to California, in 1859.  
Prices to suit the times. Residence, one mile north of  
McConnell's Station, Western Pacific Division C. P. R. R.  
P. O. address, MRS. E. McCONNELL-WILSON,  
Elk Grove, Sacramento Co., Cal.

JOHN ROGERS & SONS,  
GENERAL STOCK AND SALE YARD,  
Corner Market and 5th Sts., San Francisco,  
HORSES and MILCH COWS sold on commission. Also,  
dealers in HAY and GRAIN.  
Parties consigning Stock or Grain to us can rely upon  
prompt sales and quick returns.

MONEY TO LOAN  
AT LOWEST RATES  
On Country Real Estate and Grain in  
Warehouse.  
McAFEE BROTHERS,  
202 Sansome Street, San Francisco.



LITTLE'S CHEMICAL FLUID.  
The New Non-Poisonous Sheep Dip and Disinfectant.  
Price, \$2 per gallon. For directions and testimonials,  
apply to  
FALKNER, BELL & CO.,  
Sole Agents, 430 California Street, S. F.  
50 Perfumed, Snowflake, Chromo, Motto Cards, name in  
gold and jet 10c. G. A. SPRING, E. Wallingford, Ct.

MECHANICS' FAIR,

SAN FRANCISCO, CAL.

Opens August 5th, 1879.

SCIENCE, ART, INDUSTRY and NATURAL PRO-  
DUCTIONS will be fully represented.

Grand Instrumental Concert  
EACH AFTERNOON AND EVENING.

MACHINERY IN MOTION, RARE PAINTINGS,  
FINE STATUARY, A TROPICAL GARDEN, FOUN-  
TAINS and PROMENADES, will make this Exhibition  
the most instructive and pleasant place of resort on this  
Coast.

Those desiring space should apply at once.

OFFICE: 27 POST STREET.

IRVING M. SCOTT, President.

J. H. CULVER, Secretary.

Yosemite, Big Trees,  
CEYSERS,



Merced, Coulterville,

CALAVERAS.

And Big Oak Flat Routes  
ARE NOW OPEN!

These are the shortest, most picturesque and cheapest  
routes.

The COULTERVILLE route passes by the celebrated  
BOWER CAVE and Merced grove of trees, and the OAK  
FLAT route by the TUOLUMNE GROVE OF BIG TREES,  
where the stage passes through the "DEAD GIANT," the  
only tree in the world that a loaded stage can drive  
through.

This is the only office where tickets can be had for the  
entire round trip—all other lines ticket in and out by the  
same route.

For tickets and other information call at

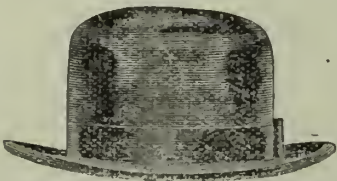
Billings, Harbourne & Co.'s Bookstore,

No. 3 Montgomery St., S. F.

T. J. MATTESON,  
Proprietor.

ED. HARRISON,  
Agent.

HERRMANN'S HATS  
ARE THE BEST!



Try one and you will Wear no other.

Spring and Summer Styles,

— AT —  
336 Kearny St., bet. Bush and Pine,

— AND —  
910 Market St., above Stockton.

Send for illustrated Spring Style Catalogue.



Send for Circular.

ARTESIAN  
AND  
SURFACE  
Well-Boring  
TOOLS.

Manufactured by the  
Rust Well Auger  
COMPANY,  
OF MACON, MO.

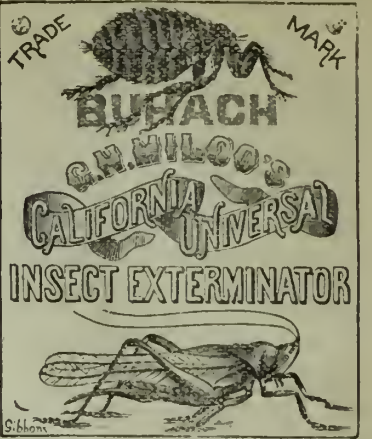
AUGERS and DRILLS from best wrought  
iron and steel. Shafting is 2-inch gas pipe.  
Couplings are round plugs fitted inside the  
pipe. Drills fitted for rope or pole. All  
tools warranted, and sold for less money  
than can be got elsewhere.

O. RUST, Macon, o

Agricultural Books.

Orders for Agricultural and Scientific Books in general  
will be supplied through this office, at published rates.

60 Chromo, perfumed, Snowflake & Lace cards, name on all  
10c. Game Authors, 15c. Lyman & Co., Clintonsville, Ct



Pyrethrum Cinerariae Folium—A California  
Production.

THE MOST WONDERFUL DISCOVERY OF THE  
NINETEENTH CENTURY.

This wonderful Insect Powder will exterminate Flies,  
Weevils, Caterpillars, Mosquitoes, Midges, Crickets, Cock-  
roaches, Spiders, Tarantulas, Scorpions, Ants, Hawk-bugs,  
Phylloxera, Plant Lice, Moths, Beetles, Grasshoppers, Lo-  
custs, Bed-bugs, Fleas, and every species of Insects.

Remember that none is genuine unless my Trade-Mark  
is attached to every package.  
Put up in eight-pound cans at \$10 per can, wholesale. Ask  
your druggists and grocers for it, and take no other to  
rid yourself of Insects. Sold at \$1.50 per pound or 12 1/2 cents  
per ounce, retail. Agents wanted everywhere.

\$100 WILL BE PAID IF IT FAILS TO KILL ANY INSECT.  
Endorsed by Prof. E. W. Hilgard, of the University of  
California, and by Prof. C. V. Riley, Chief Entomological  
Commissioner at Washington, D. C., and pronounced super-  
ior to any imported article, and perfectly harmless to man  
and beast.

G. N. MILCO.

Patentee and Sole Manufacturer, Stockton, Cal.

The Voice of Worship,  
FOR CHOIRS,  
Conventions and Singing Schools,  
BY L. O. EMERSON.

This splendid new book is nearly through the press, and  
will be in great demand. Full collection of the best  
flynn Tunes and Anthems for Choirs, numerous Glee  
songs for Social and Class singing, and a good Singing School  
course. Its attractive contents, with the low price (\$1, or  
\$9 per dozen), should make it the most popular of Church  
Music Books.

THE TEMPLE. For Singing Schools, Conven-  
tions and Choirs. By W. O.  
PERKINS. Will be ready in a few days. First-class book  
for Singing Schools, with large collection of Glee songs  
and plenty of Hymn Tunes and Anthems. Price, \$1, or \$9 per  
dozen. Although Singing Classes are especially provided  
for, both the Secular and Sacred Music render it one of  
the best Convention and Choir books.

FATINITZA. The new and very favorite opera,  
is now ready, with words in three  
languages, all the Music and Libretto complete. Price,  
\$2 paper, \$2.25 boards.

PINAFORE. Price reduced to 50 cts. The same  
elegant edition heretofore sold for a  
dollar. Complete words, Libretto and Music. All ready  
for the stage.

Any book mailed for retail price.

OLIVER DITSON & CO., BOSTON.

C. H. Ditson & Co., 843 Broadway, N. Y.

PLEASANT SUMMER READING.

THE NEW PENELOPE

— AND —

Stories of California Life.

By MRS. F. F. VICTOR.

The best delineations of Western character and incident  
ever produced on this coast. For sale by

A. L. BANCROFT & CO.  
PRICE, \$2 00.

J. P. JONES. J. THOMPSON.  
JONES & THOMPSON,

Wholesale and Retail Dealers in

Hay, Grain and Feed.

Also, Store and Sell on Commission at  
Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will  
receive prompt attention, and returns forwarded as soon  
as sales are made. For further particulars address as  
above,  
1535 Mission St., San Francisco.

The PERPETUAL WICK

Makes no smoke or smell, breaks no chimneys,  
gives a beautiful soft and clear light, never requires  
trimming, never burns out. The wicks are made of  
Felt, chemically prepared with Asbestos, which is  
non-combustible, thereby rendering the Wick Per-  
petual. A single wick was burned in the Patent Office  
at Washington, by the officers of that department, for  
140 days and nights (without burning out), before a  
patent would be granted. Sample by mail, 10c; 3 for  
\$2.50, 6c per doz. Agents wanted. Address

A. S. SPENCE & CO.,  
24 Geary St., San Francisco.

AGENTS, READ THIS

We will pay Agents a Salary of \$100 per month and  
expenses, or allow a large commission, to sell our new  
and wonderful inventions. We mean what we say. Sam-  
ple free. Address SHERMAN & CO., Marshall, Mich.

Dewey & Co { 202 San- } Patent Ag'ts  
some St.

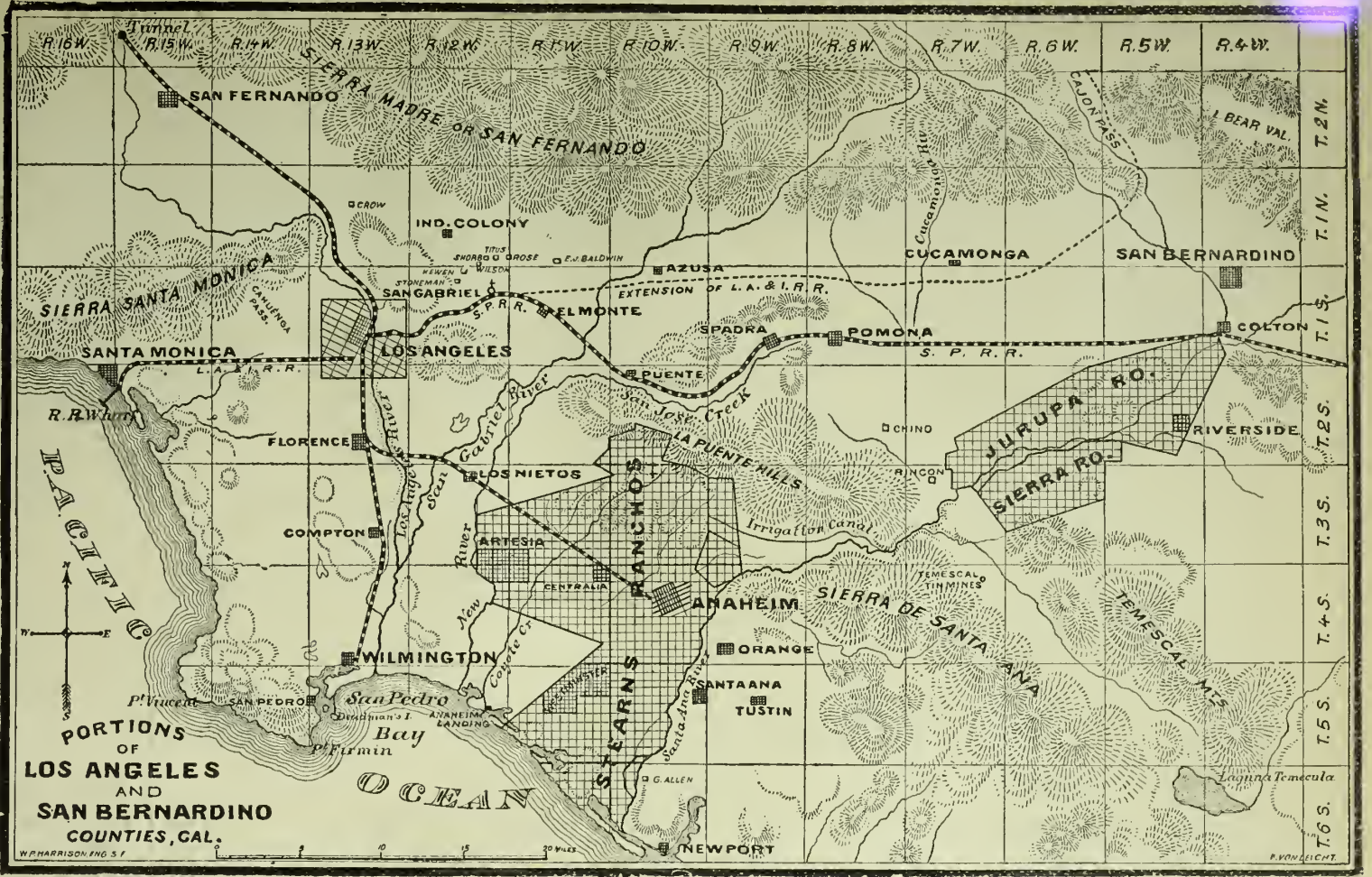


The Accompanying Map shows the

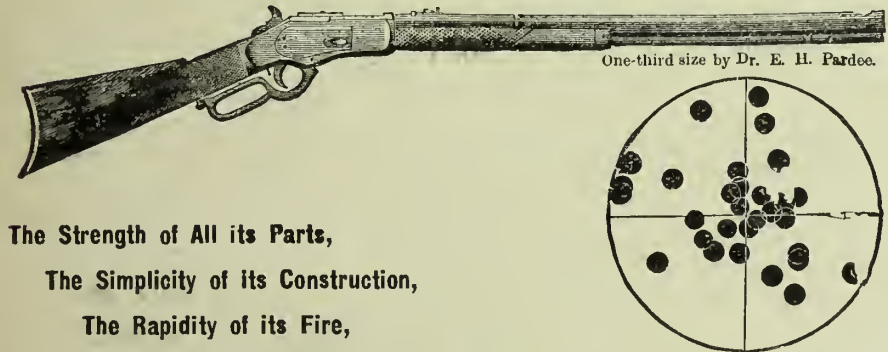
# "Abel Stearns' RANCHOS,"

The Center of Los Angeles Valley.

Six hundred Farms already sold and improved. Within the Artesian Well Belt, and having water near the surface. For sale in sections or fractions by ALFRED ROBINSON, Trustee, 120 Sutter street, near Montgomery, San Francisco, or apply to WM. R. OLDEN, Anaheim, Cal.; or, concerning the Colony, to REV. ROBERT STRONG, Westminster, Cal. Terms, one-fifth cash; balance, 1, 2 and 3 years. Interest at 10 per cent., payable at end of each year. The larger squares represent Townships six miles square, containing 36 sections. The smaller squares within the STEARNS' RANCHOS, represent 160 acres. Roads are proposed to be laid out on every section line, forming blocks of one mile square, with roads on all sides and on many quarter section lines. SEND FOR CIRCULARS.



## Winchester Repeating Rifle, MODEL 1873.



The Strength of All its Parts,  
The Simplicity of its Construction,  
The Rapidity of its Fire,  
The Power and Accuracy of its Discharge,  
The Impossibility of Accident in Loading,  
Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carabines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder,

JOHN SKINKER, No. 115 Pine Street, San Francisco,  
SOLE AGENT FOR THE PACIFIC COAST.

**ST. DAVID'S.**  
A FIRST-CLASS LODGING HOUSE.  
CONTAINS 113 ROOMS.  
715 Howard St., near Third, San Francisco.

This House is especially designed as a comfortable home for gentlemen and ladies visiting the city from the interior. No dark rooms. Gas and running water in each room. The floors are covered with body Brussels carpet, and all of the furniture is made of solid black walnut. Each bed has a spring mattress, with an additional hair top mattress, making them the most luxurious and healthy beds in the world. Ladies wishing to cook for themselves or families, are allowed the free use of a large public kitchen and dining room, with dishes. Servants wash the dishes and keep up a constant fire from 6 A. M. to 7 P. M. Hot and cold baths, a large parlor and reading room, containing a Grand Piano—all free to guests. Price single rooms per night, 50 cts.; per week, from \$2.50 upwards.

R. HUGHES, Proprietor.  
At Market Street Ferry, take Omnibus line of street cars to corner Third and Howard.

## IMPORTANT!

We wish to open correspondence immediately with one or more enterprising parties in each township upon the Coast to

### Establish an Agency

Of our valuable publications, among which are the "Pictorial History of the World," Stanley's "Through the Dark Continent," "Chase's Improved Recipes," the Farmer's Account Book, and many others. Ministers, teachers, farmers and others will find this profitable. Ladies especially are successful. Address for full particulars,

A. L. BANCROFT & CO.,  
No. 721 Market Street, San Francisco, Cal.

## BLACK POINT PACKING AND SLAUGHTER HOUSE.

MERRY, FAULL & CO., Proprietors.

### TO OWNERS OF LIVE STOCK!

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

### SQUARE DEAL and FULL MARKET PRICES

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices.

Please address our

Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.

In consequence of spurious imitations of

**LEA AND PERRINS' SAUCE,**  
which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

## Mission Rock Dock & Grain Warehouses, SAN FRANCISCO, CAL.

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

Grain received and weighed in free of expense. Wheat Cleaned and Graded. Deep Water Berths for the largest ships. Insurance and storage at the lowest rates. Loans effected on wheat stored in Warehouse at lowest rates. Apply to

CHAS. H. SINCLAIR, Superintendent,

Or to the California Dry Dock Co., Office, No. 318 California Street. San Francisco.

### A Card to Grangers and Farmers.

HAY, GRAIN, HORSES and CATTLE.

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nos. 11 and 13 Bluxome St., San Francisco.

### Engraving.

Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the MINING AND SCIENTIFIC PRESS, San Francisco, at favorable rates. Send stamp for our circular and samples.

### ROOMS TO RENT.

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco

### The New Beekeepers' Text Book.

By N. H. and H. A. KINO. The latest work on the Apiculture, embodying accounts of all the newest methods and appliances. Fully illustrated. Sent by mail, post-paid, for \$1. DEWEY & CO., 202 Sansome Street, S. F.



## Commission Merchants.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

BRYANT & COOK,

Commission Merchants,

AND DEALERS IN

GRAIN, FLOUR, ETC.

No. 8 Davis St., near Market, San Francisco.

CHARLES NAUMAN.

FRANK NAUMAN.

C. & F. NAUMAN & CO.,

Wholesale Commission Merchants

— AND DEALERS IN —

GRAIN, POTATOES, FRUIT, BUTTER, POULTRY, EGGS, GAME, ETC.

227 & 229 Washington St., San Francisco.

Consignments Solicited.

H. M. COVERT,

Commission Merchant,

AND PURCHASING AGENT.

General Agent for the CALIFORNIA SACK HOLDER.

306 Davis St., San Francisco.

Liberal advances made on Consignments.

A. GALLI & CO.,

General Commission Merchants,

AND WHOLESALE DEALERS IN

Tropical, California and Oregon Fruits, Nuts, Produce, Butter, Cheese, Poultry, Eggs, Honey, Hides, Potatoes, Grain, Wool, Etc.

516 and 518 Sansome St., San Francisco.

Cash can be drawn for immediately upon receipt of account of sales.

[NEW ADVERTISEMENT.]

"The Principles of the Republican Party are not for a Day, but for All Time."

**Regular Republican STATE TICKET.**

Election, Wednesday, September 3, 1879.

FOR GOVERNOR:

GEORGE C. PERKINS..... San Francisco.

FOR LIEUTENANT GOVERNOR:

GEN. JOHN MANSFIELD..... Los Angeles.

FOR SECRETARY OF STATE:

DANIEL M. BURNS..... Yolo.

FOR CONTROLLER:

DANIEL M. KENFIELD..... Tuolumne.

FOR TREASURER:

JOHN WEIL..... Sierra.

FOR ATTORNEY GENERAL:

AUGUSTUS L. HART..... Colusa.

FOR SURVEYOR GENERAL:

JOHN W. SHANKLIN..... Alameda.

FOR CLERK OF SUPREME COURT:

FRANK W. GROSS..... San Francisco.

FOR SUP'T PUBLIC INSTRUCTION:

FREDERICK M. CAMPBELL..... Alameda.

FOR CHIEF JUSTICE:

AUGUSTUS L. RHODES..... Santa Clara.

FOR ASSOCIATE JUSTICES:

A. P. CATLIN..... Sacramento.

ISAAC S. BELCHER..... Yuba.

JARRETT T. RICHARDS..... Santa Barbara.

JAMES E. HALE..... Placer.

MILTON H. MYRICK..... San Francisco.

E. D. WHEELER..... San Francisco.

STATE BOARD EQUALIZATION—(1st District):

JAMES L. KING..... San Francisco.

RAILROAD COMMISSIONER—(2nd District):

TIMOTHY G. PHELPS..... San Mateo.

FOR MEMBER OF CONGRESS—(1st District):

HORACE DAVIS..... San Francisco.

By order of the Republican State Central Committee.

M. D. BORUCK, Secretary.

W. W. MORROW, Chairman.

**CHEAPER YET!**

**Tension Sewing Machines!**

A large number of nearly new genuine SINGER, WHEELER & WILSON, HOWE, WOOD, WILSON, GROVER & BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

**NO TENSION MACHINE.**

**Wilcox & Gibbs' S. M. Co.,**

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.

Engraving done at this office.



**Celebrated Detrick "E W" 22x36 Grain Bag.**

CALCUTTA, DUNDEE and PACIFIC JUTE HAND-SEWED BAGS always on hand. OUR No. 1, No. 2 and No. 3 SECOND-HAND GRAIN BAGS selected and graded with care.

**TWINES.** 3, 4 and 5-ply for Grain Bags, 6 and 8-ply for Potato Gunnies, 3-ply EXTRA FINE for Flour Bags, made expressly for our trade and QUALITY GUARANTEED.

FLOUR BAGS Printed to Order WITHOUT EXTRA CHARGE. POTATO GUNNIES, Wool, Bean, Ore and Salt and Seamless Cotton Bags.

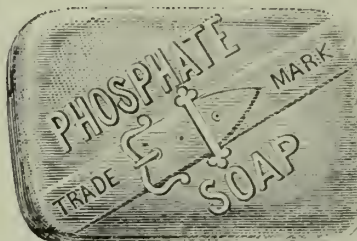
**Tents, Awnings and Hydraulic Hose.**

ORDERS PROMPTLY FILLED AT LOWEST MARKET RATES.

119, 121 and 123 Clay St., and 118 and 120 Commercial St., San Francisco.

THE BEST  
**TOILET SOAP**  
Ever Made.

**PHOSPHATE SOAP**



A superb article for the toilet, beneficial to the skin, giving it a soft, velvety appearance, and leaving a soothing, pleasant sensation after use, imparting a healthy natural and lasting beauty to the complexion. It eradicates the poisonous effects of cosmetics; prevents skin diseases by acting as a constant purifier and disinfectant; if used constantly will cure skin diseases of long standing; is superior to any other article for bathing infants; cleansing and healing for all eruptions on the scalp or face of children; good for the teeth; produces a soft, creamy lather, nicely adapted to shaving or shampooing, removes dandruff, and gives health to the scalp without injuring the hair.

Phosphate Soap is a scientific preparation manufactured from the best toilet soap with potent medicinal agents, which unite chemically with other ingredients. It is cheap, because it wears longer and combines more cleansing, healing and soothing qualities than any other article in the market.

*Cheap toilet soaps, manufactured from rancid and refuse grease, injure the skin, and are really more expensive than PHOSPHATE SOAP, which retails for 25 cents per cake. One cake will last longer than three of cheap, inferior soaps.*

*Natural beauty surpasses anything which can be imparted by artificial means. PHOSPHATE SOAP gives health to the skin simply by removing impurities and eradicating the poisons which give rise to skin diseases.*

*Not only for daily use on the face and hands, but for bathing the entire body, there is nothing equal to PHOSPHATE SOAP. It is a thorough disinfectant and removes offensive odors of every kind.*

*Thousands of articles are palmed off on the public, which have no genuine merit, but PHOSPHATE SOAP is the result of modern discoveries of celebrated chemists.*

*PHOSPHATE SOAP costs no more than other good toilet soaps, while its medicinal qualities make it worth ten times its price to every man, woman and child.*

*For chapped hands, the constant use of PHOSPHATE SOAP will be recommended by all who give it one fair trial.*

*If you want a nice article of Toilet Soap and something that is beneficial to the skin, buy PHOSPHATE SOAP.*

*Sensible girls avoid cosmetics, but use PHOSPHATE SOAP for the toilet, because it is fragrant, pure and pleasant.*

*Ladies who wish to make the skin look beautiful and natural, should use PHOSPHATE SOAP.*

It should be in every house. Sold by all dealers. One cake sent by mail on receipt of 80 cent in postage stamps. A neat box containing 3 cakes sent by mail, postpaid, on receipt of 80 cents. Manufactured by the

**STANDARD SOAP COMPANY,**

204 Sacramento St., San Francisco.

**Baling  
Fencing  
Telegraph  
Telephone  
Galvanized**

**WIRE**

**Barbed Fence Wire.**

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the  
Trademark.



**A. S. HALLIDIE**

Wire Mills.

Office, No. 6 California St.

SAN FRANCISCO.

**WIRE ROPE and CORDAGE**

Of every kind on hand or Made to Order.

**R. J. TRUMBULL & CO.,**

SUCCESSORS TO

**R. J. TRUMBULL,**

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

\*"Guide to the Vegetable and Flower Garden" will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

**R. J. TRUMBULL & CO.,**  
419 and 421 Sansome Street, S. F.

**Iron Turbine Wind Engine**



**AND BUCKEYE FORCE PUMP.**

This machine made of iron, wheel, vanes, etc., made of No. 24 sheet iron, bound and braced with best quality of wrought bar iron, gives more power than any other wheel of same diameter. No wood to swell, shrink, rattle or be destroyed by the wind. The most durable and the best Windmill ever invented. For particulars, price lists, etc., address

**D. E. GOLDSMITH, State Agent,**  
419 Sansome street, San Francisco.

**BUY LAND**

Where you can get a crop every year; where you will make something every season; where you are sure of having a crop when prices are high; where you have a healthy place to live; where you can raise semi-tropical as well as other fruits; where you can raise a diversity of grain and vegetables and get a good price for them. Go and see the old Reading Grant (in the upper Sacramento Valley), and you will find such land for sale in sub-divisions to suit purchasers—at reasonable rates and on easy terms. Send stamp for map and circular to EDWARD FRISBIE, proprietor, (on the Grant), Anderson, Shasta Co., Cal.

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 120 Sutter St., S. F.

**Well-Auger.**

Ours is guaranteed to be the best in the world. Catalogue free.  
**W. W. GILES, 149 Clark St., Chicago, Ill.**



# PACIFIC RURAL PRESS

Volume XVIII.]

SAN FRANCISCO, SATURDAY, AUGUST 9, 1879.

Number 6.

## Hydraulic Rams for Farm Uses.

It is related of one of our illustrious Commissioners of Agriculture, that he expressed the opinion that the more general use of the hydraulic ram would be of advantage to our flock-masters. Although the opinion betrayed rather a slim acquaintance with both breeding and mechanics, there was nevertheless a truth concealed, for it cannot be doubted that hydraulic rams could play a much more important part in farm economy than they do at present. There are many situations where sufficient fall can easily be obtained to drive a ram, and the water thus be compelled to elevate itself to a higher level, either for irrigation or stock watering. Situations of this kind will of course be most abundant in our hilly regions, and many times water now running to waste because of the expense and supervision required by pumping apparatus, could be made useful by the little giant of a ram, which continues its work, night and day, year in and year out, throbbing and gushing alone, and only requiring that it be perfectly constructed and skillfully set up to ensure a long period of service. We know there have been cases of disappointment with hydraulic rams, but the trouble has arisen from defective mechanism or wrong adjustment, for the principle of the ram is one of the oldest in hydraulics, and the success of the application to the device called a ram is well affirmed by recorded experience. One case is reported of a ram set up in Durham, Conn., in 1847, which had been in constant use up to 1874, during which time not five dollars had been expended for repairs. The water was delivered 85 feet above the ram, through 825 feet of half-inch pipe, the drive being 1 1/4 inches in diameter and 40 feet long. The ram at Girard College, examined and reported upon by a committee of the Franklin Institute, gave a useful effect equal to 0.71. The drive pipe was 2 1/2 inches in diameter, 160 feet long, eight of fall, 14 feet. The discharge pipe was 1 inch in diameter, 2,260 feet long and the height of delivery above the spring equal to 93 feet. We have ourselves noted the working of the hydraulic ram which supplies water to the New York State Lunatic Asylum, at Utica, and which delivers water under much the same conditions as that of Girard College.

The hydraulic ram is now being brought to the attention of California ranchers by W. T. Garratt, at the corner of Fremont and Natoma streets, this city. The engraving on this page shows one of the many conditions to which a ram may be used to advantage. Of course an infinite modification of surroundings is admissible, the only condition being the supply of water at a little elevation, from which a fall may be had to the ram. A sharp fall like that shown in the engraving is not necessary, for in one of the cases cited above, the drive pipe is 160 feet long and the height of the fall only 14 feet, and yet the water is forced nearly 100 feet above its source through nearly half a mile of pipe. Thus it appears that almost any modification of conditions may be met, if the ram is well made and well set up. In Mr. Garratt's catalogue, just issued, are tables relating to the efficiency or percentage of duty due to the proportion of height of discharge to fall and other matters, which should be consulted by all interested. We quote from the catalogue a paragraph which will enable any person to make the calculation as to what fall will be sufficient to apply to the ram to raise a sufficient supply of water to his premises. In conveying it an ordinary distance of 50 or 60 rods it may be safely calculated that about one-seventh part of the water can be raised and discharged at an elevation above the ram, five times as high as the fall which is applied to the ram, or one-fourteenth part can be raised and discharged, say ten times as high as the fall applied; and so in proportion as the fall or rise is varied. Thus if the same be

placed under a head or fall of five feet, of every seven gallons drawn from the spring one may be raised 25 feet, or half a gallon 50 feet. Or with 10 feet fall applied to the machine, of every 14 gallons drawn from the source one gallon may be raised to the height of 100 feet above the machine, and so in like proportion as the fall or rise is increased or diminished.

Of course it will be understood that the ram, as seen by the above calculation, expends the greater part of the water to raise the less, and this waste water can be utilized on the lower levels while the ram is forcing a supply to the regions above the source. The great value in the device must be its ceaseless operation without attention. To preserve it from injury it may be inclosed in a strong box of planks, with provision for the escape of the waste water, and it will then pursue its course as long as the supply holds good in the spring or stream.

NORTHEASTERN SAN JOAQUIN.—We had a call on Tuesday from J. W. Johnson, of Belota, who gave us quite favorable reports from his region lying in the northeastern part of San

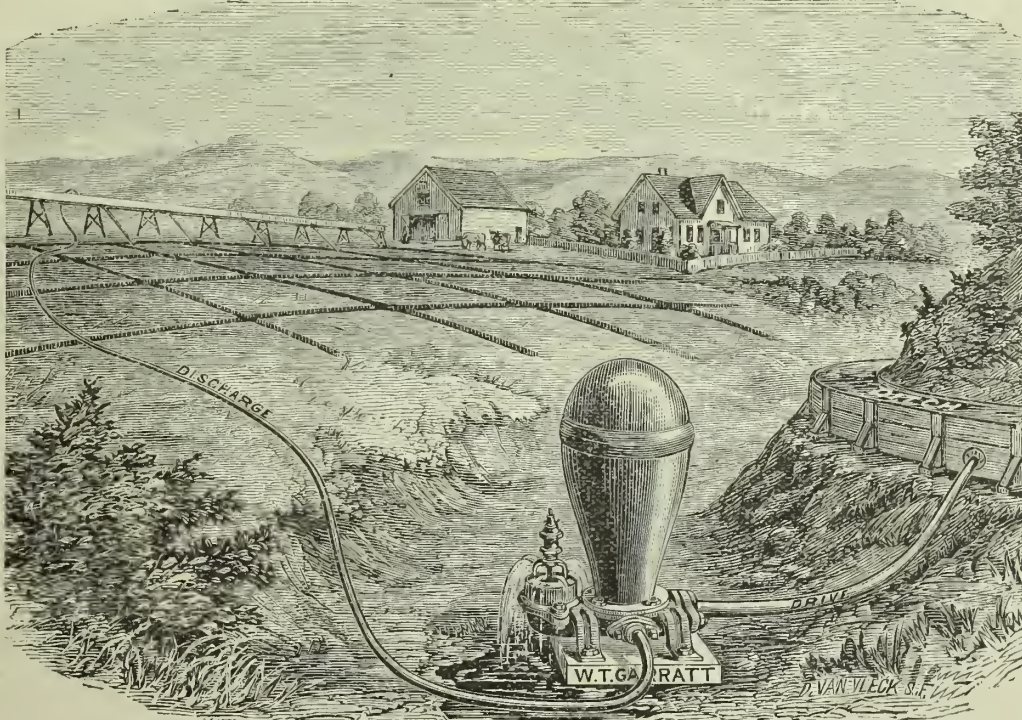
JOHN IN WYOMING.—Another page contains some facts about the growth of the wool interest in Wyoming Territory, and mentions the fact that large numbers of California sheep are being taken thither to populate the new pastures. We spoke of this to Mr. J. W. Johnson, of San Joaquin county, who is largely interested in wool growing, and he said he had had his eye on the magnificent summer pasturage of Wyoming, but he had an impression, heightened by the testimony of some stock men, with whom he talked, while passing through the Territory, that the winters were too severe to herd sheep without expensive shelter. Perhaps our Cheyenne contemporary will tell us something about the winters, and what is done with the sheep, if they be as severe as reported. It is growing plainer that the great wool interest of this State, as it formerly existed, is passing away. Sheep are going to the new lands of Washington Territory as well as to Wyoming. Hereafter, our wool growing will become more and more an adjunct to other styles of husbandry. Some will keep more, some less; and what are called few are only few, as compared with the immense

## A Proposed State Horticultural Society.

There is an idea gaining ground among horticultural circles in this State, that a State society, organized in the interest and for the advancement of horticulture in all its branches, would be an organization of much value to all engaged in this specialty of agricultural work. The idea is one which meets our hearty approval. There can be no doubt that such a society, if it should gain a wide circle of membership, and be disinterestedly conducted and officered, would exert an influence of much value toward the enlightenment of all, and toward the correction of errors and abuses which now exist both in the orchard and the market. It is fitting that the proposition for organization should be brought forward at once, and it is to be hoped that adherence will be expressed by horticulturists in all parts of the State, so that the society may be, in a true sense, representative of our various horticultural resources, and may thus be enabled to draw out the truth in fact and experience, under the divers conditions which prevail. It would be well if the organization of a State society should be supplemented by fruit clubs in each fruit-growing region, so that questions having local concern could be viewed in the light of local experience, and the results forwarded to the State society for general information. But this is an after consideration, and if the State organization should attain such a vigor and usefulness as seem within its reach, its work could be diversified and extended so as to drain every spring of valuable experience and information. In a State where environment is so potent that the same variety of fruit from different parts exhibits traits which almost obscure its identity; where nomenclature is so confused that one can hardly be sure what variety is signified by any name; where the successful methods and practices in one region would court failure in another, and where there is such an absolute lack of knowledge about a season's prospects away from home that every grower is wholly in the dark until the market tells the story too late for cheer or warning—all these conditions affecting pomology, itself but a branch of horticulture, will give an idea of the field for thoughtful, systematic work which lies open to a society in the horticultural interest. Why should our producers go about single-handed in their efforts to secure the best varieties of growth for vineyard, orchard and garden, devoting time and money, as many of them are doing, in efforts to secure the best of all climates to enrich our resources, when, by uniting experience and information, each one could enjoy the result of a hundred efforts at one hundredth part of the cost? Why should a resident of any region be almost as ignorant of the forms and qualities of fruit in another county as he is of that of a distant State? Evidently there is need of general comparison of experiences by meetings and discussions; evidently there is need of comparison of results, such as only can be gained by the object lessons of a comprehensive exhibition of products. There is room and a demand in California for the most vigorous horticultural society in the United States. No where else is there so much material awaiting the gathering; no where else are there so many men of culture and practical experience in horticultural matters, so well fitted for the harvest of facts and ideas.

We trust the proposed society will go forward, and that those who have the project in hand will meet with the co-operation of all to whom the proposition commends itself. Let those who are thus minded send their names to be placed to a call for a meeting, and when a date and place for meeting are fixed, let there be a gathering worthy of the State. If this much is assured at first, the future of the society will take care of itself.

DURING July the total coinage at the United States mints was \$4,681,610.



HYDRAULIC RAM, ELEVATING WATER FOR IRRIGATION AND STOCK.

JOAQUIN county, between the Calaveras and Mokelumne rivers. Crops, which are chiefly wheat and barley, are better this year than last, as last year the rainfall was excessive. Of 3,000 acres of Mr. Johnson's land cultivated by 12 tenants, the average of wheat on summer-fallow will be about 20 bushels per acre; late sown 12 bushels. The method which most wheat growers in the neighborhood adopt is to plow and seed the stubble dry; this they do not regard as sure as summer-fallow, but surer than waiting for the rains. Mr. Johnson's neighbors, Messrs. Bailey & Carpenter, Mr. Wilkins and Mr. Peter Linn, all have good wheat crops this year. The wheat sown is mostly white Chile and white Australian, but some Propo has been introduced. The latter was rusted somewhat by the May rain, but it was thought it was because the Propo was nearer maturity. Mr. Johnson is still sinking his artesian well patiently, and promises to report results as soon as any are attained.

CALIFORNIA VINES IN FLORIDA.—We see the following item in the correspondence of the Florida Dispatch: "My grapevines from California are doing splendidly; some grafted on the bullace have grown four feet, and will bear next year."

DURING July the internal revenue receipts amounted to \$9,000,000; custom receipts about \$13,000,000.

flocks which once they owned. For example, Mr. Johnson will keep about 6,000 just to clean up the stubble, etc. This measure of a "few sheep" on a farm will strike our Eastern readers very much as the Dutchman's idea of a "little saurkraut." Hans is reported to have said he would not make much saurkraut this year; only 15 barrels in case of sickness. Mr. Johnson believes the days of wool growing, in this State, are over. He will only keep 6,000 to run around his barnyard—so to speak.

TULE LAND OWNERS.—One of our readers who is interested in tule lands, asked us the other day what was done at a meeting of tule-land owners, which was proposed at Stockton some time since. We remember the call for a meeting, but if it was held the report of it escaped our notice. Perhaps our Stockton exchanges can inform us whether a society was organized, or in what way the meeting resulted. There are certainly problems in tule farming which require united skill and wisdom to solve them, and there are interests which could be advanced by united effort. Just now we imagine the other potato districts of the State think "them river follers" have done enough already, as they have broken the potato market all to pieces by their shipments of cheap tubers.

AMERICAN capitalists have offered to build a navy yard at Sebastopol, Russia.





## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

## Mineral Springs of Lake County.—No. 1.

EDITORS PRESS:—According to promise I proceeded to give you and your many readers a sketch of one of the numerous medicinal springs with which Lake County abounds. In some future communications I may speak of others, but in this I shall confine myself to Anderson's, owned and conducted by the Anderson family, consisting of the venerable mother, now verging on fourscore years, her son-in-law and four daughters. The place is new, having been located only five years since by Dr. A. Anderson, of Virginia City, and the present owners. The place is as yet but partially developed, but that in the near future it will be one of the most noted and valued resorts for the afflicted, no one who will take the pains to examine can for a moment doubt. And surely, for the soul-sick, weary brain worker, or the city-imprisoned, overworked business drudge, earth holds no quieter, lovelier, or more nerve-renewing nook. There are at least 15 springs, all of different mineral and medicinal properties. The favorite drinking water of all classes is the blue sulphur spring. The water looks, smells, and tastes to me precisely as the water of the far-famed Blue Lick springs in Kentucky, and I have no doubt the medicinal properties are the same. This water, when used in conjunction with the natural steam baths, is insured by the proprietors to give relief in all cases of dropsy and kindred diseases.

Next in importance are the steam baths, prepared in nature's own laboratory. As a remedy for paralysis, sciatica, neuralgia and rheumatism, they cannot be overrated, and the inhaling of the medicated vapor must be of unknown value to lungs affected by asthma, bronchitis, or sore throat of any kind. You see there is nothing artificial about the whole thing; you just enter a hole in the mountain, and though at first the intense darkness, the heat, the villainous odors, the horrid noises, all bespeaking a nearness to Hades, anything but comfortable to the average sinner. Yet a few minutes dispels the fear, and to any in pain there comes such a relief that we forget all else. The nearly boiling stuff, I can hardly call it water, which issues from beneath this bath, is conveyed in wooden pipes to the bath-rooms of the hotel. These pipes are made by boring pitch-pine logs. The doctor found the medicinal qualities much improved by mixing with those of the pine, which are of themselves a specific in many diseases.

The white sulphur water is used in connection with the iron near by in cases of general debility and nervous prostration. The epsom salts spring is a combination of druggist's stuff, highly recommended both by the doctor and those who have used it, for dyspepsia, constipation of the bowels, liver complaints, and so on. Folks who who fancy or need them can have them for all of me. Ugh! the nauseous snuff! I am glad I am not sick, so let us trot off to the sour spring, and then go to the croquet ground and have a game. See that cabin perched on the hill yonder! That is going to be fitted up to have little surprise parties in, just near enough for the sick folks to hear the music, and too far off for them to be disturbed by the merry maker's jollity. It is pretty hard climbing to reach this same old sour spring, but no matter, we are more than repaid for our labor. Did you ever in all your experience see more truly magnificent scenery? The elevation of the mountains, the depth of the canyons, the size and variety of the trees, the multiplicity of the shrubs, bushes, ferns, vines and wild flowers. See, in one direction, Cobb mountain grandly wooded to the very top. In another direction, far above all others in height, rises Mt. St. Helena. Here the artist should come to study his art; here he would find colors the most brilliant, varied and blended in a way that even his mimic art fails to produce or copy.

## A Lecture to Spring Visitors.

Can you tell me why it is that of the thousands who come to the country, and especially to the springs every year, the large majority come not to impart or gain knowledge, not to entertain or be entertained, not to rest, not to comfort or be comforted, not to set the babies free and let them have a real good time, whether that means dabbling in the water, rolling in the dirt, clambering over hill, dale and rock; no, no, not a bit of it. What do they come for? As far as I can see they come to do a whole year's growling, grumbling and fault-finding. The roughness of the road, the hardships of the trip, the uncouthness of the people, the heat of the weather, the abundance of the dust, but above and beyond all the horribility—I believe that expresses it, of the cooking in general, and the place they stop at in particular. Now, surely, no right thinking intelligent man or woman ever slept to dream that a country hotel was a home. Moreover, I assure these people they get the very best the country affords, and further, just because of this everlasting growl, 'tis almost impossible to get help to fix things up any better. Let us rather, as Topsy observes in "Uncle Tom's Cabin," "Think on our nancies! If they find it so hard to live a few days on the best—law! best their lot—in comparison to those whose life is spent with the worst."

These hotels are or should be a kind of school,

always open where the meeting of well-bred, well-to-do, well-educated people, and an interchange of thoughts, opinions and experiences on the leading topics of the day, would give birth to enlarged ideas, higher intellectual and literary movements. Cultivate friendship; do away with sectionalism; make us ambitious of excelling in some art, science or accomplishment, so as to enable us to take an honorable or a pleasing part in them. In this manner our time would not be wasted, and what a store of useful and pleasant memories would we not take back with us.

Lower Lake, Cal.

## From Sacramento to Davisville.

EDITORS PRESS:—One sultry July afternoon we crossed the sleepy, yellow Sacramento, and rode westward, toward the quiet town of Davisville, 14 miles distant. First, there were, on the very borders of the lazy river, rich farms, golden wheat, sun-burnt harvesters, dusty threshers, hurrying teams, and the strange, fervid glow of our California summer. Then there came fields of alfalfa and green pastures near the high levee, and the delicate hue of emerald islands of willow, with but one or two houses in sight, and the straight black line of the Davisville railroad piercing willow clump and wastes of tule beyond, and melting at last into the faint, misty haze, which almost hid the rounded peaks of the Coast range. By-and-by the road branched, one extending northwest to Woodland, and another leading direct to Davisville. A ridiculously small cabin, with an absurdly large padlock on the door, stood loftily on the top of a mound of sediment between the two roads; boats in various stages of decay, lay quietly on a long sand bar which ran out into the river; a knotted cottonwood bent over the cabin, and a wild white morning glory had twined about a broken oar, and hid the cobwebbed window. A little further west, about the hummock of sand, were long lines of potatoes, and straw-hatted boys following in the lines of the diggers, and picking them up with the air of an all-day job.

## Westward Again.

After crossing low, sandy marshes, impassable in winter, and hard traveling at the best of times, we pass the low brown toll-house, not blest with very fine water, it being decidedly brackish, and as far as possible removed from the ice-cold streams and springs of the higher Sierras, where we were not many weeks ago. We cross miles of marsh land next, long expanses of grass-green tule, wastes of white sand deposited by the river in times of flood, and narrow slough channels of monotonous serenity. There is, at least, five miles of this sort of thing, and the afternoon wanes perceptibly. The great white herons balance themselves unsteadily and rise with circular sweeps of their awkward wings, or, as they alight, settle well back in the mud to keep from tumbling on their very prominent noses. Some of the sloughs are full of lively little fish, splashing in and out as if they were of amphibian natures, and all of the tule is well populated with valiant and musical mosquitoes.

At last we begin to reach dry land, at first used mainly for pastures, but gradually improving in quality towards Davisville. It is not thickly peopled for a space, and, in fact, about the only signs of former occupancy by man are, for a time, old fences, moss covered and decayed, old barns and cabins, long ago deserted, and a windmill which might have been a '49er, and although once framed of massive timbers, was too far gone to make climbing a safe experiment. It is not long, however, before the far-off spires of tree-hid Davisville show faintly against the sunset's gold; and we rode past wheat fields already harvested, and others where the work of the thrasher was in full blast. There seems a growing tendency to save the straw, and this is a move in the right direction.

## Davisville

Itself is a town of quiet and not speculative habits. There is a considerable area of country which finds its outlet here, and it has railroad communication with Woodland, besides being on the main line to Martinez. There is a large amount of fruit shipped from this point. Mr. Geo. Briggs, a well-known pioneer fruit grower, owns the largest vineyard of raisin grapes in the State, and has a fine orchard also. He has a dry-house for use when the weather is too damp for outdoor drying, and when his vineyard is in full bearing it may possibly produce 100,000 boxes of 20 pounds each. There can be little doubt that we are going to have plenty of raisins to supply our home demand, within a few years at least. Mr. J. B. Saul, who has charge of the Davisville Fruit Association, and who is a brother of the famous nurseryman, John Saul, of Washington, shows us an orchard which is beginning to yield some returns and shows the value of choosing a fine location and good soil. Mr. John Ellis, now of the University gardens, had charge here once, and Mr. W. R. Smith, of Newcastle, was his successor. Mr. Smith has now a very pleasing little mountain fruit ranch.

The grain crops in this vicinity are badly spotted, there being a good deal of rust this year. Examined under a microscope the fine particles of rust look like flat scales semitransparent and showing the conglomerated cells either in cluster or in rings. It is a most interesting study, and assists us in understanding the wonderful rapidity with which rust increases.

C. H. SHINN.

## Santa Cruz Mountains.

EDITORS PRESS:—Perhaps there is no region of country within the same distance from San Francisco more worthy the attention of those seeking pleasant and healthy homes than that portion of the Santa Cruz mountains through which the South Pacific Coast railroad is being constructed. Last week I spent two days in the summit region, embracing that portion of the country between Patchen, in Santa Clara county, and the Hotel de Redwood, in Santa Cruz county, it being through the dividing ridge between these two points that the long tunnel is being made. The road is completed and running two trains daily to "Wrights," a wild picturesque station in the valley of the Los Gatos creek and near to the north end of the tunnel.

Passengers for the coast here take stage over the Morrell stage road to the summit, thence by the old Soquel stage road via Hotel de Redwood to Santa Cruz. There are several tunnels on this road within a few miles, all finished I believe except this long one, of over a mile in length, which is well under way, and in a few months the road will be open from San Francisco to Santa Cruz; thus opening to easy access one of the most delightful fruit regions of the State, and overcoming the great difficulty the pioneer fruit growers of this neighborhood have had to contend with in getting their products to market.

The places I visited are grouped along on both sides of the summit road, over the tunnel and in the new settlement on the Miller tract, about two miles further south. At Mr. D. C. Feebey's well-known place near Patchen, I found his large vineyard looking well, giving promise of a heavy crop this fall. Mr. J. M. Schultzer's ranch on the summit will always attract the attention of tourists and campers as long as those grand old redwoods are permitted to stand in such solemn family groups around the big lagoon. Mr. Volney Averill, joining him on the south, has one of the finest young orchards on the mountain. His prune trees, near the road, are beauties. Everything indicated thorough work as far as I could see. Mr. E. C. Ellis' orchard near by, which I failed to see, is said to be equally fine.

Passing Mr. Loomis' new improvement, and several other nice places, I came to the fruit farm of Mr. H. C. Morrell. I found him busily engaged in shipping wine, and took but a short ride through his orchard and large vineyard. His young orchard has greatly improved in growth since I saw it last, about two years ago. No better place in the mountains to raise fine fruit and grapes than this. Making a short detour from the road to the left, through densely shaded woods, I emerged into the sunlight again at the Sears place, formerly belonging to Mr. Burrill, the pioneer fruit grower of this ridge. Just across the road from this is the pretty mountain home of Mr. J. B. Burrell, surrounded with beautiful trees and vines. Further up the road, from a commanding point, the fine country seat of Mr. J. F. Wright, with its beautiful surroundings, makes rather an imposing appearance in this rural place.

Still farther up, on beautiful rolling ground, is Mr. S. W. Reed's new place—his "mountain home"—for the accommodation of summer and winter boarders; and a more desirable retreat for those seeking health and rest could hardly be desired, and the views in every direction are simply grand. In front, the ocean view, over vast rolling forests of dark redwoods; to the right, down the wild picturesque forest-clad canyon of the Los Gatos, through which the railroad here approaches the tunnel; in the back ground and around to the left a high mountain ridge, from which the dark form of Loma Prieta looms up, his outlines clear cut against the blue sky. From Mr. Reed's to Wright's station, at the mouth of the tunnel, is one mile and a half. A "mountain home" retreat in such a lovely place, so easy of access, in the hands of such pleasant, cultivated people must prove a success.

The Miller tract consists of 500 or 600 acres of highly diversified land in Highland precinct, Santa Cruz county; and high it is, even from where the Soquel road crosses the foot of this ridge, but the Judge has constructed such an admirable road you can trot up round among rolling hills and alternate groves of beautiful trees and sunny slopes, catching new and better views of the country below, at every turn, till you reach the old farm-house and barn of the original owners. Here I enjoyed the kind hospitalities of the proprietor and his estimable family. Judge Anson S. Miller is a gentleman of high culture and many attainments in general learning and the legal profession. After many years of success at the bar and bench, while yet hale and unbent by age or care, he has chosen this beautiful mountain region as the place of his retirement. Wishing to encourage the building up of a pleasant neighborhood on these heights, the Judge has disposed of quite a number of such tracts of land as customers wished for permanent homes, so that already a goodly number of improvements have been made; and judging from those I had the pleasure of meeting, a pleasant and cultivated class of people have been attracted to this favored locality, including several retired gentlemen both of the legal and clerical professions. Among those whose places I visited were Profs. H. B. Norton and

C. H. Allen, of the State Normal School. These gentlemen are making their mountain homes close together on good land, with beautiful surroundings and grand outlooks upon the Pacific ocean.

In the allotted time I could not visit all I wished. I found Mr. Slaughter in a very pretty place, well fixed for keeping boarders, and, judging from the people I saw over the grounds and about their tents, his retreat must be well patronized. Grand ocean views they can all have from these heights, each one claiming, of course, their view to be the best. In fact, as I drove up and up along the winding road, I thought every last view I saw the best, till at last I got up to the summit, and could get no higher. Here is Mr. William Keast's place; the views from this point I voted the grandest of them all. We could stand under the spreading oaks in his front yard and see 100 miles of sea coast, extending from near Pescadero, in the north, to Point Pinos, the extreme southern limit of the Bay of Monterey, with the towns of Monterey, Castroville, Aptos, Soquel, and Santa Cruz plainly in view. Then, from his back yard, through the gap of the Los Gatos creek range, we could see a portion of the Santa Clara valley, and, in a clear day, the Bay of San Francisco may be seen. The elevation here is 2,500 feet above the sea.

But the people who have sought these heights are not so ethereal in their being as to live on fine views and fresh mountain air alone. In common with other people they have grosser wants that must be supplied. Bread and butter is an open question, even up here. And, although nature has been lavish in her gifts of the beautiful here, she has been no less liberal in all the elements of material prosperity; with rich lands, adapted to producing all the fruits, grains, and vegetables of the State in great perfection, and now being opened up by the railroad, what can hinder this from becoming one of the most desirable places to live on all the coast?

It is generally known that the rainfall here is always sufficient to produce good crops. In Judge Miller's field I saw the best corn growing that I have seen this season, without irrigation. The Judge also showed me sample ears of last year's corn that would do credit to the Missouri bottom. Altogether the best improvements in the way of house building is Judge Miller's large, fine house, in a slightly place, overlooking the coast and country between; when completed, it will present a fine and conspicuous appearance from the road and country below.

But one of the finest rural retreats for those not wishing to go up high in the mountains, is Glen Brook Farm—formerly Blackberry Farm—belonging to Mr. G. J. Byrne, only a few miles west of Mountain View, in the lower foothills. The place has been thoroughly fitted up as a place of summer entertainment. The grand forest of live-oak trees, extending over much of the grounds, is one of its attractive features.

G. W. M.

Santa Clara, Cal., July 30th, 1879.

## FLORICULTURE.

## A New Asiatic Lily.

W. Falkener of the Botanic Garden, Cambridge, Massachusetts, writes to the *Country Gentleman* and account of *Eremurus robustus*. He says: This is one of the noblest and handsomest members of the lily family, and is a native of Turkestan. It bloomed here last year, for the first time (so far as I know) on the American continent. I received the bulb from Leitch in the fall of 1877, and treated it as a "cool" pot plant till the spring of 1878, when I planted it in its present place in the out-door rockery. There it grew robustly, bore a scape six feet high, and was in blossom during the first fortnight in June. It also ripened a considerable quantity of seeds. Inspired by the possession of plenty of seed, and the belief that the *Eremurus* ought to be hardy, coming as it does from the home of tulips and several other hardy plants, I ventured to leave it out over winter, and fortunately succeeded. This spring it came up with a vastly invigorated constitution and appearance, and is now (second week in June) in the glory of full bloom. It has a large tuft of many stout, linear, radical leaves three feet long, by two and one-half to three inches wide, and a scape eight and one-half feet high, terminating in a dense raceme three and one-half feet long, containing over 400 pale pink flowers, of which from 120 to 140 are in bloom at one time. Each blossom is about one and three-fourths inches across. It lasts in beauty two weeks or over, and presents such a striking appearance from a distance, that people passing along the street, and who seemingly care no more about garden plants than they do about the stones on the road, hitch their teams and come in to see what sort of plant it is.

*Eremurus Turkestanicus*.—This is an equally rare species from the same habitat as *E. robustus*, and growing near by it, and under the same conditions has also proved as hardy and thrifty, though by no means such a strong growing or ornamental plant. It starts earlier into growth, and is done blooming by the time *E. robustus* begins. Its blossoms are dark-red and brown, on a 16-inch raceme, terminating a scape four feet high, and now it is bearing some seed-vessels. It bloomed this spring for the first time here.



## POULTRY YARD.

## Diseased Fowls.

EDITORS PRESS:—Can you, or any of your readers, tell me what is the matter with my hens? They seem to have a diarrhoea, and yellow stuff keeps running from them. Their combs turn dark, and they die. I have opened some of them and their liver was three or four times as large as it should be, and of a light color and full of hard, white spots the size of large shot. This morning my Brown Leghorn rooster took sick. He could not see, and the blood had settled in the lower part of his body. He was as red as blood round his body from his feet back. I cut his comb, but the blood did not run only a little. I do not know whether he will live or not.—CONSTANT READER, San Jose.

The fowls have "enteritis," cause, disease and remedy have already been published in the PRESS some time ago and may be found on page 7 of Mr. Eyre's pamphlet as follows:

"The disease most common to this coast is one which I call 'enteritis,' the symptoms of which are diarrhoea, and the fowl mopes and stands with its head drawn in, often a thin, pinched look in the face; the droppings become green, and sometimes of the color and consistency of yellow paint. Give the fowl an ounce of strong alum water twice every day, and feed soft, stimulating food, and confine in a dry, warm place. The proportions I use are a pound of alum to a gallon of water. If fowls are confined in yards, the first symptoms of the disease may be noticed in the droppings, when alum water may be mixed with their soft food. But 'an ounce of prevention' in this matter is worth many pounds of cure, and the disease may be almost entirely prevented. My method is to keep constantly on hand the following mixture: One pound sulphate of iron (green coppers or green vitriol, to be had in any country store at 12 or 15 cents a pound), and one-fourth of an ounce of sulphuric acid, dissolved in four gallons of water. Each morning add to the soft food for 100 fowls, one-half pint of this solution. Once a week, when boiling meat for my poultry, I add one-half pint of alum to the 'soup,' in which I mix up bran, making a feed for about 400 fowls. This disease results from too much sameness in the food, an excess of fat-producing food, lack of green food, fermented or unwholesome grain, stagnant water, too close confinement, or some neglect which deteriorates the system and produces an abnormal condition of the liver. If whole flocks be attacked, seek the cause, alter the food, clean the houses, and disinfect them; change the location, use the preventive given above, boil meat and add alum and pepper to the soup, in which mix bran and shorts, and feed hot."

As to the Brown Leghorn cock, Col. Eyre tells us that the symptoms are not described so as to enable him to diagnosis the disease. He could not tell what is the matter without seeing the bird. Perhaps he was kicked by a horse or other animal, or may have been poisoned in some way.

## THE DAIRY.

## Dairy Notes in Los Angeles Co.

We take from the *Southern California Horticulturist* the following: It is not generally known that the Hon. J. S. Slauson, the well-known President of the Los Angeles County Bank, has had for years in successful operation one of the best butter dairies in southern California. The dairy is on his ranch on the San Gabriel river, about three miles east of Compton and about ten miles from Los Angeles city. The ranch is one of the most fertile in the State, and produces alfalfa and corn after the manner of the renowned Santa Ana lands.

Of course the proprietor, as president of the bank, in daily attendance in discharge of his official duties, gives no personal attention to the dairy. But what with a judicious selection of managers, extremely productive land, artesian water with the perennial butter making temperature of 60° Fah., thoroughbred Jersey cattle, and a fair average market, the dairy has paid a satisfactory average profit right on through the hard times including the drouth year of 1877.

Judge Slauson some years ago imported a thoroughbred cow at an expense of \$500. He also bought one of the finest Jersey bulls in the State. These have been the means of creating for the proprietor one of the handsomest herds of dairy cows in the State. And beyond this have infused superior butter qualities by way of crosses into the herds of the surrounding community.

## A "Free-Martin" Breeding.

By the way it has been said that twin calves do not make good breeders. But the \$500 Jersey cow referred to, bore twin male calves, and one of them is now the property of Gen. Shields, of Florence, and is not only one of the handsomest Jerseys in the State, but is a No. 1 breeder. The other is said to be equally as good in all respects. It is, however, also maintained, and with the greater weight of authority, that if the twins are either both males or both females, they are full as apt to be perfect in all respects as single births; but otherwise if the twins differ in sex.

The rapidity with which a herd of dairy cows may in California be bred up to an elected point is well calculated to amaze the new comer. To illustrate the rapidity with which pedigree link follows link, a gentleman about a year ago sent some calves to be turned upon the famous Cer-

ritos evergreen natural pastures of Mr. Jotham Bixby. The owner has not seen the calves since, and still thought of them as calves. Recently he sent down for information as to how his calves were getting on. The answer came back that his calves have calves six months old. As the calves sent down are only a little more than two years old now their offspring are nearly a quarter as old as themselves.

The peach in California fruits in a year, and the calf almost as soon.

**BURR CLOVER AS A DAIRY FORAGE PLANT.**—I. C. Steele, in the *Patron*, makes the following observations: Our long season of drouth prevents the use of clover or any of the grasses in use for laying down land as is the custom where summer rains prevail, and the methods practiced in the Atlantic States are impracticable here. Summer-fallowing is practiced in the dry sections of the State with good results, especially with reploting during the summer; but it requires two seasons to get one crop, which is too slow to suit most farmers and is not practiced along the coast in the region of fogs, as it would require several plowings during the summer to keep down the weeds. It is quite probable burr clover might be used to advantage provided we had a machine that would free the seed from the pod. It will often lie in the ground in the pod through a very wet winter without sufficient moisture reaching the seed to cause it to germinate. There may be machines for cleaning burr clover seed; if so, we are not informed of the fact. Prof. Hilgard stated in an address "on forage plants," delivered before the Dairywomen's Association, in San Francisco, that he believed it the most valuable forage plant on the Pacific coast. In that opinion we fully concur, and with a machine that would free the seed from the pod without too much expense it would become a valuable acquisition to agriculture. It would be extensively used as a forage plant and to enrich the soil. We have heard it said that burr clover seed will not grow the first year, but we have no doubt it would grow whenever sown in a soil sufficiently moist to govern the other seeds if freed from the pod in which it is hermetically sealed.

**ANILINE INSTEAD OF ANNATO.**—The practice of coloring Edam cheeses with aniline dyes has now become general throughout the Dutch dairies, scarcely any other material being used for that purpose. Some fears having been expressed that danger might arise from the contingent presence of arsenic in such coloring matter, a reassuring statement has been published to the effect that the amount of arsenious acid contained in the color used for a four-pound cheese is at the outside no more than four milligrammes, and is consequently absolutely harmless to the consumer.

## ARBORICULTURE.

## American Forests.

The following are extracts from a paper on this subject in *Harper's Monthly* for August, 1879, by Geo. May Powell, chairman of the American Institute Forest Committee:

Of a desolation recorded far back of even the days of Grecian glory: "A man was famous according as he had lifted up axes on thick trees." In the days when American forests were practically limitless, our fathers were far too famous for lifting up axes on the trees. Trusting to what seemed employment, skilled laborers have made their homes where the streams appeared permanent. Then as the summers came and went, the river grew more and more feeble till the spindles were silent. Then the flood turns that stream to a demon of destruction. The cause of all this was that the sources of the river's life have been injured or destroyed by men who lifted up axes on the thick trees far up the mountain where the mill streams have their birth.

Next to production in importance, is the question of transportation as involved in navigation. Less than a quarter of the traction is needed to move a ton afloat, that is needed to move it by rail.

Many of the streams constituting Britain's inland navigation are so small as to be spoken of as "brooks" in the Parliamentary acts giving rights to companies to use them. One of these combined canal and river courses takes freight at the southwest of England at the Severn; up historic little Avon; across Wiltshire to the Thames, and down to London. All this was so improved on that in a few years the speed between steam canal boats and that of the average freight train will be materially reduced. Britain's inland transport lines, thus exceed the length of her rail lines.

Agriculture does not need sacrifice of trees, to save streams for navigation or manufactures. The identical conditions of rain or dew-fall needed by either is needed for all. Seasons seldom pass in which farmers would not have from one to three-fourths added to their yield by a more equal distribution of the rainfall. High culture proves an acre properly watered, may yield as much as seven or more treated in the usual ways.

Single trees have been burned in America in log heaps, which, cut into veneers, would sell for more net cash than the whole farm where it grew. When our forests are as well treated as those of Europe few trees will be cut except by advice of a forest engineer.

## HORTICULTURE.

## Fruits in History.

Alas! for those to whom a fruit is only a fruit; who have no midsummer day-dreams under their orchard trees, and who can read no antique poem, or taste no flavor of antiquity, in their plate of crimson drupes or ripe red strawberries.

Here is our basket of cherries. It comes to us from the soft luxurious fields of Asia. When Lucullus, at an immense sacrifice of life and treasure, had overthrown Mithridates, he took from his royal garden the beautiful cherry tree, and carried it in triumph to Rome; so that we really are the heirs of the Mithridatic War. Planted in Italy 68 years B. C., in 26 years it had been carried all over Europe, even, says Pliny, to "Britain beyond the Ocean."

England has been famous for its cherries since the days of Caesar. Shakespeare speaks often of them; and Herrick's *Hesperides* is a garden of cherries. Charles I. had 200 trees in his garden, and under them the melancholy, handsome Stuart often walked in sorrowful confidence with his faithful queen. Now they have crossed the Atlantic, and linked nearly every State of America with the orchard-lands and battle-fields of England and of Rome.

And has memory any more subtle spell than we can all find in a basket of strawberries? No wonder the Latins named them *fragaria*. How fragrant they are! They were indigenous to the wild green woods of England. Our painted Celtic ancestors found them around their wicker huts. Roman soldiers, Saxon thanes, Norman barons, prudent monks, English men and maids, in all stations and in all ages, have been familiar with this delicious berry.

Not only a red, but a white and green strawberry used to grow wild in England. The scarlet strawberry is a native of Virginia, and was brought to England in 1625. Chile gave an excellent variety to France, and Alpine Switzerland has a delicious native berry. Here is a hint which may be worth something to American cultivators who live near the sea-shore: In the Isle of Man they cover the plants in winter with sea-weed, and the result is a prodigious increase in the size of the fruit.

No fruit has so many poetic memories. It is the rose of fruits. Shakespeare frequently mentions them. Who can pass by Ely Place, in Holborn, without seeing the street converted into a garden, and the pavement into rows of strawberries?

"My Lord of Ely, when I was last in Holborn, I saw good strawberries in your garden there: I do beseech you, send for some of them,"

quote Richard III. to the bishop, in that scene of frightful calmness which precedes his burst of thunder against Hastings. But there is no poet that can overpraise them; they deserve all the good things that can be said of them. Indeed, Virgil classed them with flowers, and Ovid gives them the tender epithet of "darling fruit."

The raspberry, which to many tastes is equally fragrant and delicious, also grew wild in the English woods from the earliest times. Pliny also mentions it as growing on Mount Ida, and says, that "the flowers of the raspis being tempered with honey, are good to be laid on inflamed eyes, and also in erysipelas." Gerard who wrote in 1597, and Tusser, who wrote half a century previous, neither of them mention the white rasp, which probably came originally from Antwerp.

The gooseberry does not appear to have been known to the ancients. Gerard calls it feaberry, which name I have heard in some parts of Yorkshire, even 20 years ago. It received the name of gooseberry from being used as sauce to young or green geese. Parkinson, an old writer on fruits, says the berries "are much boiled to make sauce for fish or flesh of divers sorts;" and as a sauce for pike and mackerel, they are still in favor, being also mentioned by the French as *groseilles aux maquereaux*.

The large pale gooseberry was brought from Flanders in the same year that Henry VIII. received the title of Defender of the Faith; and even as late as the reign of Elizabeth, its leaves were eaten as a salad by those who could not afford to send to Holland for a lettuce.

"— Berries that emboss  
The bramble, black as jet,"

were well known to the Romans. Pliny tells us that the propagation of trees by layers was taught the ancients by the bramble-bush.

Some bow their vines, which buried in the plain,  
Their tops, in distant arches, rise again.—*Virgil*.

They were also well aware of the medicinal qualities possessed by blackberries in all diseases of the mouth and throat. Another wild berry which they shared in common with us was the whortleberry, or bilberry, to which both Virgil and Pliny give the name of *Vaccinium*. The Highlanders of Scotland eat them with milk as we do; but they also make of them a jelly, decidedly flavored with whisky, which we do not. The Duke of Athol, about a century ago, discovered a pure white variety growing in the woods between his two seats of Dunkeld and Blair.

A red whortleberry, from which a fine dye is made, I have found abundantly on the broomy hills of Westmoreland, and the white whortleberry I have gathered both in Lancashire and Shetland. As in neither place it seemed re-

markable, I am inclined to doubt the Duke of Athol's claim to a new variety; it is probable that the white whortleberry has been indigenous to certain localities from time immemorial. That it is a berry inclined to vary, is evident from the fact that in rather more than 20 years America sent to England no less than 15 distinct species.

Cranberries were found all over the world in ferny or marshy places. England which has a fine small variety, imports them largely from America, Russia, and New Holland. She has also, of late years, cultivated a variety called snowberry, which is pure white, and was brought from Nova Scotia, though it is also stated to be found in the swamps of Cyprus, her newly-acquired territory. This cranberry has a perfumed taste, like *eau-de-noyau* or bitter almonds.

The mulberry is the fruit of a really handsome tree—one, indeed, which has the reputation of being the wisest of all trees, because it does not bud until the cold is fully past. Pliny says if you want a sign that the winter is over, when you see the mulberry tree put out leaves, fear no more frost nor hard weather. Guillelm, also, says "that the mulberry in heraldry is an hieroglyphic of wisdom, whose property is to speak and to do all things in opportune season." This fruit is mentioned several times in the Bible, and Ovid celebrates it in his famous story of Pyramus and Thisbe:—

"The cherries, stained with blood, began to show  
A dark complexion, and forgot their snow;  
While, fattened with a flowing gore, the root  
Was doomed forever to a purple fruit."

The mulberry was introduced into Europe from Persia, and was more esteemed by the Romans than any other fruit. It did not reach England until 1548, where the trees then planted at Sion House still live. A few years later Tusser speaks of both white and black mulberries as growing in England. James I. greatly favored this tree, and during his reign great numbers of it were planted. One of these old mulberry gardens, the rendezvous of fashion during the Commonwealth, is now Arlington street.

Every one knows that the "mulberry leaf, in time, becomes silk," and England had at this time a dream of gigantic silk factories; but the dream was never realized. The mulberry grew and flourished; but she still imports her raw silk. Shakespeare was very fond of the mulberry, and planted a tree, which was long religiously preserved. An avaricious proprietor at length cut it down, and made it into articles which commanded a great price. Among them was an arm-chair which belonged to David Garrick, and was highly prized by him. There are immense native groves of it in Texas, and it is worthy of remark that this tree breeds no vermin, nor harbors any caterpillar except the silk-worm.

From berries we will now pass to stone-fruits. First in popular esteem is the peach, a fruit of Persia. It was taken first to Greece, and then to Italy; but it was a novelty in Rome in the first Christian century, and cost no less than five dollars of our money *each*. Wolf, the gardener of Henry VIII. brought it from Italy to England. Father Hennepin, in his voyage down the Mississippi, describes glowingly the native peach trees which he saw on its low waters; the peach tree was then indigenous to the southern portions of America, as it was to Persia. Every one has observed that the best peaches of every kind are red next the sun, and yellowish next the wall. The pulp should be yellowish, the skin thin, and the stone small.

Apricots ("seed of the sun") are an Arabic fruit. M. L. Legnier says that the inhabitants of the desert's oasis gather and dry large quantities, which they bring into Egypt for sale. Columella is the oldest Roman author who mentions it; this would make its introduction into Italy about A. D. 60. Pliny says, at its first coming it sold for a Roman denier each apricot. Thunberg describes the fruit as growing spontaneously in Japan, and Pallas says it is wild all over the tract of Caucasus; and from various sources we know that it abounds in Persia and India. It was taken to England at the same time as the peach, by Wolf.

Very nearly akin to peach and apricot is the nectarine, which derived its name from the uccatar of the gods.

"Blushing like youthful cheeks, the nectarine, full  
Of lavish juice,"

has always been a great favorite. There have been many instances of nectarines growing on peach trees, without either budding or grafting. Thomson thus beautifully distinguishes them:

"As I steal along the sunny wall,  
Where Autumn basks with fruit empurpled deed,  
Presents the downy peach, the shining plum,  
The ruddy, fragrant nectarine."

"The shining plum" is so numerous in its varieties that even the names would be tedious. Greece added to her plums those of Syria, Egypt and Persia; and the Romans not only possessed themselves of the plums of all the known world, but employed their ingenuity in producing additional varieties. The Danson takes its name from Damascus, from whence it was brought B. C. 114. The Orleans, or Reine Claude, from Queen Claude, of France, who introduced it into that country. In England and America this fine plum is called the Greengage, from the family of Gage, of Hengrave hall, who procured it from the monastery of Chartreuse, at Paris, and planted it in England. But as early as 1597 Gerard says he had "three-score

[CONTINUED ON PAGE 92.]



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### The State Agricultural Society and the Grange.

**EDITORS PRESS:**—The following circular letter has been sent to all the Granges in the State, but it is a matter of general interest to all farmers, and indeed, to all classes. If you will copy the same, or call attention to the matter in such manner as suits you, you will confer a favor on the Society:

**Brother and Sister Grangers:**—We desire to call your attention to the fact that the State Agricultural Society was established for the encouragement and support of agriculture, and the practical education and elevation of all those engaged in that calling or occupation. Its main objects and purposes are therefore the same as those of the Grange. Grangers are more interested in its proper management and success than any other class of citizens. The Society, for the first time since its organization, is now practically in the hands of members of our Order—the President and Secretary, and four out of the nine directors being Patrons. It is under these circumstances we appeal to every Granger, male and female, in the State, to come to the aid of the State Agricultural Society: give it your support, and secure its proper management and benefits. Attend its fairs and bring with you some of the products of your farms, your orchards and your vineyards, for exhibition, for competition and comparison. Let us make the State fairs hereafter the occasion of a general annual harvest feast and practical thanksgiving, as well as a school for practical advancement and improvement.

This year, for instance, the hopes of many a farmer have been blasted and his year's profits destroyed by the interposition of that dreaded wheat enemy called rust. It is believed that by a proper investigation of the causes and habits of this destructive fungus, a partial, if not a complete remedy may be found. What better occasion or opportunity can be had, than is offered at the annual fairs of the State? Let those more directly interested in this question bring to the fair samples of wheat of all the different varieties raised in the State, both samples of the grain that has escaped the rust, and samples of such as have been affected by it in all the different degrees, to be shown together with brief statements of the soil, exposure, mode of cultivation, and any other facts connected with the history of each sample. A hundred samples (a thousand would be better), should be shown at our next fair, and they would make for the grain farmers of the State one of the most interesting and profitable exhibitions that could be made, and for scientists, a valuable study. Let this investigation be followed up year after year, and it can hardly be possible but that great benefits would follow.

So with fruits—the worms are becoming very prevalent, and this subject could and should be investigated in a similar manner. So with rot and other diseases of the potato. So with the phylloxera on the vine; and worms that destroy the corn after the ears are formed, and many other matters of vital and direct interest to farmers, and indirect interest to all other classes. The fairs should be places for study as well as amusement and recreation. The failures as well as successes in every department of cultivation should be shown and studied. But we have said enough to indicate our ideas, and will leave the matter with you, believing that the importance of the subject will prompt thought and energetic action.

H. M. LARCE, President.  
I. N. HOAG, Secretary.

Sacramento, Cal., July 28th.

#### The Welcome to Martinez.

Our Sacramento correspondence last week, it was stated that a Grangers' Convention would be held with Alhambra Grange at Martinez, on August 22d and 23d, to discuss the State fair and kindred subjects. W. T. Dr. Strentzel writes to the *Patron* the following welcome to the proposed meeting: "Your proposal to convene delegates from adjoining counties in Grange meeting at Martinez, on the 22d and 23d of August, was brought before the Alhambra Grange, and most favorably received. Resolutions passed to that effect, and a reception committee appointed. Our Grange hall is of ample space, our harvest room is not sumptuously furnished, but it can accommodate many hundreds. We have plenty of bread, meat and 'taters,' some of the luxuries of ripening fruits, and a 'drop,' if needed, for the stomach's sake; so come every one and all, and be assured of a cordial reception."

#### Appeal of the Committee.

The following appeal has been issued to the members of the subordinate Granges by the committee whose appointment was noted in our Sacramento correspondence last week: We, the undersigned, have been appointed a committee by Sacramento Grange, No. 12, to communicate with all the Granges in the State, and to urge upon its individual members the importance of contributing something towards making up a grand exhibition at our coming State fair. Of the eleven officers of the Board, six of them are active members of the Grange, and we can truly

say that the future of the Society never looked better than it does to-day. We therefore, as Patrons of Husbandry, earnestly ask your co-operation with our brother Directors to assist them in every possible way in your power, and with your contributions, to make this the most successful exhibition ever displayed on the Pacific coast. In place of having a mere sample of fruits, vegetables and cereals, let us have a bountiful supply of all productions of the soil, and a generous representation from the animal kingdom. Instead of exhibiting half a dozen sacks of cereals, as heretofore, in a State that exports more wheat than gold dust, let us have on exhibition from 100 to 500 sacks. Let us make it felt that the Grange is still a power in the land—Fraternally yours, W. S. Manlove, Chairman; Geo. Rich, Secretary; Fannie L. Manlove, Delania D. Hull, Julietta Hancock, Chas. Hull, James Rutter, Daniel Flint.

#### Grange Suggestions.

Field meetings and re-unions of the Patrons in some shady grove for rest and recreation are now the order of the day. We need hardly add do not make the day one of so much labor and care that it shall bring neither rest nor pleasure. Make it pre-eminently social. Have a good word and a pleasant look for everybody. Don't stand too much on ceremony. They who are gentle and kind and considerate of others are always polite. Don't let the choir do all the singing, but at any rate join in the chorus with spirit, and if you can with understanding. These holidays do not come often enough; make the most of them when they do come. The man who is repeatedly changing his work, and who can chat with his passing neighbor or read in his newspaper at noon, may not need it, but he should consider those of the household who cannot do as he has done, and who must recruit up by a day's rest now and then.

That the residents of the towns and villages, under a mistaken notion of the purposes of the Grange, should have an antipathy to the Order of Patrons is a matter of no surprise. Men do not look with a friendly eye on what is supposed to be unfriendly to their personal interests. Time will do away with this. But in almost every community we find persons engaged in agriculture who spare no pains to show their hostility. The Grange says plainly, we are working for the interests of agriculture, and incidentally for the whole country. It would be a better indication of sound sense in the opposer to send in his application for membership, and see what this dangerous secret is.

Too many Patrons have supposed that because the Grange numbered more subordinate societies or lodges, and an aggregate membership greater than any other social order, no difficulty would be experienced in carrying out successfully any well devised plan of co-operation to promote the interests of farmers. There has been no more difficult task for Patrons than this. Farmers have become wedded to their modes of business, and are the last men in the world to surrender an established custom for another, however plausible. In this, as in other respects, the few must take the lead, and demonstrate the wisdom of their cause by success. The hesitating and indifferent will soon follow.

Many of the Grange stores—no difference what the plan adopted—have failed or closed up. "We told you so," is the common and self-satisfied comment, and the world is too ready to conclude that the farmer is incompetent to conduct successfully even a small mercantile business, or that he found the profits so much smaller than he expected, as to quit in disgust. Of course, shop-keeping is a trade to be learned, and in the learning to make mistakes, but wherever the Grange store has opened, the community have reaped a benefit in the sudden and general fall of prices in that neighborhood. The cause is worth being remembered.

What evidence have we that the agricultural class, through the Grange, have received, or are receiving, any benefit intellectually? was the doubting inquiry propounded a few days since. To answer the question would require a column, not a paragraph. A single instance will be sufficient. We attended a Grange meeting, the other day, when the speaker discussed an abstract proposition, occupying nearly an hour in a close logical argument, and not one of his 500 hearers left the grounds or spent the time in side talk. Five years ago, a baker's dozen would not have remained to the end.—*Grange Bulletin*.

**A NEW GRANGE WANTED IN TEHAMA COUNTY.** We are in receipt of a letter from Bro. H. B. Jolly, formerly a member of the Merced Grange, but now a resident of Tehama county, in which he says: "The farmers of our valley are desirous of having a Grange organized, and would like to know when it would be convenient for a deputy to meet with us." The necessary information was sent Bro. Jolly, and we hope soon to hear of the organization of Grange No. 278.—*Patron*.

**NATIVE PLANTS.**—We have received from our contributor, W. C. L. Drew, of El Dorado, Cal., his special autumn catalogue of California lilies and bulbs. This is Mr. Drew's first catalogue of this kind and will doubtless be welcomed by those who desire to cultivate some of our peerless native plants of the bulbous persuasion.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### AMADOR.

**A CONTRAST.**—*Times*, Aug. 2: Forty years ago wheat was threshed with a flail, and a slow and laborious process it was. Now a steam threshing machine, like that belonging to W. W. Carlisle, operating in this valley, will thresh and clean from 1,600 to 2,000 bushels of wheat a day. On one occasion it threshed out 2,300 bushels in a day. This is a good example of the modern improvements in agricultural machinery in use in California.

#### BUTTE.

**RUINED GRAIN.**—*Record*, Aug. 2: While coming home from Colusa county, last week, we noticed what seemed a splendid field of grain on the ranch of John Bowers. From the road it was the best looking stand of grain we had seen on the trip. Yesterday, Mr. W. M. Bowers brought into the office a quantity of heads from this same field, not one of which contained a single kernel of grain. He informed us that an examination discovered the whole field of a hundred acres to be in the same condition.

#### EL DORADO.

**HILL CULTURE OF WHEAT.**—*Republican*: Last September, in writing up the exhibits at our county fair, we noted a bundle containing 52 well headed stalks, grown on F. Veerkamp's ranch, at Granite Hill, Coloma township, said 52 stalks being the product of one kernel of wheat. The large wheat stools of which this was a sample were found on the outer edge of the field, and averaged twice, three or quadruple the number of stalks to the stool, and proportionately exceeded in size and weight of head, those where the seed had been sown more thickly. Acting upon the idea thus suggested, and to demonstrate what could be produced in a given period from one kernel of wheat most judiciously handled, Mr. Veerkamp this spring planted in rows, corn fashion, the wheat from the 52 stalks above mentioned. The kernels were planted about four or five inches apart, in drills about 21 inches apart, making three rows about 31 yards—93 feet—in length. Last Tuesday we had an opportunity of inspecting the results thus far obtained. The patch of wheat stands from two and a half to four feet in height. The stalks are extraordinarily large and strong. We measured one head which exceeded six inches in length, and the average would fall but little, if at all short of five inches. In one stool we counted 72 stalks, and in one of the smallest we counted 42 stalks. The results conclusively demonstrate that by planting wheat in drills, as we plant Indian corn, giving the plants room to stool and spread, one-fourth of the seed usually used in sowing seed broadcast will produce more grain, and of better quality than is commonly raised by the latter method, and it is unquestionable that the drill method is much less exhaustive of the land. We are glad to learn that Mr. Veerkamp intends to pull up by the roots and exhibit in a stack at the pavilion next fall the entire product of this little patch of wheat. Thus our people will be brought face to face with enormous possibilities of production from one kernel of wheat within two years, when the same is most intelligently and judiciously handled. Even then the results will appear incredible.

#### LAKE.

**HILL FARMING.**—*Bee*, July 31: Mr. John Burger has a hill ranch about three miles north of Lakeport, which he was told, two years ago, was only suited for a sheep walk, and hardly for that. Mr. Burger, however, thought he knew better, and proceeded at once to put it in a proper condition for cultivation. Last summer he followed the land and sowed it in wheat early in the fall. There were those who held up their hands in holy horror at the idea of a sane man expecting to reap a crop of wheat on such land that would pay him for plowing but Mr. Burger winked one eye and continued to sow. He has just finished threshing this crop and to the astonishment of some, but not much to himself, he has harvested a fraction over 35 bushels of plump splendid wheat to the acre on the average, and he says he is satisfied if some of it had not fallen down before harvest, he would have saved 40 bushels. He has also a young orchard which is loaded down with fruit, and his vines are doing splendidly.

#### NAPA.

**GRAPE PRICES.**—*St. Helena Star*, Aug. 1: It is reported that H. W. Crabbs has bought 700 tons of grapes, from the vineyards of John C. Davis, T. J. Safford and W. C. Watson, at a lump price of \$18 a ton. We understand that a prominent wine manufacturer has offered \$22 for foreign and \$15 for Mission, for a large vineyard, which was declined. Captain Glynas informs us that his crop is about an average, but that of other vineyards which he has examined, a number are lighter than usual, owing to the rains and hot weather in the early part of June.

**GRAPE CROP OF NAPA VALLEY.**—*Register*, Aug. 1: The grape crop of the valley this season promises to be a bountiful one, though the total yield will probably not be quite as large as that of last year. In the upper part of the valley grapes on high land are well set, the bunches being of good size, but on lower lands the clusters are not so well formed. The spring frosts damaged the crop to some extent in different localities, but the practice in vogue by many vintners of building fires in their vineyards in seasons of frosts saved thousands of dollars to

the valley. At the present time mildew is giving some trouble, but vigilant vinegrowers subdue this by the free use of sulphur. The yield of 1877 was 575,462 gallons wine, 8,230 gallons brandy, 3,360 acres vines being cultivated. The yield last year was much greater, being of wine, 1,494,500 gallons; of brandy, 30,410; acres in cultivation, 36,035.

#### PLACER.

**FINE CROPS.**—*Folsom Telegraph*, Aug. 2: The ranchers near Roseville have harvested fine crops of wheat, barley and hay; the yield being far in excess of their anticipations in the early part of the season.

#### SACRAMENTO.

**FRUIT DRYING AT FOLSOM.**—*Telegraph*, Aug. 2: The fruit drying house has commenced operations, and large quantities of peaches and plums are now constantly undergoing the drying process. A number of girls are employed in selecting, packing, etc., and give the best satisfaction to their employers.

#### SAN DIEGO.

**BIRDS AND BEES.**—*News*, July 26: Birds continue their depredations on fruit trees, pecking peaches before they are ripe, and then the little honey makers take hold and finish. Linnets and mocking birds seem to be the worst on peaches, but doves and quail try to keep all the grapes from ripening. Some of us will consider ourselves in luck if we get any ripe grapes or figs, on account of birds and bees, but I shall try strychnine on the former and another kind of exterminator on the latter, if I don't lay up a cent.

#### SAN JOAQUIN.

**THE WHEAT YIELD.**—*Herald*, July 29: The reports that are given by farmers, who have threshed their grain, are of a most satisfactory character. The estimates that were made on the yield of wheat before threshing have uniformly been too low, and instead of farmers being compelled to return surplus grain sacks to dealers after threshing, as is usually the case, a great many, a large majority of those who have threshed, have been compelled to purchase additional lots to hold the larger yield than they had calculated upon. The wheat crop of San Joaquin county has this year generally been underestimated. It may be well enough to remark that if there is any county in California that is more prosperous to-day than San Joaquin, the fact is not generally known.

#### SAN MATEO.

**HARVESTING.**—*Half Moon Bay* cor. Redwood *Times*: The farmers are still at work stacking their grain, and in a few weeks threshing will be in full force. A trial of Shoults & Dolloff's new engine was made on Wm. Nelson's grain, which proved entirely successful. Half Moon Bay this season can boast of as good an average crop as any in the state.

**DERRICK.**—George W. Lovie has rigged a derrick for the stacking of loose grain, which is a perfect success. He has the grain brought to the place where he desires to build the stack, on sleds, the sides of which are made of bailing rope, which connect on the bottom of the sled to the pieces of wood with a catch. The sled is then brought to the spot, and on being hoisted up, a small string, which is attached to the catch, is pulled, and the load of grain is dropped where desired. About 25 acres of grain a day can be stacked with the help of three sleds, five men, one hoy and seven horses.

**ROTATION AND CULTIVATION.**—I. C. Steele in *Patron*: Flax has been found to leave land in good condition for wheat in the vicinity of Pescadero. Wheat is generally good along the coast this season. It is especially fine where flax was raised last year. Potatoes fit land nicely for other crops, and some farmers are of the opinion that they impart some virtue to the soil. In the dry season, two years ago, we saw a splendid crop of barley on a dry knoll, while all the surrounding land was dry and parched. On inquiry we learned that the land where the barley was growing was planted with potatoes the previous year; the land was well cultivated, but the potato crop did not amount to much. It was probably the cultivation, and not the potatoes, that benefited the barley.

We saw beautiful fields of wheat occasionally amid general failure the same season, and feeling a deep interest in the causes that gave such unusual results, we made inquiry, and found the land received two plowings in the summer, and a third at seeding. It is an interesting fact worth knowing that rest and till will do so much for the productive power of land, and presents a subject of great interest to those who love to study natural causes. But our subject is a system of rotation in crops as a means of maintaining the productive forces in the soil under annual cropping, and our object is to call the attention of farmers to the subject by a few suggestions, with the hope that others will take up the subject, and give us the benefit of their experience.

#### SANTA BARBARA.

**SEEDLING PEACH.**—*Independent*, August 2: O. N. Cadwell, the owner of Pomona's Retreat, a rich, rare and beautiful orchard situated in Carpinteria in this county, has just brought us in a box of the finest, handsomest, largest and richest peaches we have seen this year, from a seedling tree of his own raising.

#### SONOMA.

**FOOTHILLS FOR WHEAT.**—*Healdsburg Enterprise*, July 29: Last spring we noted the fact that Mr. Wheaton of Dry Creek had summer-fallowed several acres of upland and sowed it



to wheat and barley. The crop was intended for hay, and the experiment was made for the purpose of ascertaining the practicability of that grade of soil for cereals. Mr. Wheaton summer-fallowed his land thoroughly, and the result was that he had a splendid stand of grain on the few acres selected for the test. He cut the crop for hay, as intended, and it yielded about three tons to the acre, which was remarkably good. He demonstrated that foothill soil is capable of producing well by proper cultivation. Some time in the future we expect to see many acres of that land, now idle, sown to wheat, barley and oats, and we opine that it will prove profitable.

**NOTES ON CROPS.**—*Argus*, Aug. 2: It is estimated that the acreage of matured wheat in Sonoma county this year amounts to over 70,000 acres. The present has been an unusually favorable season for cereals, and the yield, it is estimated by competent judges, will average 25 bushels to the acre. Admitting, for argument sake, that the product of our wheat fields will meet this figure, we will have this result: Number of acres, 70,000; yield in bushels, 1,750,000; yield in cents, 1,050,000; gross value of wheat, at \$1.70 per cental—the ruling price—\$1,780,000. These figures may fall below the above, or may be still larger, owing altogether to the yield and price. Many have an idea that wheat will touch two cents, in which event our wheat crop will reach the unparalleled figure of two million dollars and over. A few weeks more, when the threshing season is well advanced, something nearer the yield can be determined, and the prices will be more definitely fixed. Considering that Sonoma county is not classed as a grain-producing district, these figures make a good showing as regards our prosperity for the season. All the smaller grains are looking well, save oats, that crop being light and limited. Hay is still considerable of a drug, consequent upon the enormous overplus from last year. Yet, clean, marketable hay brings a remunerative price, with fair demand. Potatoes as a money-making fall crop, are yet an uncertainty. The immense product of early potatoes has broken the back of the market, and in some parts of the State they are not being dug. The price, however, of early potatoes does not, as a necessity, affect our fall yield. We have seen early potatoes sell throughout the season from \$1.50 to \$2 per hundred, and the fall crop at 45 and 50 cents. It is not improbable that the reverse of this will occur this year. Fruit is spotted, according to locality and variety. The small fruits have been and are reasonable to consumers, if not in every instance profitable to the producer. Good peaches are scarce, at high prices; plums will not be abundant, and, we think, will bring a good price. The apple crop promises well in this locality, though in other sections there are complaints of a short crop. The yield of grapes will be fully an average. The price of table varieties will depend largely upon the caprice of the market when they come in. The price of all wine grapes is fixed at from \$15 to \$25 per ton, which will also yield a handsome reward to our vine-growers. The dairy season has been long, and on the whole rather unprofitable. The enormous rents paid by some of our dairymen will make the year a losing one to many. As rents in many cases are altogether too high, the result must be that the landlords will be compelled to fix rentals somewhere near in keeping to the prices of dairy products.

#### STANISLAUS.

**FINE POTATOES.**—*News*, July 31: This has been noted as a remarkable season for the production of fine potatoes. Never were larger or finer potatoes raised in the county than the present year. The finest sample, however, of the "Early Goodrich," we have yet seen, was sent us from Mr. M. B. Root's farm, near Salda.

#### TULARE.

**THRESHER'S FIGURES.**—The biggest threshing done so far, at Grangeville, was by W. H. Worswick, 1130 sacks in one day; and the heaviest grain was on E. Sanborn's ranch, over 45 bushels of wheat to the acre.

**ARTESIAN WELL-BORING.**—*Delta*: We are pleased to notice that artesian well-boring is again receiving attention in this county. Two wells have already been bored with successful results, and two others are now being bored in the Tule river country. One is now being bored by a Mr. Gilbert, about six miles east of Tipton, with a steam apparatus. The boring is done very rapidly by this method, and should the well now being put down prove a success, we do not doubt that many others will be bored in this county. The following short description of the boring machine now being used may be interesting: The auger consists of two strong steel knives curved in an oval shape, with the points approaching each other at the apex of the ellipse. A stream of water is forced down the pipe and through the auger by hydraulic pressure, and is forced to the surface, bringing with it the earth from the bottom that is loosened by the auger.

**HARVEST.**—*Delta*, Aug. 1: Threshing in Mussel Slough will be through in about two weeks. The machines can run only part of the time, on account of the hands not being able to stand the hot weather. One employer runs two shifts, each working 20 or 30 minutes, and even then they are not able to run continuously. The heat on the straw piles reaches 140°. Two evenings last week the thermometer, at 6:30 p. m., stood at 108° near Hanford. Where wheat got a good stand, more than an average crop is realized, of superior quality. Where wheat last

year went from 125 to 130 pounds to the sack, it this year goes from 140 to 150 pounds.

**HOGGING GRAIN.**—A gentleman from Squaw valley was in our office the other day and informed us that good crops were raised there, but were not harvested; the farmers turned hogs into the fields as soon as the grain was ripe. Several of them have not made as much out of their crops as they would if they had had them threshed, as they had to sell their hogs at two and one-half cents per pound.

#### OREGON.

**WHEAT GROWTH.**—*Oregonian*, Aug. 21: Mr. William Barlow, of Barlow's prairie and station, in Clackamas county, received from the Department of Agriculture at Washington, last year samples of white wheat which he sowed broadcast in ordinary soil. The result has been simply wonderful. Ten stools, the product of ten grains which were planted on the 24th of October last, numbered 455 stalks, an average of 45 heads for each grain of seed. It is estimated and the estimate is small, that each stalk contains 60 perfect kernels, a product of 2,700 for each kernel sown. The sheaf shown us will be sent by the steamer sailing on Saturday for San Francisco, and will be displayed in connection with the Oregon exhibit at the Mechanics' fair.

#### Grape, Fruit, and Flower Picker.

As a device now timely, we give an illustration of a fruit, grape and flower picker, which we have heard highly recommended. Its mechanism is quite fully seen by the engravings, and its use is too obvious to need comment. It is designed to save the hands from injury, which is always more or less imminent when grape-cutting by knife power is in operation. It also saves the skin from contact with the spines, with which some fruit trees are armed, and in rose gathering it disappoints the traditional thorn with which the queen of flowers is accompanied. The tool is a pair of shears arranged with an elastic holdfast that cuts the stem and



Fig. 1.

#### WEEKS' GRAPE, FRUIT AND FLOWER PICKER.

holds it, so that the fruit can be deposited in the receptacle for receiving it without touching it with the hands. It is said to be so perfectly contrived that it will hold "a cherry or a bunch of grapes weighing five pounds." A point of great importance in the case of some fruits is that they may be picked and deposited in the basket without handling. Fig. 1 shows the large size picker, suitable for orchard use.

Fig. 2 shows a smaller size of the implement, which is adapted to flower picking, and which may do our lady florists good service. The pickers are known as the Weeks pickers, and are sold in this city by Dunham, Carrigan & Co., 107 Front street, S.E.

**THE GRAPE INTEREST.**—One of the clearest signs of the revival in the grape interest which has been long forecast, is the enlarged views of grape buyers. An item in our "Agricultural Notes" shows that in Napa county bids of \$22 per ton for the best wine grapes have been refused, so that it is plain that the growers have confidence in the situation. The difference between the prices now attainable and those of a year or two ago, certainly amounts to a margin which contains all the elements of prosperity, and if continued our grape-growing regions will burst forth into a perfect bloom of new houses, barns and wineries. An item which enters into the prospect is the announcement by telegraph that French vineyards will yield but half a crop this year. What is the raisin interest doing for itself? We have been on the lookout for interesting facts all the season, but European authorities are very quiet and we haven't winged a California raisin maker for a month. Who will tell us something interesting about the raisin interest?

**IMPORTATION OF NORMAN FRENCH HORSES.**—E. Dillon & Co., of Normal, Illinois, write us under date of July 25th, that they sailed from London the 5th of July with nine Norman stallions; landed in New York the 18th with eight; one being lost on the voyage the day before they arrived in New York. The eight horses landed are all dark grays. One is four years, and the other seven are each five years old. They are in good health and looking well, and were expected to arrive in Bloomington about the 27th of July.

#### Rights of Ditch and Canal Owners.

In 1873, S. Jennison, the testator of R. B. Titcomb, constructed a ditch in Placer county, California, to convey the waters of a canyon to a mining locality known as Georgia hill, 17 miles distant, for mining, milling and agricultural purposes, and for sale. The intention of the testator when he appropriated the water right was to divert 2,000 inches of the water of the canyon by means of a flume and ditch. In its course, the ditch crossed Fulweiler's gulch, the waters of which had been already appropriated by J. T. Kirk, who had constructed ditches, one of which was intersected by the testator's ditch, which diverted the waters from it. Kirk thereupon repaired and reopened his own ditch, turning into it the waters which had previously flowed in it, and in so doing cut and washed away a portion of the ditch of the testator, so as to let out the waters brought down from the canyon above and the intermediate streams. The testator brought suit against Kirk for damages and to restrain the continuance of the injury to his ditch. The case was carried to the Supreme Court of the United States and is the case entitled S. Jennison, executor of R. B. Titcomb, vs. J. T. Kirk.

It appears from the answer of Kirk, which the court finds to be correct in this particular, that he and his predecessors in interest had been in possession of a portion of Fulweiler's gulch for many years prior to this suit, and the ground was continuously held and worked for mining purposes, and as a mining claim, according to the usages, customs and laws of miners in force in the district; that the "hydraulic process" was used in working the claim and extracting the gold, for which a large volume of water was necessary; and that the plaintiff's ditch rendered the gold-bearing earth and gravel inaccessible, and practically destroyed the working of the mining ground.

It was admitted that defendant's right of way for his ditch was superior to that of plaintiff, and it was also admitted that the extension of plaintiff's ditch across the defendant's claim pre-

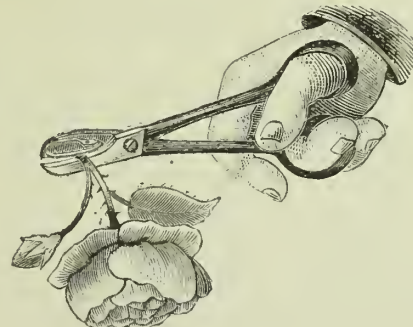


Fig. 2.

vented the successful working of the mining claim. But it was contended that as the land over which the ditch passed and on which the claim is situated was a portion of the public domain of the United States, that the right of way for the ditch was superior to the right to work the claim, such superior right being conferred by the ninth section of the act of Congress of July 26th, 1866. That section enacts:

That whenever, by priority of possession, rights to the use of water for mining, agricultural, manufacturing, or other purposes, have vested and accrued, and the same are recognized and acknowledged by the local customs, laws, and the decisions of courts, the possessors and owners of such vested rights shall be maintained and protected in the same; and the right of way for the construction of ditches and canals for the purposes aforesaid, is hereby acknowledged and confirmed: Provided, however, that whenever, after the passage of this act, any person or persons shall, in the construction of any ditch or canal, injure or damage the possession of any settler on the public domain, the party committing such injury or damage shall be liable to the party injured for such injury or damage.

The court pronounced the plaintiff's position untenable and held: 1. That this section only confirms to the owners of water rights and of ditches and canals on the public lands of the United States the same rights which they held under the local customs, laws, and decisions of the courts, prior to its passage; and, 2. That the proviso confers no additional rights upon the owners of ditches subsequently constructed; but simply renders them liable to the parties on the public domain whose possessions may be injured by such construction.

The section is to be read in connection with other provisions of the act of which it is a part, and in the light of matters of public history relating to the mineral lands of the United States. The law of miners recognized discovery, followed by appropriation, as the foundation of the possessor's title, and development by working as the condition of its retention. By that law the owner of a mining claim and the owner of a water right in California hold their respective properties from the dates of their appropriation, the first in time being the first in right; but where both rights can be enjoyed without interference with or material impair-

ment of each other, the enjoyment of both is allowed.

By that law a person cannot construct a ditch to convey water across the mining claim of another, taken up and worked according to that law before the right of way was acquired by the ditch owner, so as to prevent the further working of the claim in the usual manner in which such claims are worked, nor so as to cut off the use of water previously appropriated by the miner for working the claim, or for other beneficial purposes.

Accordingly, where the owner of a mining claim worked by the method known as "the hydraulic process," cut and washed away a portion of a ditch so as to let out the water flowing in it, the ditch having been so constructed across the claim previously acquired as to prevent it from being further worked by that method, and to prevent the use of water previously appropriated by him. Held, that the cutting and washing away of the ditch, it having been done in order that the claim might be worked and the water used as before, was not an injury for which damages could be recovered. And judgment in favor of defendant was affirmed.

#### News in Brief.

CHOLERA is abating at Cabul.  
THE ZULU war cost England £4,500,000.  
TURKEY is still arming the Greek frontiers.  
A SERIOUS riot is reported at Philippopolis, Turkey.

THE late Khedive of Egypt will reside at Rhodes.

THE increase of the public debt for July was \$6,086,344.

THE French colony in Egypt consists of 20,000 persons.

A CONFLAGRATION is raging at Ortakuei, on the Bosphorus.

MINNESOTA will harvest 44,000,000 bushels of wheat this season.

FRESH disturbances are reported in Silesia, on the Russian border.

THE failure of the Consolidated Bank at Montreal is announced.

THE Colorado beetle has made its appearance in county Cork, Ireland.

BULLION in the Bank of England increased £273,000 the past week.

BASHI-BAZOOKS are pillaging and assassinating on Bulgarian territory.

IN France, slates used in roofing are bedded in plaster on the boarding.

OHIO is about to be flooded with campaign documents from Washington.

LORILLARD'S "Papoos" came in sixth in the race at Goodwood, Eng., lately.

A VEIN of coal 10 feet thick has been discovered in Cassia county, Idaho.

"LUCK" won the fifth heat in the postponed pacing race at Cleveland in 2:16.

THE Tuileries ruins are to be demolished and the site transformed into a garden.

THE Stadacona Bank, at Quebec, will go into liquidation and wind up its affairs.

THE crops in Hungary and Galicia have been damaged by heat, followed by rain.

THE rush from New York for summer resorts is greater than at any time since 1876.

THE free postal delivery system will be established at Portland, Or., October 1st.

THE army of the Zulus is broken up, the nation dispersed and the King a fugitive.

THE condition of the currency at Constantinople is becoming more deplorable daily.

THE Custer battle field on the Little Big Horn has been made a national cemetery.

THE Government expects to prorogue the British Parliament on the 16th of August.

THE annual session of the National Educational Association has begun at Philadelphia.

A DISEASE resembling cholera is ravaging Center Point and Walker, Linn county, Iowa.

ANOTHER expedition in search of the North Pole will leave England in the spring of 1880.

THE weather is excessively warm at St. Louis, and several cases of sunstroke have occurred.

LORD DERRY's recent award as umpire affects 57,000 persons in the Durham, Eng., collieries.

THE corner-stone of the monument to Gen. Anthony Wayne was laid at Erie, Pa. August 4th.

BULLION to the amount of £500,000 was paid into the Bank of England on balance August 4th.

A SKIRMISH between United States troops and Indians occurred Saturday at Salt Lake, Texas.

HALF a score of obnoxious publications have been suppressed within the last few days at Berlin.

THE old woman who threw a stone at the King of Spain has been sent to an insane asylum.

THE exodus of citizens from New Orleans has begun, and fears of yellow fever prevail in all parts of the city.

WHEN an Englishman speaks of corn he means wheat. Corn, in the American sense, is not grown in England.

THE Sultan of Morocco has subdued the border tribes, and exposes the heads of 34 rebels on the walls of Tangiers.

THE African expedition sent out by the Algerian Missionary Society is in urgent need of supplies, as starvation is imminent.

THE match between Ten Broeck's "Lincolnshire" and Lord Dupplin's "Royal," for £500, has been declared off by mutual consent.

LIEUT. GORRINGE, U. S. N., will have charge of the transfer of the obelisk presented to the city of New York by the Khedive of Egypt.





### Sometime.

'Tis a wild, sweet song, a beautiful song,  
With a low and rhythmic chime,  
Rung out from the topmost boughs of a tree,  
The winds have christened "Sometime."

Its words are strung on a golden string,  
In a low and melodious rhyme,  
Telling of germs in each withered flower  
The rain shall bring out sometime—

Telling of hopes that are buried low,  
'Neath the dust of deceit and crime,  
That true repentance and true belief  
May waken to life sometime—

Of folded bands o'er a pulseless heart,  
Under some fragrant lime,  
In the beautiful city, with pearly gates  
Shall I elapse them again sometime?

Of tiny ringlets of golden hair,  
And eyes with a look sublime  
In their shadowy depths, as we said—"good-bye,"  
Hoping to meet sometime.

Ah, yes; 'tis a beautiful song that I hear,  
Afar in this changing clime,  
Rung out from the topmost boughs of a tree  
The winds have christened "Sometime."

And it lessens my heart of its weary load,  
Renews all its olden prime,  
For it tells of a mansion beyond the skies,  
Where I hope to be happy sometime.

### Woman's Influence in the Home.

[Written for the RURAL PRESS by RHODA DENDRON.]

Yes, it would seem that there should be chance for us women to reach society through the home influences, and the training of children. The theoretical-ideal home is one in which the mother's influence is supposed to prevail, and always for the good. She is represented as loving, wise, patient, self-sacrificing, with a nearly faultless judgment and a gentle though strong will. So far, good. Now if her husband adds his influence to hers, and her children have fortunate temperaments, there can certainly be no reason why such a family should not each and all be an honor to themselves, their parents, and society. But in this ideal home everything is conceded: and we all know that it is not one case in a hundred, nay, many hundreds, that can show this happy coincidence of circumstances.

Granted such a woman—and such women are by no means common—but give her children a father who is bad-tempered, unjust, selfish, or vicious or dissipated, and the chances of even such a mother for conducting all her children to honorable places in society are diminished at least half; for inheritance and example are powerful factors in forming character, and either one or the other may render nugatory the most careful training. Dangerous traits frequently crop out in children, that come from some far-back ancestry on either side, and confound the parents through whose veins the unconscious poison is transmitted. Accidents of birth of any kind will interfere to disappoint parental hopes. Even disease may intervene to warp the intellectual and moral natures of the children of seemingly sound parentage. Against all these chances the mother's influence is required to prevail. What wonder that it often proves a failure?

But failure from these causes is not what I am going to take under consideration. It is woman's power to influence society against itself. In the first place woman is herself a product of the society she is expected to control; and is far more controlled by it than man, who makes one rule of action for himself and another for her. With this distinction constantly in mind she grows up endowed with half her natural physical strength, from the restraint imposed upon her movements as a child. This want of physical power is erroneously supposed to add to her moral power by making constant demands upon the tenderness of men. As if the consideration which is won by invalidism could compensate for the want of health! or could make happy the wife whose husband makes it an excuse for his own bad faith! Grown to womanhood, she has still to govern herself by cumbersome conventionalities, and to accept a husband who might or might not have been her choice, had she had any free choice in the matter. She may have had the kind of domestic education that would fit her to take a wise course in her own domestic concerns, or she may not. At all events, when she has become a mother she finds herself launched upon a sea of perplexities requiring the greatest adroitness in keeping her course; and it is here that her boasted influence is supposed to commence. Supposing that she really has tact, and that she is not seriously interfered with at home, and that her children are reasonably well disposed, she has then no very great difficulty in bringing them up to the age when responsibility for them

begins—the age of conflict between parents and children.

It is here that society interferes, and mothers are powerless. That example is stronger than precept. A little five-year-old girl, daughter of a friend of mine, had been guilty of a misdemeanor according to her mother's code, when her mother said to her:

"Carrie, how could you do such a thing?"  
"Other little girls do it," answered Miss Carrie, hanging her head.

"But other little girls doing it doesn't make it right, does it?" asked the anxious mother.

"No," replied this precocious reasoner, "but it makes it a great deal more comfortable!"

And this is just exactly where the trouble lies. It is a very strong-minded person who is not, like Carrie, made comfortable by having plenty of company in doing wrong; and young people, as a rule, are not particularly given to strong-minded self-abnegation. "But other people do so-and-so" is the constant cry in the ears of conscientious mothers who are trying to save their boys and girls from the vices of society. That their elders do so-and-so is sufficient argument. The boys you have carefully trained in habits of neatness, and as far as you know, according to rules of health and good morals, as soon as they reach their teens, if not before, have learned to smoke. You remonstrate; they prevaricate. You forbid the practice; they comply, while in your sight, with your command, and with self-congratulation that they will sometime be old enough to do as they like, continue to indulge, or rather to cultivate, the habit in private.

It is not because your boys are bad boys. They ought to be very good ones, after all the care you have given them. But they are boys, and they realize that, although you are a good mother, and they are proud of you in that relation, you are only a woman! and what does a woman know about boys! They chuckle to themselves over their immeasurable superiority, that nothing but their legal minority suppresses. You appeal to their father, and he reads the "young rascals" a lecture, with a laugh in his eyes—for how can he seriously reprimand them for doing what he does himself? It is merely a matter of time, and you might as well never have said a word about smoking for all that you have affected by your training. And thus from one thing to another. By the time your sons have reached majority, your authority and your influence are repudiated together. The latter remains only under the guise of affection; and if you have really won the love of your children, they will have enough regard for your feelings to conceal from you what they know would pain your heart to be aware of. This is the rule. Of course there are exceptions, and cases where the mother of a family has a strong personal influence over her sons especially, and this, too, by pure intellect rather than by affectionateness.

But any observer knows that mothers, as a class, are devoted to the welfare of their children; that only a very few are wilfully derelict in duty to their offspring. Doubtless many of them err in judgment one way or another. Some are too indulgent, and others too severe. Ministers' sons, who certainly have good example at home, from both sides of the house, are proverbially reckless; and this fact is attributed to too great restraint. Again, sons of very bad fathers sometimes become the most exemplary of men, probably through a sort of mental reaction, as in the other case. To keep just to the happy mean requires "infinite wisdom," and infinite wisdom is not a common quality of the average human mind. Accept the fact, however, that most mothers conscientiously endeavor to make good men of their sons, and consider how often they are disappointed—what an aggregation of misery is there! Does anybody wonder that women are said no longer to desire children, when the task of rearing them is so often a thankless one?

Look at the cities of this republic any evening in the week. Consider that young men and boys, as well as older men, are privileged to witness, nay, can hardly refrain from witnessing, the sights that almost intrude themselves in the streets. These traps to perdition are regular institutions—licensed, authorized: forbidden, certainly, to respectable women, but not forbidden to any man. And does not the boy soon learn that it is *manly* to know all that is going on in the world? How is he to learn these things, except by spending his nights in finding them out? What is the effect of finding them out? It is to destroy forever the home influence. He looks, thenceforward, askance at his mothers and sisters, feeling that a great wall of separation has, somehow, come between. From that time on it is he who criticizes them, from out the profound depths of his superior knowledge. Instead of feeling that innocence is the natural and proper state, he is constantly alarmed lest it should lead them to do something improper. This is the very least of the consequences of a boy's acquaintance with the institutions organized by and supported by the society of men, in antagonism to home influences. The worst and greatest are too terrible to be set forth here. You can learn them from broken-hearted mothers, and unhappy sisters and wives.

Nor does the harm done by men's society influence end with the withdrawal of the boy from home influences. It is quite impossible that one-half the household should go wrong without in some way highlighting the other half. The young man makes doubtful acquaintances, whom he, in return for a similar favor, introduces to his sisters. To confess to her what he

knows about his associates is to betray his own complicity in wrong; and therefore he permits her to believe them all they should be, while they are gaining her confidence, and perhaps affection. When it is too late he may remonstrate and blame her for an unworthy choice, but he has nevertheless been the occasion of her unhappiness, whether by causing her to contract a bad marriage, or by drawing her into a conflict of feeling to escape it. These domestic tragedies are enacted daily, and they do not come from the sweet, healthful home influence, but from those that are opposed to it.

What is mother-love when opposed to the love between man and woman? You will say that a well-trained woman will govern her affections and not give her love unworthily. That is what ought to be expected of her certainly. But she cannot always be on her guard—her very innocence is against her, since it makes her unsuspecting. She is young, too, and not at all argus-eyed in the matter of faults in agreeable young men. The cautions of her careful mother sound cold and hypercritical. Her lover is, for anything she can see to the contrary, as irreproachable as possible. If papa, made anxious by the fears of mamma, inquires into the matter and reports that there are certain rumors against the young man, Nellie, in a half-suspicious, half-resentful mood repeats the calumny to the scandalized suitor, and joyfully receives the denial she was sure he would make. That settles the question in her mind; for who that loves believes aught against the beloved one? And so everybody gives way at last, and sweet, confiding, innocent Nellie—so well brought up, says every one—takes the final fatal step. She is foolishly happy for a little while, but there soon comes a time when she smiles no more, and after a few short years she is home in her father's house again with her babies, a widow without the intervention of death.

Nor, harrowing as this is, is it the very worst. An age of vicious men makes, to a greater or less degree, an age of corrupt women; for it is wholly impossible that those towards whom the hearts of women naturally lean, and who in addition to the attraction between the sexes, are armed with money, influence and power, should not be able to bend a large number of women to their purposes. The example of these corrupt women in turn spreads contagion among the weak and frivolous of their own sex, and the arts of both together sometimes entangle the darlings of the most careful mothers.

One thing is certain, that open profligacy is yearly on the increase in American cities, more particularly those of the West; not because mothers have ceased to care for the moral culture of their children, or because homes are not made pleasant. That women are as much as ever interested in the preservation of home influences is proven by the fact that in many cities they actually carry the home into the streets, to catch up, if may be, any homeless or friendless ones. They send their young women to serve at cheap coffee-houses, and even supply reading and music free, as an attraction to hold men, young and old, away from destruction. But while, with all this effort, here and there one may be saved, the saloon, gambling-house and brothel destroy hundreds for that one. It is an unequal contest that will end, perhaps, with the destruction of the home itself. Not perhaps only, but certainly, unless a balance is somehow struck between the opposing influences. As continents rise out of, or sink into the sea, by scarcely perceptible degrees, so that no generation can name the year of their elevation or their subsidence; so peoples, day by day and hour by hour, steadily rise or sink according to the influences at work to elevate or depress their moral tone.

The one thing that woman can do to prevent a moral catastrophe, is to use her limited period of influence in the home; which is that of a dozen or fifteen years, half of which time is the period of mere infancy, and counts for very little. The 7 years, from 14 to 21, are the most important of all; yet these years are now accorded to young America to sow his wild oats in. Men have very generally ceased to co-operate with women in the family government; and as boys are usually thought too old for the mother's rule after 14—by themselves, at all events—all government practically ceases for the boy at that age in most families. Now it is futile to expect that half a dozen years of actual training of the immature individual and the subsequent abandonment of it at a critical age, shall, or can by any possibility, give permanent form to the character. If the mother could have full control for even 16 years, there might be some hope of success; though we all see frequent instances of men of 25 turning from safe and honorable ways to ways of shame and dishonor when subjected to new and strong influences; and we know that, in a general sense, nobody is proof against temptation in every form and at all times. But we are considering the subject of home influence, which is woman's influence, as against that of society, which I say is controlled by men. I think the former is a partial failure at least, while the latter is an almost complete success.

To be convinced of this, you have only to see the antagonism excited by any class of reformers—reformers being generally favored by women. So active is this, and so disagreeable it is made to our sex, that those of more refinement than courage always shrink from coming to the front, no matter how much they may have the matter at heart. It certainly is not pleasant to have all our male friends arrayed against us; to be at sword's points with our brothers, fathers or husbands. The reflection,

too, that if they do not choose to allow it we cannot prevail, is very disheartening; and the discovery, the attempt to carry a point against men's wills, forces upon us that "the world's male chivalry has perished out," is extremely mortifying. That frightful bugaboo, "you are out of your sphere," takes all the strength out of us, and we succumb at once.

Does any anxious mother feel that my views are extreme and discouraging? Well, let me say this in defence: I have studied the subject a good deal on all sides, and while I am convinced that the "woman's kingdom" is passing away in free America, through an aggregation of hostile influences, I never for one moment have ceased to defend it, or to build up, as best I could, what was being pulled down. This is my duty, as it is the duty of every mother to properly instruct her boys and girls, albeit she knows her labors are to be half, if not quite altogether, thrown away. If I show the weak places in the walls of our kingdom, it is with the hope of stimulating some to make repairs.

Admitting that we have not much to hope for—we of this generation, or the next, or the next after that—if we ourselves remain true to truth, there is just so much pure blood left to sweeten the common stream of our humanity; and the germ is preserved of the higher influence that shall some day rebuild a brighter and prouder kingdom on the ruins of the one that is going to decay. The very center and heart of our domain, the home, will then be, as it is now. To it we shall have brought attractions that it has not now. It will not then be simply a place to refresh the tired body in—a restaurant, a lodging house, with powerful rivals in every street of the city—but the palace of the king, where nothing is lacking to pleasure him. That some such now exist is sufficient security that others will exist in greater perfection then.

It is the experience of all time that when affairs have reached a stage where they are insufferably bad, they have begun to mend. This is the nature of things, since events must go on, and everybody is interested in having them go on comfortably. When they are going in the wrong direction they proceed first to a point where the passive body suffers; next to a further point, where the agent active in taking the wrong direction begins to suffer too. Shortly after this, affairs take a turn for the better. It is toward this latter point that society is tending now; and we have only to possess our souls in patience until the turning.

**THIMBLE MANUFACTURE.**—The process of making thimbles is described as follows: Bright new silver coins are reduced to ingots by melting in crucibles. They are then rolled into the required thickness and cut by a stamp into circular pieces of the required size. These circular disks are placed under a solid metal bar of the size of the inside of the intended thimble, which, moved by powerful machinery, descends in a bottomless mold of the size of the outside of the thimble, and presses the metal into the desired shape at a single blow. The remaining operations of brightening, polishing and decorating are performed by means of a lathe. First, the blank form is fitted with a rapidly revolving rod; a slight touch of a sharp chisel takes a thin shaving from the end; another does the same on the side, while a third rounds off the rim. The polishing is done by a round steel rod, which is dipped in oil and pressed upon the surface. Small revolving steel wheels, held against the revolving blank, pierce the indentations on the lower half and end of the thimble; the ornamentation is done by a similar process. All that remains to be done to the thimbles is to brighten and polish the insides, boil them in soap-suds to remove the oil, brush them up and pack them for the market.

**WAGNER ON HIS OWN MUSIC.**—A somewhat notable event in recent journalism is the fact that an American publication has gained from Wagner a statement of his experience, theories and ideals. The *North American Review* for August opens with an article of unusual interest from his pen: It is entitled "The Work and Mission of My Life." Only an appeal from America, he writes, could induce him to give a new explanation of his aims in art. It is in America that he expects the Germanic spirit, hampered and trammelled at home, to find a new realm and to "attain to the full glory of an art that is all its own." He gives a vivid sketch of his art life from boyhood till he returned to Germany from Paris upon the first representation of "Rienzi" in Dresden. He analyzes the tendencies of musical art in Germany since the beginning of the century, treating with unsparing criticism the influence of the French and Italian schools upon German music, and explaining what he has attempted to accomplish in elevating dramatic and musical art.

**EXCESSIVE SELF-DEPRECIATION.**—Do not be so eager to disclaim personal merit that you shall fall into the tone of abjectness and self-contempt. Doubtless it is only by God's grace that you stand, yet doubtless it is you who stand by God's grace. Does God who gives this grace despise you? What right then have you to despise yourself? Since you are precious in His sight, you ought to be honorable in your own. Between self-righteousness and abjectness there is a wide interval, and it is not necessary in departing from the one vice to fall into the other. "As for me," says David, "I will walk in mine integrity."—*Sunday Afternoon.*



## Highly-Seasoned Food Promotive of Intemperance.

As long as the American people consume such quantities of stimulating and highly-seasoned food as they do, they will want to imbibe stimulating drinks. Stimulating food and stimulating drinks go necessarily together. The one is the concomitant of the other. Many a man who seasons his dinner liberally with the contents of the castor excites in his system a thirst for something stronger than cold water. Not that cold water would not be the best thing which to extinguish the fire he has kindled within the vital domain by the use of such hot, stimulating condiments; but that is too insipid. Having partaken of such highly seasoned food he craves a drink equally stimulating.

Now, it is not true that every one who eats inordinately and of stimulating and highly-seasoned food is a drunkard, but I hold that such a one, by his manner of living, supplies a very important condition for becoming a drunkard. That he does not become one is, perhaps, because of a high moral principle, acting in conjunction with a great will power to restrain his appetite for diffusible stimulants; for we hold that in such a case, this appetite, to a greater or less extent, exists. The converse of this proposition, however, is true; that as a general thing, men who are fond of stimulating drinks are also fond of stimulating and highly-seasoned food.

On the other hand it was the opinion of Liebig, founded upon observation, that persons who live mostly upon farinaceous and amylaceous food cannot take wine; all kinds of alcoholic drinks seem to be repugnant to such. It is only those whose daily diet consists largely of animal food, who can relish spirituous liquors. Savage nations living in tropical regions, where they have subsisted mostly upon fruits and vegetables, the spontaneous productions of mother earth, have rarely, on coming into contact with the white man and his fire-water, fallen victims to intemperance like the North American Indian, who, living by the chase, has subsisted almost wholly upon animal food.—*Sunday Afternoon.*

## Chaff.

A PLEASANT NECESSITY.—A flat iron.

A POOR RELATION.—A story badly told.

MUMPS are plural, yet they often look singular.

A PEN may be driven, but the pencil does best when it is lead.

It is beauty's privilege to kill time, and time's privilege to kill beauty.

It must be very warm weather that will take the corn starch out of festival ice-cream.

The right kind of man will always have his life insured. It gives his wife's second husband a start.

The man who is waiting for something to turn up generally finds it when he steps on a barrel-hoop.

If S-i-o-u-x spells sue, and e-y-e spells i, and s-i-g-b-e-d spells side, why doesn't S-i-o-u-x-e-y-e-s-i-g-b-e-d spell suicide?

AN up-country church society offers a reward for the arrest of the person who surreptitiously introduced a hornet's nest into the grab-bag.

A JAPANESE student, newly arrived in this country, thought we were all doctors, because everybody took his hand and asked after his health.

PHILOSOPHERS say that shutting the eyes makes the sense of hearing more acute. A wag says that this accounts for the many closed eyes that are seen in church.

KANSAS teacher: "Where does all your grain produce go to?" Boy: "It goes into the hopper." Teacher: "What hopper?" Boy: (triumphantly): "Grasshopper."

KANKAKEE has a Justice who beats them all in the way of doing up a job of matrimonial splicing with neatness and dispatch. This is his formula: "Have 'er?" "Yes." "Have 'im?" "Yes." "Married—two dollars."

THE just published report of an Irish benevolent society contains one paragraph rich in caustic humor. It says: "Notwithstanding the large amount paid for medical attendance, very few deaths occurred during the year."

A LITTLE boy of Providence, not yet out of his short clothes was asked by his grandmother the other day how he had torn his dress. He replied that it had "got caught on a clover leaf."

WORTHY MAGISTRATE: "What! a man can be so cruel enough to maltreat his lawful wedded wife, and even hurl a plate at her head?" Prisoner: "But your honor, do you know my wife?" Worthy Magistrate: "I have not that honor." Prisoner: "Then just go slow."

MOTHER'S SEWING.—Rose Terry Cooke writes to the *Sunday Afternoon* as follows: I never shall forget my own childish tears and sobs over my sewing. My mother was a perfect fairy at her needle, and her rule was relentless; every long stitch was picked out and done over again, and neither tears nor entreaties availed to rid me of my task till it was properly done; every corner of a hem turned by the thread; stitching measured by two threads to the stitch; felling of absolutely regular width, and patching done invisibly; while fine darning was a sort of embroidery. I hated it then, but I have lived to bless that mother's patient persistence; and I am prouder to-day of the six patches in my small girl's school dress which cannot be seen without searching than of any other handiwork—except perhaps my bread!

## Young Folks' Column.

## Our Puzzle Box.

## Cross Word Enigma.

The first is in false, but not in true,  
The second is in boot, but not in shoe,  
The third is in rat, but not in mouse,  
The fourth is in barn, but not in house,  
The fifth is in ham, but not in meat,  
The sixth is in arms, but not in feet,  
The seventh is in mit, but not in glove,  
The eighth is in lark, but not in dove,  
The ninth is in fiddle, but not in drum,  
The tenth is in gin, but not in rum,  
The eleventh is in coal, but not in slate,  
The twelfth is in look, but not in bait,  
The thirteenth is in love, but not in hate,  
The fourteenth is in soon, but not in late,  
The whole was an eminent American. G. L. B.

## Double Acrostic.

1. A famous engineer of Holland.
  2. Sister of the Emperor Augustus, and wife of Marc Antony.
  3. The name of certain large Australian birds belonging to the crow family (*corvidae*).
  4. A notorious highwayman.
  5. A title of a Turkish State official.
  6. A large island of the Southern ocean.
- The initials name one of the few eminent English statesmen who sympathized with the Union cause in the American civil war; the initials form the name of a genus of plants, the tuberous roots of which are used as food in Mexico. MELANCTHON.

## Riddle.

Only some hours I comprehend,  
Only three letters make the word,  
But if you shorten me a third,  
Then time shall never see my end. J. B.

## Initial Changes.

1. Change the initial of a part of the head as many times, and form successively a sewer, a weight and a procession.
2. Change the initial of a malt liquor as many times, and form a wild animal, to taunt, a facial contortion, an equal and a prophet. UNCLE CLAUDE.

## Dropped Letters.

S-e-a-d-r-d-y-h-l-n-s-o-e,  
A-d-i-t-n-d-o-h-m-a-i-g-e-e,  
A-d-a-a-d-e-r-w-s-e-w-i,  
"O,-a-e,-g-v-e-b-c-m-l-v-t-m-"  
UNCLE CLAUDE.

## Answers to Last Puzzles.

ENIGMA—"Be always as merry as you can, for no one delights in a sorrowful man."  
BLANKS—1, port, pot; 2, pine, pie; mart, mat.  
PROBLEMS—80 square rods.  
CHARADE—Magnet.  
CONCEALED SONG—"Rock me to sleep, mother."

## The Reason Why.

A boy returned from school one day with a report showing that his scholarship had fallen below the usual average.

"Well," said the father, "you've fallen behind this month, have you?"

"Yes, sir."

"How did it happen?"

"Don't know, sir."

The father knew, if his son did not. He had observed a number of cheap novels scattered about the house, but he had not thought it worth while to say anything until a fitting opportunity should offer itself. A basket of apples stood upon the floor, and he said:

"Empty those apples, and take the basket and bring it to me half full of chips. And now," he continued, "put those apples back into the basket."

When half the apples were replaced, the son said:

"Father, they roll off—I can't put in any more."

"Put them in, I tell you."

"But, father, I can't put them in."

"Put them in! No; of course you can't put them in. Do you expect to fill a basket half full of chips, and then fill it with apples? You said you didn't know how you fell behind at school, and I will tell you. Your mind is like that basket; it will not hold but about so much; and here you have been the past month filling it up with something worse than chips—worthless, cheap novels."

The boy turned on his heel, and said:

"I see the point."

WHAT THE OLD COW DID WITH HER CALF.—Mr. Knox's cow had a calf on the 4th of July, and probably thought a 4th of July calf was too good to lose, so she hid it in the pasture, which is a half-mile from the barn. The cow was driven home at night with several others, going quietly along as if nothing had happened, leaving the calf in the lot. Arriving at the barn, it was discovered, and she was milked and returned to the pasture, and a search made for the calf, but to no purpose. She had hid it, and could not be prevailed upon to reveal its hiding place. The search was renewed the next day, with the same result. She would not go near it when any person was in the lot, and she was driven home that night, where she remained until morning, when she returned to the pasture with the other cows. On Sunday afternoon some 12 or 15 children and young folks, having heard of it, went to the pasture in search of the calf. The cow, all the time watching their movements in an unconcerned manner, would not betray its hiding place until one of the party, standing on a rise of ground, imitated the calf by bleating, when she started at once down into a hollow among the bushes calling for it, and it was discovered. The calf was very much frightened when it saw the children, and ran off. They then left her for a few minutes, and she hid it again in another place, but this time it was soon found.

## GOOD HEALTH.

## Recreation.

"All work and no play  
Makes Jack a dull boy."

Poor poetry, but right good sense. As a people we need more recreation. We are desperate workers. Many of us are wasting our vital forces at a fearful rate, without taking sufficient measures to re-create them; a balance in bank subject to such drafts will soon be overdrawn. We must keep it good with fresh deposits or we shall soon have an awkward account on our hands to settle. Enough to eat but no appetite, nervous headaches, sleepless nights, heavy doctors' bills, expensive visits to "the springs," doleful company, regaling their friends at breakfast, lunch, dinner and "between times" with their doleful symptoms, will all be in the bill to foot. Better learn to be happy, instead of miserable, at less cost. But a noted English physician has just been telling the world, through the *Gentleman's Magazine*, that we must learn to turn work into play and play into work. It is drudgery that wears. We need to take pride and delight in our work, get up a little enthusiasm that turns it into a good game of skill. The workman shoveling rock on the macadam, or mixing the bed of mortar, ought to be able to say when he is done, "That's a first-rate job; beat it who can?" Then no less than the painter or the poet he feels the stimulus of an ideal. Every stroke is a pleasure and as he looks back on his finished task honest pride and a good conscience are like lingering music in the soul. On the other hand nothing is more dreary than the effort to be amused. A more pitiable sight rarely pains the eye than the "gentleman of leisure" who has plenty of money and nothing to do but play. He hangs heavily on himself. Killing time kills the killer. To live well we need to learn to work sportively and play in earnest.—*Work and Play.*

NEW DISEASES.—Prof. Winckel, the director of the Royal Lying-in Institution at Dresden, has reported to the Congress of Children's Doctors, lately held in Berlin, observations upon a mysterious children's disease, which he had an opportunity of clinically studying in his own institution. An epidemic broke out toward the end of March. Of 23 children attacked, 19, or 82% died, and the average duration of illness in the fatal cases was 32 hours. The illness began with a sort of sudden stupefaction of the children. The respiration became hoarse, accompanied with groaning and occasional foaming at the mouth. The change in the blood was remarkable. Dr. Winckel made incisions in some cases, but it was only by using pressure that he was able to squeeze out any blood. It was a thick, brown-black fluid, of the consistency of syrup. The body became flacid, the liver much swollen; presently convulsions supervened, during one of which the child expired. The President of the Congress, Privy Councillor Dr. Gerhardt, of Wurzburg, suggested that this new disorder should be designated "Winckel's disease." Another disease has become apparent in the heart of a very crowded portion of London. It is a new form of Cyprus fever, and a diagnosis of a recent malignant case shows the patient to be suffering from hallucinations and lowered vitality. The faculty ascribe the disease to impure water, and have given it the name of detephobia, and, though it is seldom fatal, the sufferer remains but a shadow of his former self.

BLACKBERRY ROOT GOOD FOR SUMMER COMPLAINT.—We have great faith in a decoction of fresh blackberry root for looseness of the bowels. Last summer it completely cured a severe case of chronic diarrhoea, after the other remedies of the best physicians had proved unavailing, and it invariably cured in many other cases where it was afterward recommended. Dig the green roots, rejecting those that are large and woody. Wash thoroughly clean, and steep in water at the rate of a quart to half a pound of the root, boil down one-half and then strain or pour off. Put the liquid in a bottle with about one-eighth of its bulk of brandy, whisky, or alcohol, to keep it from souring, and cork tight. A tablespoonful of this, rather less for a child, is to be taken three or four times a day, say before each meal time. We would not go from home, especially southward, without taking this preparation along. The blackberry brandies or cordials made from the berries are of little account as remedies for the diarrhoea. The virtue lies in the roots, not in the berries.—*Agriculturist.*

CARBOLIC ACID INHALATION.—The inhalation of carbolie acid spray (two per cent. solution) in phthisis has been tried in the Mount Sinai Hospital, New York. The first case had fetid expectoration, with an average temperature of 102½°. The first effect of the inhalation was to increase to a marked extent the sputa, but at the same time to check the fever. The most important effect of the inhalations was to decrease the temperature from 102° to 101°, 100°, and 99°. In some of the cases carbolie acid acted as an irritant, giving rise to considerable spasmodic effects, and in these cases salicylic acid was substituted. The latter agent did not produce such a decided effect on the temperature, but its action on the fever was equally marked.—*Medical Times.*

## DOMESTIC ECONOMY.

ROAST MUTTON VENISON STYLE.—A saddle of mutton is very fine prepared as follows: Wash it well inside and out with vinegar; do not wipe it, but hang it up to dry in a cool cellar; when the vinegar has dried off throw a clean cloth over it to keep out the dust. On the next day but one take down the meat and sponge it over again with vinegar; then put it back in its place. When the vinegar has dried off, wet it again, repeating this process three times a day, keeping the meat hung in a cool place and covered. When ready to cook wipe off with a dry cloth, but do not wash it. Roast, basting for the first hour with butter and water, afterwards with the gravy, keeping the meat covered with a large tin pan for two hours. A large saddle of mutton will require four hours to roast; when done remove it to a dish, and cover to keep it hot. Skim the gravy and add half a cupful of walnut or mushroom ketchup, a glass of Madeira wine, and a tablespoonful of browned flour. Serve with red currant jelly.

BEEF FILLETS WITH VEGETABLES.—Cut some rump steak in slices half an inch thick, trim them all to the same size in the shape of cutlets, and lard them finely and thickly with fat bacon; lay them out, the larded side uppermost, into a baking dish, and put in as much rich stock or gravy as will come up to but not cover the larding; cover the dish, and place it in the oven to braise gently for half an hour, then remove the cover, baste the fillets with the gravy, and let them remain uncovered in the oven for the larding to take color. Take equal quantities of carrots and turnips, cut into the shape of small olives, parboil them, then toss them in butter separately until done. Melt a piece of butter in a saucepan, add a little flour, mix well, and put in as much of the gravy in which the fillets have been braised as will make enough sauce; stir well, add the vegetables, and when quite hot arrange them on a dish with the fillets round them, and serve.

FLOWERS FOR THE TABLE.—Set flowers on your table—a whole nosegay if you can get it, or but two or three, or a single flower—a rose, a pink, or daisy, and you have something that reminds you of God's creation, and gives you a link with the poets that have done it most honor. Flowers on the morning table are especially suited to them. They look like the happy awakening of the creation; they bring the perfume of the breath of nature into your room; they seem the very representative embodiment of the very smile of your home, the graces of good morrow; proofs that some intellectual beauties are in ourselves, or those about us, some Aurora (if we are so lucky as to have such a companion) helping to strew our life with sweetness, or in ourselves some masculine wilderness not unworthy to possess such a companion or unlikely to gain her.—*Leigh Hunt.*

PINEAPPLE CAKE.—A couple of hours before bringing the cake on the table, take a very ripe, finely-flavored pineapple, peel it, cut as thin as wafers, and sprinkle sugar over it liberally; then cover it close. For the short-cake take sufficient flour for one pie-dish, butter the size of a small egg, a tablespoonful or two of sugar, the yolk of an egg, two teaspoonfuls of baking powder, a very little salt, and milk enough to make a very soft dough. Do not knead the dough, but just barely mix it, and press it into the pie-plate. The baking-powder and butter, sugar and salt, should be rubbed well through the flour, and the other ingredients then quickly added. When time to serve, split the cake, spread the prepared pineapple between the layers, and serve with nothing but sugar and sweet cream.

JUGGED HARE.—Shin the hare, and cut it in pieces, but do not wash it; dredge it with flour, and fry it a nice brown in butter, seasoning it with pepper, salt, and cayenne. Add about a pint and a half of beef gravy. Put the pieces of hare into a jar, add one small onion stuck with four or five cloves, a lemon peeled and cut, and pour in the gravy. Cover the jar closely to keep in the steam; put it into a deep stew-pan of cold water, and let it boil four hours; but if a young hare three hours will be sufficient. When done, take it out of the jar, and shake it over the fire for a few minutes, adding a tablespoonful of mushroom ketchup, two glasses of port wine, and a piece of butter rolled in flour, with some fried forcemeat balls. Serve with red currant jelly.

INSOLUBLE CEMENT FOR BOTTLES.—Softened glue in cold water and melt it in the water bath to form a very thick paste. To this add good glycerine in quantity equal to the dry glue taken, and continue the heating to expel as much of the water as possible. This may be cast on a marble slab to cool, and melted for use as required. This is not soluble in alcoholic liquids.

SHIRRED EGGS.—Break six eggs into a basin; add to them one ounce of fresh butter and a little pepper and salt; melt one ounce of butter in a small saucepan, then pour in the eggs; keep stirring until they are set; serve on toast. They are also very nice served with fried bacon.

TREMONT-HOUSE MUFFINS.—Four quarts of flour, one teacup of sugar, one teacup of butter, cup of yeast, four eggs, a little salt, two quarts of sweet milk; let mixture rise all night; bake in muffin rings.





DEWEY &amp; CO., Publishers.

A. T. DEWEY. W. B. EWER.  
Office, 203 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line..... .25 .80 \$2.00 \$ 5.00  
Half inch (1 square).....\$1.00 \$3.00 7.50 24.00  
One inch.....2.00 5.00 14.00 40.00

The Scientific Press Patent Agency.  
DEWEY & CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. G. H. STRONG

SAN FRANCISCO:  
Saturday, August 9, 1879.

## TABLE OF CONTENTS.

**EDITORIALS.**—Hydraulic Rams for Farm Uses; Northeastern San Joaquin; Wool in Wyoming; Tule Land Owners; Proposed State Horticultural Society, 81. Grape, Fruit and Flower Picker, 85. The Week; An Infamous Business, 88. Landscape Gardening—No. 2, 89. Fourteenth Industrial Exhibition, 92.

**ILLUSTRATIONS.**—Hydraulic Ram, Elevating Water for Irrigation, 81. Larva and Imago of Prionian Beetles, 85. Week's Grape Fruit, and Flower Picker, 89.

**QUERIES AND REPLIES.**—The Feeding Value of Marrowfat Squash; Cuczo Corn and Teosinte; Strawberry Growing; Separating Barley from Seed Wheat; Mimulus Cardinalis; The Glanders Case; Influence of Irrigation on Citrus Trees; Tan-bark and Tar for Fruit Trees, 83.

**POULTRY YARD.**—Diseased Fowls, 83.

**THE DAIRY.**—Dairy Notes in Los Angeles County; Burr Clover as a Dairy Forage Plant, 83.

**ARBORICULTURE.**—American Forests, 83.

**HORTICULTURE.**—Fruits in History; The Best Fruit to Cultivate—No. 1, 83-90.

**PATRONS OF HUSBANDRY.**—The State Agricultural Society and the Grange; Grange Suggestions; A New Grange Wanted in Tehama County, 84.

**AGRICULTURAL NOTES** from the various counties of California and Oregon, 84-85.

**NEWS IN BRIEF** on page 85 and other pages.

**HOME CIRCLE.**—Sometime (poetry); Woman's Influence in the Home; Thimble Manufacture; Wagner on His Own Music; Excessive Self-Depreciation. Highly Seasoned Food Promotive of Intemperance; Chaff; Mother's Sewing, 86-87.

**YOUNG FOLKS' COLUMN.**—Our Puzzle Box; The Reason Why; What the Old Cow did with Her Calf, 87.

**GOOD HEALTH.**—Recreation; New Diseases; Black-berry Root Good for Summer Complaint; Carbolic Acid Inhalation, 87.

**DOMESTIC ECONOMY.**—Roast Mutton Venison Style; Beef Fillets with Vegetables; Flowers for the Table; Pineapple Cake; Jugged Hare; Insoluble Cement for Bottles; Shirred Eggs; Tremont-house Muffins, 87.

**ENTOMOLOGICAL.**—A Monster Borer in Walnut Tree; The Mountain Grasshoppers; Grain Aphid in Humboldt County, 89.

## Business Announcements.

The Voice of Worship, Oliver Ditson & Co., Boston.  
Chromo Cards, J. B. Husted, Nassau, N. Y.  
Situation Wanted, "Manager," Placerville Cal.

## The Week.

The event of the week in the city has been the opening of the Mechanics' Institute fair. The grand pavilion, which has held so many interested throngs, again opens its doors to welcome to the seekers for sights to instruct or entertain, either in the weighty matters of material and industry, or in the light embodiments of natural or artistic beauty. In the ponderous machine or the massive product of the soil, in the forms and colors of the picture gallery, in the beauty of growth in the garden, in the stirring music of the band or the gentler melody of the running water in the grotto, certainly there are matters to meet all tastes and moods and make the grand display an object to come from afar to enjoy. The opening was on Tuesday afternoon, and the stirring address of the President, Irving M. Scott, was well attuned to the keynote of the nobility of labor which is embodied in the uprising of the Institute and the success of its efforts. Nor were the other literary exercises less appropriate. The fair is doubtless well begun and its future well assured. The agricultural features of the display will be more complete than ever, and will, we trust, be in some sense representative of the progress of the coast in this specialty of labor in which our readers are most interested.

In the country the busy season continues and the days have been truer to California than most days of the year thus far. It fills one with life and joy to go abroad in the vivifying air which clothes this coast. "Happy are they who live in California!" exclaimed a friend lately returned from the boiling summer of the East, and similar is the cry of those who fly hither from the pinching frost of Eastern winters. Thus we are twice blest, in summer's dry air which makes heat a light burden, and in the constant warmth of California's winter. Extremes are of iron force; the mean is golden; the mean is California.

## An Infamous Business.

May the curse of God rest upon an impious traffic which is robbing our State of its manhood; turning the feet of our sons away from the paths of industry, and transforming our sober and industrious fathers into condemned criminals. It certainly would seem that enough of disgrace and destruction has already been visited upon our homes to warn all those who have anything of self-esteem and family love remaining, to shun an indulgence which saps their strength, distracts their minds, casts to the winds the fruits of a life-time's labors, and leads them to deeds which bend their heads with shame and plunge their families into the depths of despair. But the end is not yet. Infatuation still leads men to pursue gain, even where loss and ruin are sure to be found, and the community, while it pours out its sympathy for the fallen, still accords respectability to a traffic which should be held in the deepest detestation for the evil which it brings upon society.

Instances recur which are so like hundreds which have gone before that the details need hardly be recited. A man, with a beautiful home, a devoted wife and a group of lovely children; a man who, by nearly 20 years of constant devotion to the interests of his employers, had won their fullest confidence, and who stood before the community as a model of unyielding industry, suddenly appears a confessed criminal, and in a day is transformed from an apparent promoter of public virtue to an enemy of society, who has his liberty only at the price of pledges from his friends. Does anyone need to be told the cause of the transformation? Is it necessary to tell again how the glittering snares of the stock gambler entrapped the feet which trod so firmly the path of virtue and industry; how the mud was turned from its sober thoughts and honorable ambitions by the visions of short-cuts to fortunes; how the blinding promises were false as perdition, and yet so alluring that he who pursued them was led in the deeper, until the funds of employers, confidently entrusted to his care, were secretly appropriated to feed the unholy fire of the gambling passion; how the theft was ere long discovered, and how the bars closed in the wreck of reputation and of honor, while tears flow in the home and heartfelt sympathy and regret fill a neighborhood.

But what use is it to recite such painful incidents when the evil seems to grow the while? No sooner does some wretched conspiracy of impious men fall into the hands of the police than another, even more glaring, springs into view. And the people—poor, senseless throng—crowd the counters of the swindling cormorants giving their hard-earned savings in return for naught but worthless promises. For a few days the gold pours in, and then the throng comes some morning to find the doors closed and their treasures gone beyond recovery. One would think that these specious frauds would be recognized by the shallowest brain, and yet experience proves that victims are always ready to jostle one another in the rush to ruin. It is plain that there should be some power to guard the people against these coarser forms of fraud, for these are the traps that catch the poor and the unwary. There is one thing that the public should demand from the press, and that is, that the insidious snares should not be spared in the public prints. What use is it that the editorial columns of our dailies waru people against them so long as their glittering advertisements are received by the publishers? What use to preach virtue when the hauds are filled with the rewards from vice? The press is a sharer in the fortunes made by ruining homes and wrecking lives, and so long as this is true, the friends of humanity will have cause to mourn.

The public has its eye open to the evil, and yet it lives. In the city, some business houses which employ many men have their spies abroad and as soon as any man in their employ takes a hand in stocks, he is watched and his accounts scrutinized daily. What better evidence could be had of the way in which the business is regarded by our leading men? And yet the evil grows. Not satisfied with the gambling in railway and other securities at the East, they have introduced the California system, and already victims are falling just as men fall when plague settles down upon a city. Only last week it was a bank officer who went down to perdition in New York, by breach of trust, through gambling in stocks. Thus, east and west, the evil spreads, and distrust rises as virtue sinks. What can save the people? Nothing, unless each one works to save himself, and to spread a truer idea of the danger. Let it be understood that whoever enters the business in any form places his foot upon dangerous ground, which may ere long part and engulf him. As a man values his reputation; as he loves his home, his wife, his children; as he values a right life here and cherishes a hope beyond, let him shun the evil—the crowning evil of the day.

Of a grand total of 94,842 men in the British army, 62,860 belong to the Church of England, 20,872 are Roman Catholics, 7,125 Presbyterians and 3,985 of other denominations.

At Liverpool wheat is quoted at 8s 6d@9s 8d for average California white, and 9s 6d@9s 10d for club.

## QUERIES AND REPLIES.

## The Feeding Value of Marrowfat Squash.

EDITORS PRESS:—Can you not give us some analyses or other data for determining the comparative value of our field squashes as compared with some other crops grown for cattle food?—E. BERWICK, Monterey.

The best study of the composition of pumpkins and Marrowfat squashes (which are generally dubbed "pumpkins" in this State) has been made by Prof. F. H. Storer, of the Bussey Institution, Massachusetts. From his published paper on this subject we learn that the composition of the different parts of the Marrowfat squash is as follows:

	Water.	Ash.	Albumen-oids.	Carbohydrates.	Fiber.
Flesh.....	89.65	0.73	0.96	7.47	1.19
Rind.....	85.65	1.49	2.51	7.19	2.86
Seeds, etc.....	72.35	1.70	5.75	15.72	4.48

It will be noticed that the seeds are very rich in albumenoids, or blood and tissue formers; also in carbohydrates, or substances like starch, sugar, oil and the like, which are employed in maintaining heat in the animal structure. This storage of rich matters in the seed is a well known habit of plants. The rind is much richer in albumenoids than the flesh, and every cow of Grahamite proclivities should insist on having her squash with the shell on. This analysis by Prof. Storer, while it represents the composition of the vegetable more accurately than any other analysis on record, segregates the parts so that it is hard to compare the squash with alfalfa, beets, etc., of which the analyses at hand embrace the entire substance. Therefore, we shall take from the tables of Prof. Emile Wolff, of the Royal Academy of Agriculture, at Hohenheim, Wirtemberg, certain analyses which may exhibit the comparative qualities which our correspondent desires. We select from the tables only those constituents which are denominated "digestible nutrients," or those which are directly available as food:

	Albumen-oids.	Carbohydrates.	Fat.
Green corn fodder.....	.07	7.4	.02
Dry corn fodder.....	3.20	43.4	1.00
Potatoes.....	2.10	21.8	.2
Carrots.....	1.40	12.5	.2
Manure.....	1.10	10.0	.1
Rutabagas.....	1.30	10.6	.1
Turnips.....	1.10	6.1	.1
Sugar beets.....	1.00	16.7	.1
Squashes.....	.40	7.1	.1

From this review of various vegetables used as cattle food, it appears that squash is of the least value. It is better than green corn fodder in blood and tissue formers, but it is even less valuable than this fodder in heating substances. As compared strictly with the various root crops, squash is quite inferior. The good points found in practice in feeding squash result from its use in connection with substances rich in flesh formers, as for example, alfalfa green and alfalfa hay, or bran, bean meal, oil, meal and the like; it then doubtless has a grateful effect upon the system and is profitable to use, because it can be produced in great quantities and fed easily. But the comparison of nutritive value, bulk with bulk, of squash and the root crop gives the latter a decided advantage.

In connection with the extremely low price of potatoes at this time, the mention of their food value in the above table will be of especial interest. These depressed tubers are being gathered in by our stock men to some extent. One of our leading sheep breeders, Mr. Woolsey, of Berkeley, told us the other day of a purchase he made for sheep feed. Succulent food like potatoes and root crops is well worth attention when it can be had at a low price, because it is of great value in toning up the systems of animals while they are running on rich dry feed. It is also marked in its effect upon the secretion of milk, and is therefore indispensable in the dairy as in the ewe-flock.

## Cuzco Corn and Teosinte.

EDITORS PRESS:—Cuzco corn has proved very successful in Chile. It grows very tall, in fact has the tallest stalk I ever saw, is very slim, hard, and of a dark green color; it bears three large cobs, which are high up above the ground; it takes a long time to mature, yields well, and is good eating corn when green. It is said to be good for meal for making mush, and makes splendid bread. The people here prefer the toasted flour made from this corn to any other.

I enclose you another little sample of teosinte seed—it is all I can procure. The last year's experience here goes to show, if I am to believe reports, that this article is not what it was represented to be, or else it has changed its nature very much in this climate. It will not compare with alfalfa or other grasses for cattle feed. The experiment has been tried on the hills and in the valleys with equal ill-success.—C. T. WARD, Jr., Valparaiso, Chile.

These plants are both growing in the garden of economic plants, at the University, but neither are matured enough to warrant conclusions on their merits. We shall have full reports of them ere long. As we saw the Cuzco corn it was about 10 feet high, of dark green color, the lower joints being tinged with purple. It had a stocky growth rather than the slim one mentioned by our correspondent, and rose from the ground self-reliantly—a single stem without suckers. The ears are now forming.

The teosinte, at the University, was growing well, but was not far enough advanced to disclose either notable merits or defects. At the close of the season we can tell from the Berkeley experiments, and those of Prof. Sanders, at Fresno, how the plant succeeds under the widely different conditions prevailing in the two localities. We have given the little packet of seeds to the College of Agriculture; there was too little of it to warrant offering it to our readers.

## Strawberry Growing.

EDITORS PRESS:—Will strawberries pay grown on damp land without irrigation?—S. A. CARTER, Yountville, Napa Co.

EDITORS PRESS:—In answer to Mr. S. A. Carter, of Yountville, I would say, that the finest quality and best yield of strawberries I ever had was raised without irrigation, but that was in the humid atmosphere of the ocean, where moisture is never wanting. The soil was a black clay loam about 18 inches deep, with a compact, yellow clay sub-soil. The plot was previously prepared by putting on a heavy coat of leached ashes and old, well-rotted chip manure. I do not think such results can be obtained anywhere in Napa valley without irrigation.

As to the question whether it would pay to raise them without irrigation on damp land in Napa valley, I must say I am doubtful; judging from the experiments made in the neighborhood of St. Helena. My plan would be to try it on a small scale for the first year or two. I would prepare my ground this fall by deep plowing and a heavy coat of well-rotted manure or leached ashes if the soil was heavy; no fear of making it too rich. I would get my bed in the best tilth possible, as I would for a vegetable garden. Plant as early as possible, and keep the surface well loosened with cultivator or hoe. By this means I would expect to retain the moisture near the surface. A little mulching of clean straw might be of advantage after the cultivation had to cease. I would plant several varieties of the most approved sorts, with the view of finding the varieties best suited to the climate and locality.—JOHN MAVITY, St. Helena, Napa Co.

## Separating Barley from Seed Wheat.

EDITORS PRESS:—A few nights ago I dreamt that wheat and barley had different specific gravity and that I could make a brine that would float the barley and allow the wheat to settle to the bottom. Yesterday I tried the experiment, first by putting in all the salt the water would dissolve, and found that only the shrunken barley would float. After which I added sugar and up came the last grain of barley, leaving perfectly clean wheat at the bottom of the dish. By using rock-salt, bitter honey, cheap molasses, or some other inexpensive, dense, harmless substance to increase the specific gravity of the brine, our seed wheat can be relieved of barley and oats at very little expense.—O. L. ABBOTT, Santa Barbara, Cal.

## Tan-Bark and Tar for Fruit Trees.

EDITORS PRESS:—Is tan-bark a good substitute for manure around fruit trees? What would be the effect of using it? Would it be good on sandy land or land that is very dry?

How would coal or wood tar do to protect fruit trees from the rabbit? Which would be best? Would there be any danger of the tar killing the trees?—READER.

Tan-bark would not be a substitute for manure, because it has no available amount of fertilizing material in it. Placed around the trees on dry, sandy land, it would not decay, and consequently what little plant-food there might be in it would remain in statu quo. We have seen it used as a mulch without ill effects, but even in such a situation saw-dust would be better.

Tar would restrain the rabbits, but it is reported to be injurious to the tree. Who has tried it and with what results?

## Mimulus Cardinalis.

EDITORS PRESS:—Accompanying this you will find a stem with flowers of a plant that was discovered near here and of which I should like to know the name. Please answer through the PRESS and oblige.—EMMA L. HOPPEL, Saratoga, Cal.

The plant is determined by Dr. A. Kellogg, of the Academy of Sciences, to be *Mimulus cardinalis*. It is a native of California, and was taken hence by Douglas and introduced in European gardens. It is now cultivated everywhere as the "cardinal flower."

## The Glanders Case.

EDITORS PRESS:—Tell "Reader," of Solano county, his horses have the glanders in the worst form, and men are liable to take it by being impregnated with the matter. The only remedy is to shoot them as soon as discovered. White-wash, air and clean every portion of his stables, and even tear out the stalls. Parties having valuable horses think they cannot do too much in purifying their stables. Close-confined stalls and filth have much to do in producing the disease.—R. H. CHINN, San Francisco.

## Influence of Irrigation on Citrus Trees.

EDITORS PRESS:—It has been said, that to irrigate orange, lemon, or other trees while in bloom will cause them to drop their fruit. Will those who have had large experience tell us whether the report is correct or not through the columns of the RURAL PRESS.—J. C. FRISBIE, San Diego, Cal.

**METEOROLOGICAL SUMMARY FOR JULY.**—The report of the United States Signal Service officer, of San Francisco, for the month of July, is summarized as follows: The mean height of barometer for the month was 29.934; mean temperature 58; mean humidity, 78.2; prevailing winds, west; highest barometer, 30.093; lowest, 29.30; highest temperature, 76; lowest, 51; monthly range, 15; greatest velocity of wind, 30 miles per hour; total number of miles traveled by wind, 9,149; total rainfall, .01 inches. Rainfall in July during former years: 1872, .01 inches; 1873, .01 inches; 1874, .00 inches; 1875, .00 inches; 1876, .01 inches; 1877, .02 inches; 1878, .01 inches.

No appointment for the English Mission is expected to be made until Minister Welsh returns home.



## ENTOMOLOGICAL.

## A Monster Borer in a Walnut Tree.

We give on this page illustrations of a boring larva of a Prionian beetle, like one found in the root of one of his walnut trees by Mr. Elwood Cooper, of Santa Barbara, also a perfect insect of the same genus, though probably not the same species as the larva. The larva found by Mr. Cooper was submitted to the Academy of Sciences for identification, and Dr. H. Behr, entomologist of this city, presented the following notes upon it at the last meeting of the Academy:

It is the larva of a species of *Prionus*, a genus belonging to the *Cerambycides*. It is, as yet, impossible to state the species, as these insects in their larva state absolutely show no difference. It is by no means common in the perfect state; but as it lives several years in the larva state and attains to considerable size, is nevertheless capable of inflicting considerable harm to vegetation. I had the larva of a species in full grown size for two years before the perfect insect developed, and from this I infer that, at least, they must live for three years from the egg to their final transformation. They seem to be polyphagous to a certain extent. I raised my specimens on pine wood, but I know the same species has been found in oak wood. It lives but a short time in the perfect state; the female deposits its eggs by an ovipositor under the bark of trees, from whence the young larva enters the interior. As it is difficult to detect the larva that feed upon the interior of trees, and as, even when discovered, it would be difficult to destroy it without injury to the tree, it would be impossible to save a tree once attacked. The only consolation we have to offer is the circumstance that the insect is too rare to cause any general ravages.

The color of the insect is dark brown; they have saw-toothed antennae, the nails more sharply so; the eyes are kidney-shaped and prominent.

The Prionians derive their name from a Greek word signifying a saw, and it is said that some of them saw off large limbs by seizing them between their strong saw-toothed jaws and flying or whirling sideways around it until completely divided or sawed off. The grub has no legs, apparent to the unassisted eye. Sun-scalded bark and trees weakened from any cause invite their attack. Vigorous culture is the best preventive, as it is also the best policy.

## The Mountain Grasshoppers.

Reports from the Sierra state that the grasshoppers, which have laid waste Sierra valley for two years past, are now moving toward the west. David Evans, of Long valley, tells the *Reno Gazette* that within the last ten days the grasshoppers have appeared in strong force in Grizzly valley. They came from the head of Sierra valley, where they are still numerous. Grizzly valley is at a much greater elevation; so high that grain cannot be cultivated, and nothing but grass is grown. Mr. Evans thinks their next move will be into Indian valley, whence their progress to Big Meadows, Plumas county, will be easy. And he surmises that the Sacramento valley will next year suffer from the ravages of the insects. This is at present little more than conjecture, and though the scourge should be well watched, it is too soon to become alarmed. The grasshopper of this slope is *Edipoda atrov*, and not the famous Rocky Mountain locust (*Caloptenus spretus*). It would not matter much, of course, what difference there may be in names, but for the fact that our grasshopper has not shown such migratory and devastating power as the Rocky Mountain rascal, and the probability is that in the future his grievous work will be restricted to certain localities as it has been in the past. At all events we shall hope so until there is reason to think otherwise.

## Grain Aphid in Humboldt County.

Editors Press:—Near Eureka, I found large fields of oats destroyed by a peculiar aphid, of a dead green color. It was the first instance of the kind that I ever observed. Carnivorous beetles and ichneumon flies were busy among them, and many spectators fancied that the beetles were doing the mischief, or were the parents of the lice. Doubtless many agents might be found which would cheaply destroy these aphides.—H. B. NORTON, San Jose, Cal.

The insect was fully described in our issue of June 21st, from specimens sent by James Smith, of Ferndale. It is *Aphis avenae*, Fabr. We hardly see how any application could be made cheaply and effectively to whole fields of grain, especially as the insect delays its attack until the grain is well grown, and no machinery can traverse the field. The main hope of the grower must be in the fact that conditions are rarely favorable for the great spread of this insect, and to overcome it, reliance must be had upon its insect enemies. The most effective aphid eaters are the lady birds (*coccinellæ*) and they should be spared from harm. The experimental grain plats at the University were badly infested by these aphides, but they were reduced by swarms of lady birds. A lady bird will soon clean a stem of aphides, leaving a mass of skins from which he has sucked the life juices.

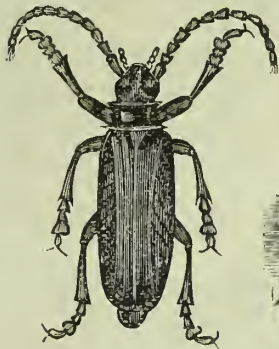
The Central Pacific engines burn between 55,000 and 60,000 cords of wood per year between Sacramento and Ogden. It costs from \$3.50 to \$3.75 per cord delivered on the track. It is all cut between Reno and Auburn.

## Landscape Gardening.—No. 2.

Written for the RURAL PRESS by J. B. ARMSTRONG.

The entrance leading through ornamental grounds to the dwelling is a study deserving great attention. Here the skill of the landscape gardener is tested, as the slightest mistake in the location of the approach is apparent to the most superficial observer. We hope the day is passed when proprietors of fine grounds contemplate square enclosures, and lanes running at right angles, like ruled lines, from the highway over pastures, woodlands and hills, to the house. Such harsh, geometrical outlines involuntarily prepare the eye to rest on the bare stone walls and iron-barred windows of a prison. Those who care for nothing but utility, and cut down fine trees because they obstruct the view of a dusty public road; and who, like Gradgrind, plan to repress every emotion and impulse, will not be persuaded to interest themselves in these matters.

The subject of drainage is one to which too much attention cannot be given. For it is a recognized fact that underdraining is of the first necessity to insure the growth of trees and



LARVA AND IMAGO OF PRIONIAN BEETLES.

plants. Nor should it be confined to low-lying lands, as very often steep hillsides are equally benefited. The elementary chapters of land improvements, whether for common farming, or ornamental uses, should begin with deep and thorough underdraining. Nowadays tile of various patterns and dimensions are within reach, and the work is not expensive. Very good drains are built with the surface cobble stones found in many regions; and it is an inexpensive plan for clearing the ground. Plank, and even brush, laid in the bottom of the drain answer very well until the material decays.

First, all the ground which is to be planted with ornamental trees, shrubs and flowering plants, should be underdrained. The main drains, lying in the lowest ground and following the curves of the valley, may be of six-inch tile and three feet deep. Side drains need not be larger than two inches. Their course should be straight down hill to the main drain. The distance apart is a question for the owner to solve. Sometimes 60 feet answers quite well; but, if the soil is spongy and holds water, 25 feet is better. The rule to underdrain is imperative, unless in exceptional cases.

Young plantations require cultivation, with-

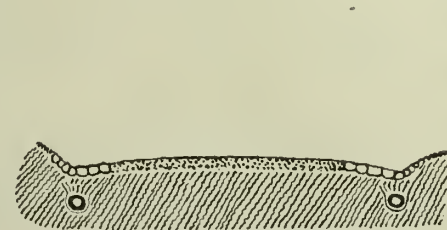


FIG. 3. ROAD BED.

out it, many of the trees die. To insure a healthy and rapid growth, the ground must be frequently stirred and enriched. This can only be done satisfactorily, at all times, by underdraining. The writer once owned a meadow too swampy for cultivation. In its middle was a hill of clay land. Having resolved to see what virtue there was in underdraining, he put down tile drains 40 inches deep and 60 feet apart. The swamp was reclaimed and plowed for corn, being the first field dry enough to cultivate the next spring. But the clay knoll, which was not supposed to require underdraining, was too wet to plow, at the time the low black land turned up as mellow as an ash heap. Had my drains only been 24 inches deep, they should have been 20 feet nearer. It is established that 40 inches is the best depth, and is the cheapest drainage for loamy soils, when it is possible to get a proper outlet.

In practice there are several plans for draining. The narrow plow land, with frequent dead furrows leading to an open ditch at the lowest side of the field, is a very good beginning. A great deal of the rain falling on the surface is thus disposed of. If, in addition, a head ditch be cut along the upper side, to intercept the overflow from other grounds, the surface drainage is well provided for. In thoroughly draining very stiff soils like adobe, besides the tile underdrains used, the surface will require the same ridged plow lands and open ditches to re-

move, as much as possible, the water falling on it.

Where tile are costly and stone scarce a triangular box of any sort of durable plank, shaped as in the figure, cut No. 4, answers the purpose for many years. If there are flat or cobble stones on the premises the drains would be imperishable and as good as tile. Tile drains are the easiest made; but care must be taken, when they discharge into an open ditch, that the last five or ten feet be through a wooden box, to avoid injury to the line during high water.

In these brief papers the writer cannot give detailed instructions on the subject of drainage; for it is but incidentally connected with landscape gardening. But, as respects the improvement of adobe lands, which there is a popular belief cannot be underdrained at all, he may be pardoned for a little further showing. There is no doubt but that there is such a strong family likeness between our adobe soil and the stiff, plastic clays of the south of England as proves their identity. The English clay is stiff. It cracks. The plow pushes it in great, unyielding clods; and, in every condition, it works like our adobe. Yet it is underdrained. A rock quarry can be drained. All talk to the contrary is rubbish. The proof is at hand for the consideration of any sensible man who will re-



flect a moment. Its capacity is acknowledged in common with other soils for absorption; that it is easily saturated, and dries, even drier than many; so that, if it be true that all clay and loamy soils absorb water which they part with in draining, then, therefore, adobe, which is a soil that absorbs moisture, can be underdrained. Any other conclusion is illogical and absurd.

In treating adobe land we would put down tile 24 inches deep. The drains must be not more than 25 feet apart. To facilitate drainage the plow lands should be the same width, ridged midway between the drains, and having the dead furrows over the tile. This throws the surface water off the land, and brings it soonest in contact with the underdrains.

## The Approach.

Road-making is another matter not to be overlooked. All carriage ways, or drives, as well as other roads on the premises, require much care in building. They should be well underdrained, and have side gutters of cobble stone to carry the surface water. The material most in use, and the best for wear, which always looks well with the green border of grass or flowers, is screened gravel. Properly constructed these roadways are durable and highly

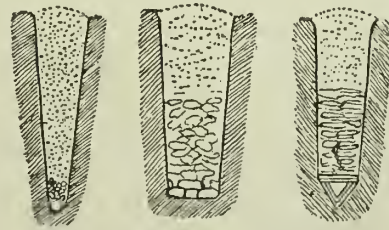


FIG. 4. UNDER-DRAINS.

ornamental. (Both asphaltum and flagstone are out of keeping with sylvan scenery.) Their location is a severe test of the skill of the landscape gardener. Any engineer can lay off curves, and set grade stakes for a turnpike or railway. But to avail ourselves of the proper lines, both vertical and horizontal, which naturally guide us in this business, is a touch beyond the theodolite of the surveyor. Close observation, and long familiarity with the work, can only point the way. A mistake in the location of the approach, either over unsuitable ground, or with reference to the direction taken, is often ignorantly made; and no expenditure of money afterwards can remedy the fault. The rule, if any exists for a level site, is not applicable to rolling lands. The plan for one undulating lawn is never fit for another. Yet there are a few suggestions to be made on this subject, which may serve as a guide to keep from going very far astray. They will be considered under their proper heads.

The width of road bed for a carriage way may be from 15 to 30 feet. Ordinarily 15 feet is wide enough for private grounds, exclusive of the gutters. The top of the road must not be higher than the lawn. It would be better every way if six inches lower, to facilitate drainage. The plan of a cross section, Fig. 3, shows its convex surface, and the position of the sewer pipes.

After the location of the approach, the first

step is to grade it and put down on each side 24 inches below the gutters, a line of six-inch tile with collars to carry the water collected by the road. These lines will, also, thoroughly drain and keep dry the road bed. Let the surface water fall through grates at suitable distances in the bottom of the gutter. A section of pipe, on end, will answer for the connection. Wherever there is a depression in the line the culvert may be of masonry, or stone pipe, so constructed as to admit the entrance of the sewer pipes. The rule is to make the culvert as large as the requirement seems to be for stress of weather, multiplied by two to meet the emergency of a flood. It is not safe to deviate from this rule.

Formed in this manner the road will always be dry; and, if the gutters are paved with cobble-stones, will be imperishable, save for the renewal of gravel. This should be screened, and placed eight inches deep on the road. Burning makes it whiter. In many places shells are used. The effect, however, is not good.

A common notion prevails that all we require for a permanent road is to make the bed of some hard substance. Accordingly, we often see stretches of public highways, across moist land, paved with boulders, and covered with dirt or gravel. After the heavy traffic of a year or so, the stone get displaced by the wheels of vehicles. Ruts are formed in the yielding soil, and the highway becomes a horrible, rough causeway of black mud and jolting cobblestones. The work was built on a wrong principle. Any competent draining engineer knows better. It is not true, to begin with, that a road, however well its surface may be constructed, will stand, unless its bed be prepared by draining. A ditch of the proper depth, fall and capacity to remove the water on each side, is the first requisite for a common country road. Then, if the enlightened roadmaster will provide for the draining of the road-bed, by placing a line of four inch tile thirty inches below the surface, in all cases where the side ditches are more than thirty feet apart, seeing to it that they are well laid, with proper outlets, he will have prepared the bed for a road that will last. It matters little what metal, whether broken stone, gravel, or clay and gravel, be put on it, there is a roadway that will last a generation, with trifling repairs.

## Bridges.

If the streams coursing through ornamental grounds be large, and the crossing not far from the dwelling, it will be well to erect a solid structure, and expend upon it considerable ornamental work. Being part of the architectural improvements of the place, it will reflect and lighten the beauties of the mansion. The abutments and arch, if any, should be of the best stone work, with a generous span, making full allowance for high water.

The graceful, pendant limbs of elms and willows, with their low, rounded outlines, are in keeping, when planted near water. No more fitting place could be found for a clump than near the bridge. A distinguished writer on the subject objects to the planting of round-headed trees on a site where rugged scenery is visible. He is the great teacher and master of the modern art of landscape gardening. Nevertheless, the writer, his warm admirer, ventures to differ from his opinion so far as to wish it could have been somewhat modified. If Mr. Downing had stated that the prevailing character of the foliage in a mountain landscape should be tall, spire firs and larches, shooting up in harmony with the Alpine scenery, then we might, without impropriety, allow a few round-topped trees on the bank of the stream; for there is the example of Nature to sanction their use. Since plants began to grow, her hand has set them near springs and along the banks of streams. They prepare the eye to meet the fountain, and do not seem out of place there. But it is also true, as he says, that the poplar, the willow, and the drooping birch, are most dangerous trees in the hands of a planter who has not considerable knowledge and good taste in the composition of a landscape. In another paper the subject of planting will be treated more at length.

Rustic bridges are beautiful in their place, as where a footpath crosses a brook. They are not designed for roadways, nor would the plan be in unison with such uses. They may be constructed of round timber retaining its bark. Enough forks and crooked limbs can be shaped into arches and ornamental parapets, with a little skill, to do credit to any rustic architect. To complete the design, the floor must be laid with slender poles, covered with bark.

Persons of good taste, who contemplate making rural improvements, usually possess the means to do so. But if such undertakings are likely to absorb all the expenditures in the purchase of land and the building of a mansion, we would advise delay. Beautifying the ground is of the first importance; all else is secondary. Any competent architect can plan and erect a commodious mansion. But it would ill assort with unkempt grounds and neglected roads and plantations. Rather bestow labor, thought and skill in the embellishment of the approach and the lawn, residing meantime in a cottage on the premises. The place will possess more attractions.

The coinage of standard silver dollars will this month fall \$500,000 or \$700,000 short of the minimum amount fixed by law.

The Cornish mines have been worked for over 1,000 years, and are entirely exhausted.



Fruits in History.

[CONTINUED FROM PAGE 83.]

sorts of plums in his garden, and all good and rare."

"The juicy pear  
By Nature's all-refining hand prepared,  
Of tempered sun and water, earth and air,"  
is a fruit of great antiquity, as the pear tree was consecrated to Minerva before the olive. It grew naturally in Syria, Egypt and Greece, and was brought to Rome about the time of Sylla. "This fruit," says Guillim, in his "Display of Heraldry," "was ordained for the comfort of man; but the devil's imps used the pear to a wicked end when the monks of Swinested poisoned King John in a dish of pears." From this tale we may conclude that pears were grown in England before King John's time.

A fruit equally ancient is the pomegranate. While the Israelites sojourned in the wilderness it was one of the ornaments of the robe of the Ephod. It figured largely in the Temple of Solomon, and from that king's writings we infer a rich wine was made from it in Judea: "I would cause thee to drink of spiced wine, of the juice of my pomegranates." The prophet Joel also refers to it. The Grecians believed that it grew in their Elysian fields, and it was of this fruit only Proserpine had eaten during her detention there. Granada, in Spain, takes its name from this fruit which, on being brought from Africa, was planted there; and it still forms the arms of the province, being carved or painted on all the public buildings. It was introduced into England in 1545; but it seldom comes to perfection in the open air.

The Parisians are extremely fond of this tree; it may be seen in nearly every garden in the city. In Sicily it forms the hedge-rows. In Syria it is the favorite tree of the nightingale; and Russel notices "the nightingale's singing from the pomegranate groves in the day-time, and from the loftiest trees in the night;" a fact Tom Moore has thus beautifully expressed:

"The nightingale now bends her flight  
From the high trees, where all the night  
She sang so sweet, with none to listen;  
And hides her from the morning star  
Where thickets of pomegranate glisten."

But most famous of trees in all ages is the apple tree, the fruit of which—

"Brought death into the world, and all our woe."

Not only Scripture asserts this fact—a universal tradition supports it. Aphrodite, as well as Eve, holds it in her hand; and underneath the apple tree Woden, Thor and Freyja lie. Deeper still, in the more ancient world, into which these deities never intruded, among the primeval races of Egypt and Assyria, the same tradition is written on their vast monuments. In classical history it plays a most important part. Hercules seeks them in the gardens of the Hesperides. Ulysses longs for them in the gardens of Alcinous. It was one of the fruits that tantalized the Phrygian king in Hades. In the Arabian tales it has the gift of healing. In Mohammedan theology its perfume dismisses the souls of the dying. In the Edda the gods eat it to renew their youth; and wherever the Cross or the Crescent is the symbol of religious faith it is used in divination and love-spells.

Apples were highly valued by the Romans; and Pliny speaks with great honor of the first grafters, especially of Appius, of the house of Cladius, who grafted a quince upon an apple stock, and thus produced the famous *Appiana*, an apple of exquisite flavor and perfume. Whittaker thinks the apple tree indigenous to Great Britain. Certainly the word "cider" is only a slight change of the "seider" of the ancient Britons. As late as the reign of Henry VIII. it was a felony to purposely injure an apple tree.

We know as little of the first makers of cider as we do of the first makers of wine. The drink was well known to the Greeks and Romans, and the African Fathers Augustine and Tertullian name it.

The apple tree is perfectly naturalized in America, and the spontaneous production of such fine varieties as the Baldwin, Swaar and Spitzenburg show perfectly the soil and climate are adapted to it. The early French settlers were great fruit planters, and there are still noble apple trees and pear trees grown from the seeds planted by them at their early posts and settlements.

I have left myself little space in which to speak of the vine, a plant whose tendrils have entwined themselves deep into the heart of history and humanity. From Noah's conduct immediately after the flood, it is evident that the culture of the grape and the making of wine was known prior to that event; and the sin of drunkenness may have been one of those so emphatically punished by heaven. Egyptian traditions point to its cultivation from time almost immemorial; and among the Hindoos, Bala Rama, the giver of the vine, has an equal antiquity.

All scholars know how intimately the grapevine clings to every phase of ancient life, domestically and religiously; and we even meet with records of its careful cultivation in far northern countries penetrated by Roman civilization. Tacitus speaks of the English vineyards, and in Alfred's laws they are referred to. They are mentioned in Doomsday-book thirty-eight times; and Geoffrey, of Monmouth, says: "Without the city (London) gates the old Roman vineyards still put forth green leaves and clusters in the plains of East Smithfield, and the fields of St. Giles.

France, in 1844, could send to the gardens of

Luxembourg two thousand varieties, all grown in her own provinces. Andalusia cultivates two hundred and fifty varieties. Tuscany is one continuous vineyard and *Corpo di Baccio*—still the common expletive of the people. To speak of the Rhine, is to call up grape-covered hills and terraces. Hungary claims some of the richest growths, and among them the peerless, highly phosphorated vintage of Tokay, mythical as that of Shiraz.

In North and South America the grape is indigenous. Some of the wild vines of Texas have trunks ten inches in diameter. In 1684 the vines of Delaware, training themselves over the mulberry trees were a decided feature of the country. In 1683 Wm. Penn planted a vineyard in Philadelphia. In 1826 the Catawba was found growing spontaneously in a garden near Washington, and it immediately attracted attention. American varieties are now numbered by the hundred, and the vineyards of the Eastern States, merely in the item of packing fruit, are of vast importance.

Of all plants, the vine is the most generous and good-natured, the friendliest and most affectionate. Other crops drain the land; the vine gives more than it takes. It loves to climb and cling, it has so much to say to every tree near it, and it supports itself confidently on the stateliest of them. It throws out tendrils here and there, and stretches out arms full of purple or translucent clusters to all who seek its shelter. Therefore, as Ralph Waldo Emerson sings:

"Give me of the vine,  
Whose ample leaves and tendrils, curled  
Among the silver dew of heaven,  
Draw everlasting dew;  
Wine of wine,  
Blood of the world,  
Form of forms, and mould of statues."

—Amelia E. Barr, in *Baldwin's Monthly*.

The Best Fruit to Cultivate.—No. 1.

EDITORS PRESS:—As I have been frequently asked for information with regard to selecting kinds, and varieties of kinds of fruit for profitable cultivation, I would like to make a few suggestions to all interested in fruit culture, through the PRESS, as by this means I can benefit more persons wishing such knowledge than in any other way, if it is a benefit at all. To do justice to this subject requires more than a few hasty thoughts, or a few casual observations. There are a good many conditions involved in this question, and the first is what kind and variety of fruit is in demand in the market in which you expect to sell; and whether your facilities are good for getting to such market with your fruit in good condition and in season. Next, is your location suitable for growing such fruit to a good degree of perfection; and third, are you prepared to cultivate, gather, and market such fruit in good order, and at the proper season to get good prices.

To settle these questions satisfactorily, you see, requires some investigation, and a little experience would not be amiss. Let me illustrate: Suppose, in looking over the reports in the PRESS on the cultivation of fruit, you find that some persons in Santa Clara county, for instance, have been very successful in growing and marketing Bartlett pears, and you learn by observation or inquiry that the soil on which the pears grow is in appearance just like yours, and you have as good facilities for getting to market as they have, and you can't see why you can't grow Bartlett pears and make money as well as others. So you go at it and plant your orchard of Bartlett pears, and, with proper cultivation, you soon have nice trees, full of pears, but to your dismay the fruit is rather small and not of first quality in flavor, and you can't see where the difficulty can be; but so it is, and your fruit lags in market, and there is no money in it, while your neighbors just over the mountains are getting rich selling pears.

Just such disappointments will occur, unless we pursue the proper course to prevent them, and now you will ask, how are we to know if we can safely engage in the growing of certain varieties of fruits. There is always some uncertainty about it, until it is actually tried; but with proper care we may come to tolerably correct conclusions. Perhaps I may as well tell you how I did, in selecting fruit for my orchard, and then, with proper improvements on my way, you may succeed. I first studied the nature of the soil and climate where I had located, in order to determine what to plant, and then took a tour of "observation" throughout the country, in order to see how such fruit as I had thought of planting was doing in similar locations, and with careful investigation and comparison of soil and climatic influence, I came to a conclusion about the matter, and, so far as I have tested them, they hold good.

I will mention some kinds of fruit that can be grown in all locations similar to mine, and made profitable. One is the yellow Newtown Pippin apple. This apple comes as near growing on all soils as any other apple, and with proper cultivation and care in gathering and marketing, you may depend on good returns. All things considered, it is the best market apple grown. It is a regular and prolific bearer, a long keeper, and a universal favorite in market, late in winter and spring. I will mention one other, the Winter Nellis pear, in this article, and defer others for the next. With good cultivation this pear does well in this region, and if properly gathered and marketed pays largely on the outlay, as it is always ready sale and high price, but they must be of good size and well handled.

Soquel. M. P. OWEN.

DEWEY & CO.

American & Foreign Patent Agents,

OFFICE, 202 SANSOME ST., N.E. COR. PINE, S. F.

PATENTS obtained promptly; Caveats filed expeditiously; Patent Reissues taken out Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences Prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Agency Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons; and our success and business are constantly increasing.

The shrewdest and most experienced Inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

Foreign Patents.

In addition to American Patents, we secure, with the assistance of co-operative agents, claims in all foreign countries which grant Patents, including Great Britain, France, Belgium, Prussia, Austria, Baden, Peru, Russia, Spain, British India, Saxony, British Columbia, Canada, Norway, Sweden, Mexico, Victoria, Brazil, Bavaria, Holland, Denmark, Italy, Portugal, Cuba, Roman States, Wurtemberg, New Zealand, New South Wales, Queensland, Tasmania, Brazil, New Granada, Chile, Argentine Republic, AND EVERY COUNTRY IN THE WORLD where Patents are obtainable.

No models are required in European countries, but the drawings and specifications should be prepared with thoroughness, by able persons who are familiar with the requirements and changes of foreign patent laws—agents who are reliable and permanently established.

Our schedule price for obtaining foreign patents, in all cases, will always be as low, and in some instances lower, than those of any other responsible agency.

We can and do get foreign patents for inventors in the Pacific States from two to six months (according to the location of the country) SOONER than any other agents.

The principal portion of the patent business of this coast has been done, and is still being done, through our agency. We are familiar with, and have full records, of all former cases, and can more correctly judge of the value and patentability of inventions discovered here than any other agents.

Situated so remote from the seat of government, delays are even more dangerous to the inventors of the Pacific Coast than to applicants in the Eastern States. Valuable patents may be lost by extra time consumed in transmitting specifications from Eastern agencies back to this coast for the signature of the inventor.

Confidential.

We take great pains to preserve secrecy in all confidential matters, and applicants for patents can rest assured that their communications and business transactions will be held strictly confidential by us. Circulars free.

Home Counsel.

Our long experience in obtaining patents for Inventors on this Coast has familiarized us with the character of most of the inventions already patented; hence we are frequently able to save our patrons the cost of a fruitless application by pointing to them the same thing already covered by a patent. We are always free to advise applicants of any knowledge we have of previous applicants which will interfere with their obtaining a patent.

We invite the acquaintance of all parties connected with inventions and patent right business, believing that the mutual conference of legitimate business and professional men is mutual gain. Parties in doubt in regard to their rights as assignees of patents or purchasers of patented articles, can often receive advice of importance to them from a short call at our office.

Remittances of money, made by individual inventors to the Government, sometimes miscarry, and it has repeatedly happened that applicants have not only lost their money, but their inventions also, from this cause and consequent delay. We hold ourselves responsible for all fees entrusted to our agency.

Engravings.

We have superior artists in our own office, and all facilities for producing fine and satisfactory illustrations of inventions and machinery, for newspaper, book, circular and other printed illustrations, and are always ready to assist patrons in bringing their valuable discoveries into practical and profitable use.

DEWEY & CO.

United States and Foreign Patent Agents, publishers Mining and Scientific Press and the Pacific Rural Press, 202 Sansome St., N. E. corner Pine, S. F.

Grangers' Business Association of California.—Location and Principal place of business, 106 Davis street, San Francisco, Cal.

NOTICE.—There are delinquent on the following described stock on account of assessment (No. 2) levied on the 8th day of April, 1879, the several amounts set opposite the names of the respective shareholders:

Names.	No. Certificate.	No. Shares.	Am't.
Adams, John.....	1076	6	\$15 00
Allison, C. P.....	1424	1	2 50
Andrews, Howard.....	290	4	10 00
Ashley, W. D.....	992	4	10 00
Ashley, Geo. W.....	1429	3	7 50
Ashley, Angeline.....	921	2	5 00
Bailey, Robt.....	648	6	15 00
Bell, Wm.....	1369	1	2 50
Bell, Wm.....	1140	1	2 50
Beardsley, E. A.....	874	4	10 00
Bennett, Albert.....	671	4	10 00
Berry, Mrs Geo M.....	570	1	2 50
Berry, G. M.....	573	10	25 00
Benton, T. N.....	591	8	20 00
Bigbie, R. L.....	43	4	10 00
Barbour, Miss A.....	569	1	2 50
Black, W. H.....	606	1	2 50
Black, W. H.....	274	1	2 50
Blawie, W. H.....	385	2	5 00
Bliss, Geo H.....	354	100	250 00
Bouton, A.....	1157	2	5 00
Boody, J. B.....	224	4	10 00
Booth, J. B.....	1029	2	5 00
Bosworth, C. M.....	1027	3	7 50
Box, Samuel.....	502	5	12 50
Bradley, W. T.....	128	1	2 50
Brandenburg, Chas.....	1315	4	10 00
Brewster, John.....	999	5	12 50
Brann, O. H.....	465	2	5 00
Brown, Sherman.....	1530	4	10 00
Bryan, W. E.....	1529	10	25 00
Bryan, E. H.....	1528	10	25 00
Browse, H. W.....	1300	2	5 00
Bugbee, R. J.....	65	2	5 00
Burnham, John.....	488	6	15 00
Burnham, Albert.....	492	5	12 50
Burnham, Jos C.....	404	6	15 00
Burnham, Mrs Ada.....	500	3	7 50
Bricell, J. G.....	538	4	10 00
Byers, J. S.....	479	1	2 50
Byers, J. S.....	587	1	2 50
Byers, Mrs Elizabeth.....	591	1	2 50
Byers, Mrs Elizabeth.....	596	1	2 50
Byers, Alice J.....	480	1	2 50
Burnham, Belle W.....	848	2	5 00
Browse, Mrs H. W.....	1301	2	5 00
Baxter, Geo C.....	1663	5	12 50
Calden, A.....	12	4	10 00
Calden, A.....	1646	1	2 50
Calden, A.....	1674	1	2 50
Campbell, D.....	255	15	37 50
Campbell, Basil.....	259	4	10 00
Campbell, W. J.....	931	2	5 00
Camps, John.....	1162	1	2 50
Carrington, J. B.....	1525	30	75 00
Carroll, M.....	633	4	10 00
Carson, Jennie.....	116	1	2 50
Castro, Juan B.....	435	8	20 00
Castro, Juan B.....	1593	2	5 00
Capell, B. E.....	1190	2	5 00
Chapman, W. W.....	1201	3	7 50
Chapman, Mrs W. W.....	1280	7	17 50
Chance, W. H.....	1361	2	5 00
Crisman, J.....	1673	3	7 50
Church, L.....	70	1	2 50
Churchill, D. M.....	416	1	2 50
Churchill, Zenas.....	403	2	5 00
Church, L. C.....	730	4	10 00
Clark, Chas S.....	834	2	5 00
Clark, Jas A.....	011	8	20 00
Clark, Jas A.....	277	2	5 00
Clark, Annetta.....	595	1	2 50
Clark, Annetta.....	270	1	2 50
Clark, Mrs M. J.....	835	2	5 00
Clark, F. G.....	162	2	5 00
Clarke, W. J.....	1462	10	25 00
Clyde, Leslie Y.....	97	2	5 00
Coats, Lemuel R.....	1365	1	2 50
Coats, J. R.....	1373	1	2 50
Coats, Felix G.....	1381	2	5 00
Coburn, A. P.....	771	1	2 50
Coburn, H. B.....	751	2	5 00
Cole, J. S.....	1499	5	12 50
Coles, Joseph.....	397	2	5 00
Compton, James.....	1369	4	10 00
Cooper, Mrs E. D.....	106	1	2 50
Cooper, L. B.....	105	1	2 50
Cooper, M. D.....	290	2	5 00
Cook, S.....	1065	1	2 50
Cook, S.....	906	1	2 50
Coulter, Rachel M.....	1082	4	10 00
Cothrin, II. W.....	414	1	2 50
Cothrin, H. W.....	1643	1	2 50
Cox, Abbie M.....	558	30	75 00
Coulter, S. T.....	1639	5	12 50
Crook, John.....	505	5	12 50
Crook, Christ.....	509	2	5 00
Cressey, C. J.....	1446	40	100 00
Cressey, C. J.....	1446	25	62 50
Cressey, C. J.....	1446	18	45 00
Cressey, C. J.....	1620	4	10 00
Cressey, A. L.....	1446	82	205 00
Davis, Emiline.....	809	5	12 50
Davis, W. B.....	808	10	25 00
Davis, Clara P.....	775	1	2 50
Davis, R. P.....	170	1	2 50
Davis, R. P.....	1640	2	5 00
Dennis, Orrin.....	62	2	5 00
Dennis, Orrin.....	556	2	5 00
DeTurk, I.....	4974	6	15 00
Dewey, A. T.....	1456	10	25 00
Dewey, Mrs A. T.....	173	1	2 50
Dean, O.....	729	4	10 00
Diggs, D. P.....	450	4	10 00
Doak, David.....	115	1	2 50
Drake, S. S.....	309	2	5 00
Drake, S. S.....	634	4	10 00
Drake, T. C.....	1530	2	5 00
Durkee, Geo W.....	908	2	5 00
Edgington, L. T.....	104	1	2 50
Eddleman, C. H.....	1160	1	2 50
Eddleman, C. H.....	1587	5	12 50
Eddleman, C. H.....	1383	2	5 00
Eddleman, Mrs S. L.....	1370	1	2 50
Eddy, L.....	1150	2	5 00
Eddy, L.....	1364	2	5 00
Eddy, Mrs Mary C.....	1385	1	2 50
Eddy, Mrs Mary A.....	1381	1	2 50
Edwards, D. P.....	1283	20	5 00
Elliot, A. W.....	1597	2	5 00
Elliot, J. M.....	1131	1	2 50
Ewer, W. B.....	1455	6	12 50
Ewer, W. B.....	1455	5	12 50
Ewer, W. B.....	1690	10	25 00
Estey, C. L.....	301	4	10 00
Faith, Adm.....	1524	4	10 00
Fales, Orris.....	1389	5	12 50
Fales, Orris.....	1389	5	12 50
Fales, Mrs E. M.....	1390	5	12 50
Fisk, Ezra.....	1423	5	12 50
Fishback, T.....	257	4	10 00
Fishback, T.....	905	4	10 00
Finley, Mollie.....	598	1	2 50
Fleming, D. P.....	1204	4	10 00
Fortune, Amanda.....	1378	1	2 50
Foss, J. C.....	98	2	5 00
French, E. B.....	1310	3	7 50
Fulton, James.....	693	5	12 50
Gallup, E. E.....	470	1	2 50
Gallup, Youngs A.....	469	1	2 50
Gallup, Mrs L. J.....	468	4	10 00
Gallup, T. A.....	256	4	10 00
Galloway, A. J.....	1188	8	2 00



Names.	No. Certificate.	No. Shares.	Am't.
Gartleman, Daniel.....	994	2	5 00
Gartleman, Daniel.....	1001	2	5 00
Gaulding, W. W.....	691	10	25 00
Garfield, Urezilla.....	1521	2	5 00
Gamble, Abram.....	578	20	50 00
Gates, T. M.....	602	1	2 50
Geopner, H.....	744	1	2 50
Glover, A. B.....	704	2	5 00
Goff, J. H. F.....	380	2	5 00
Gould, J. D.....	1408	1	2 50
Gosling, C.....	628	4	10 00
Greenwood, H. A.....	1169	4	10 00
Grilley, Daniel.....	1046	4	10 00
Grangers' Business Association, Dixon.....	1604	71	177 50
Grover, C. D.....	1532	2	5 00
Groves, J. M.....	952	2	5 00
Groves, H. S.....	1403	4	10 00
Hall, A. S.....	1242	5	12 50
Hall, M. W.....	1142	1	2 50
Hanschlat, Tim.....	1504	4	10 00
Harris, Mrs. L.....	127	2	5 00
Harris, H. H.....	125	2	5 00
Haskell, H. W.....	1058	2	5 00
Harsha, J. B.....	1007	1	2 50
Henry, J. R.....	337	4	10 00
Hendrix, Lewis.....	1081	4	10 00
Herring, D. H.....	1480	1	2 50
Hills, H. E.....	1174	4	10 00
Holton, S. B.....	458	2	5 00
Holland, Joseph R.....	1444	2	5 00
Holliday, J. A.....	1439	2	5 00
Holliday, B. R.....	1438	3	7 50
Hooper, Wm H.....	683	2	5 00
Hudson, J. L.....	1475	5	12 50
Hudson, T. W.....	1090	4	10 00
Hunter, A. B.....	749	4	10 00
Jamison, J. B.....	672	10	25 00
Jamison, S. J.....	249	4	10 00
Jahant, P. F.....	500	4	10 00
Jackson, W. M.....	449	4	10 00
Jaspar, Ch.....	1206	1	2 50
Jansen, Jessie.....	1508	1	2 50
Johnston, Mrs. J. W.....	147	1	2 50
Johnson, John.....	600	2	5 00
Johnson, Wm.....	801	1	2 50
Jones, J. W.....	618	10	25 00
Jones, Nettie.....	654	1	2 50
Jones, R. M.....	655	1	2 50
Jones, Kate.....	1072	1	2 50
Jones, J. P.....	1491	10	25 00
Judson, Homer W.....	1248	5	12 50
Judson, Homer W.....	793	2	5 00
Kendrick, M.....	1168	4	10 00
Kirkpatrick, C. J.....	366	2	5 00
Knox, Mrs. R.....	745	4	10 00
Knox, Lewis.....	539	10	25 00
Knox, Lewis.....	565	10	25 00
Knox, Wm.....	560	15	37 50
Knight, T. J.....	882	1	2 50
Lander, Israel.....	221	1	2 50
Lacque, Aaron.....	487	6	15 00
Lacque, Andrew.....	495	5	12 50
Lacque, B.....	496	10	25 00
Lattin, Amy.....	582	1	2 50
Lattin, Amy.....	1633	1	2 50
Lewis, Chas. F.....	262	4	10 00
Lewis, David.....	344	4	10 00
Leonard, H. M.....	1319	40	100 00
Leighton, E.....	375	2	5 00
Lillick, Henry.....	730	1	2 50
Lindner, Lucinda.....	839	2	5 00
Lindner, John D.....	847	10	25 00
Longmire, Joseph.....	988	3	7 50
Longmire, Joseph.....	1010	1	2 50
Longmire, Joseph.....	1034	6	15 00
Longmire, Joseph.....	1066	10	25 00
Longmire, S. G.....	1591	5	12 50
Long, E. O.....	943	2	5 00
Long, E. O.....	336	2	5 00
Love, R. B.....	1148	1	2 50
Lynch, Wm.....	1359	10	25 00
Lyman, Callisto.....	499	4	10 00
Lyman, Charles.....	498	10	25 00
Manly, W. L.....	1170	4	10 00
Mahler, Henry.....	084	10	25 00
Manning, And.....	1204	5	12 50
Mayfield, J. M.....	99	10	25 00
Mayfield, J. M.....	1040	20	50 00
Mayfield, J. M.....	175	5	12 50
Mayfield, Rosalie.....	121	10	25 00
May, Mrs. Geo.....	1250	5	12 50
Marlin, John.....	540	20	50 00
Mann, D. D.....	506	5	12 50
Marshall, Arch.....	439	1	2 50
Malsbury, J.....	415	2	5 00
Masth, James.....	1340	5	12 50
Menzies, Thos.....	75	1	2 50
Merritt, A. P.....	185	7	17 50
Merritt, James.....	190	5	12 50
Meyers, Georgie.....	927	2	5 00
Meyers, Mary J.....	501	1	2 50
Miller, Mrs. D. E.....	501	5	12 50
Moore, T. S.....	1535	2	5 00
Moore, Alex.....	371	10	25 00
Moore, Miss E. G.....	1372	8	20 00
McCabe, H. C.....	1482	4	10 00
McCullough, C.....	399	1	2 50
McCampbell, S. S.....	1623	5	12 50
McPherson, K.....	284	2	5 00
McPherson, D. R.....	1164	1	2 50
Newton, Hollis.....	1017	2	5 00
Nebas, H. F.....	555	8	20 00
Oiler, J. M.....	773	1	2 50
Oliver, Wm.....	350	2	5 00
Oldham, Frank W.....	1008	2	5 00
Ormsby, J. H.....	1126	10	25 00
Osburn, Mrs. C.....	872	2	5 00
Parker, Catherine.....	1223	1	2 50
Parker, Nellie.....	1224	1	2 50
Parker, James.....	1225	1	2 50
Parker, F. W.....	829	1	2 50
Patterson, C. H.....	945	4	10 00
Perham, Liberty.....	535	9	22 50
Perham, Liberty.....	1010	1	2 50
Perdue, Mary.....	599	1	2 50
Pena, D.....	814	4	10 00
Pena, D.....	705	10	25 00
Peugh, James A.....	1202	10	25 00
Pilkington, Thomas.....	897	2	5 00
Pilkington, Thomas.....	358	2	5 00
Pomeroy, H.....	1338	10	25 00
Pomeroy, M.....	1683	4	10 00
Pollard, B. H. C.....	92	2	5 00
Prince, R. H.....	870	2	5 00
Prince, R. H.....	046	2	5 00
Ralston, Geo.....	13	2	5 00
Ramage, Sam'l F.....	1384	1	2 50
Reed, John A.....	1453	2	5 00
Reed, John A.....	402	2	5 00
Reed, J. T.....	376	1	2 50
Rector, W. H.....	1085	8	20 00
Rhodes, John M.....	881	10	25 00
Riley, Franklin.....	810	2	5 00
Ripley, J. M.....	445	2	5 00
Rippey, S. E.....	275	1	2 50
Robinson, Joseph.....	201	1	2 50
Rodgers, C. E.....	338	2	5 00
Roadhouse, J. J.....	229	10	25 00
Rush, R. R.....	8	1	2 50
Rush, R. R.....	1673	1	2 50
Service, John.....	890	2	5 00
Shedd, E. D.....	351	2	5 00
Slayton, O. O.....	546	10	25 00
Smith, James.....	721	1	2 50
Smith, W. C.....	1350	2	5 00
Smith, W. C.....	1594	2	5 00
Smith, Jeremiah.....	240	5	12 50
Smith, W. W.....	1107	10	25 00
Soule, A. J.....	503	5	12 50

Names.	No. Certificate.	No. Shares.	Am't.
Soule, A. J.....	1632	5	12 50
Still, James E.....	96	2	5 00
Stern, John.....	1147	2	5 00
Story, Stephen C.....	491	5	12 50
Stearns, W.....	682	5	12 50
Stearns, Mary J.....	685	3	7 50
Staley, Theo.....	1075	10	25 00
Stephens, A.....	761	4	10 00
Steuben, H. W.....	1203	4	10 00
Still, Jas E.....	96	2	5 00
Stone, Wm Z.....	1386	1	2 50
Sutton, H. D.....	665	10	25 00
Swift, Mrs. H.....	1042	1	2 50
Swift, J. J.....	1043	4	10 00
Teague, C. P.....	1050	4	10 00
Thompson, A. W.....	1471	20	50 00
Thompson, A. W.....	1047	2	5 00
Thompson, J. M.....	1135	10	25 00
Thompson, Mrs. A. W.....	1472	10	25 00
Tillotson, G. W.....	608	1	2 50
Turner, W. H.....	1503	25	62 50
Veal, Thomas.....	1257	2	5 00
Veerkamp, Francis.....	679	10	25 00
Wallace, G. P.....	702	2	5 00
Wallace, Miss G. P.....	703	1	2 50
Wallace, Miss A. E.....	704	1	2 50
Walters, J. J.....	709	1	2 50
Walters, Fannie.....	710	1	2 50
Walker, L. W.....	1191	10	25 00
Walker, Mrs. L. W.....	1194	2	5 00
Wasley, John.....	345	4	10 00
Wells, J. W.....	68	1	2 50
Wells, A.....	772	1	2 50
Webster, J. V.....	1318	20	50 00
Webster, J. V.....	1318	20	50 00
Webb, Jessie.....	195	1	2 50
West, D.....	230	1	2 50
Whitney, D. H.....	819	2	5 00
Wilson, Valentine.....	436	6	15 00
Wilson, Valentine.....	78	4	10 00
Wilkins, Edward.....	114	1	2 50
Wilson, Lavinia.....	1417	4	10 00
Wilcox, I. A.....	1298	4	10 00
Wilcox, I. A.....	1298	6	15 00
Wiswell, Mrs. N.....	1195	5	12 50
Wood, Benjamin.....	533	4	10 00
Worthington, C. H.....	733	2	5 00
Young, J. V. N.....	60	5	12 50
Young, Mary E.....	58	1	2 50
Young, Almira.....	51	1	2 50
Young, J. G.....	40	1	2 50
Yolland, Thomas.....	169	5	12 50
Yolland, Thomas.....	1287	5	12 50

And in accordance with law and an order of the Board of Directors made on the 11th (eleventh) day of June, 1879, so many shares of each parcel of such stock as may be necessary, will be sold at the office of the Secretary, No. 106 Davis street, on Thursday, August 14th, 1879, at the hour of one o'clock p. m. of such day, to pay delinquent assessments thereon, together with costs of advertising and expenses of sale.

AMOS ADAMS, Secretary.  
San Francisco, Cal., July 26th, 1879.

## Educational.

## Washington College.

The Fifteenth Semi-Annual Term of this Institution will commence on

Thursday, July 31st, 1879.

Catalogues can be had at Bancroft & Co.'s Bookstore, San Francisco, and at Hardy's Bookstore, Oakland.

For further information address

S. S. HARMON,

Washington, Alameda County, Cal.

## Seedsmen.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco



B. K. BLISS & SONS,

Importers, Growers and dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address

B. K. BLISS & SONS, 34 Barclay Street, N. Y.

## FENCING—CHAPPARAL SEED.

Parties wishing to experiment in the cultivation of Chapparal as an economical and valuable substitute for fencing, can obtain the seed in 50 Cts. and \$1 packages, at W. R. STRONG'S, Sacramento. Sent by mail.

EXOTIC GARDENS. F. A. MILLER & CO., Mission St., opposite Woodward's Gardens. Send for Catalogue and Price List.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

Engraving done at this office.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

### CATTLE.

PETER SAXE & SON, 520 Bush St., S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

### SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

### POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BUREBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Dors, etc. Eggs for hatching. Send for price list.

### SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine. Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Thoroughbred Berkshire and Poland-China Swine. Light Brahma and Black Cochins for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

### BEEES.

JOS. D. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## Thoroughbred Berkshire Swine.

A few very choice specimens of the

## CROWN PRINCE and COMET FAMILY,

Of various ages, for sale at Reasonable Prices by

A. L. SAYRE, Borden, Fresno County, Cal

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$2,500,000,

In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

### OFFICERS:

PRESIDENT.....G. W. COLBY.

MANAGER AND CASHIER,

ALBERT MONTPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1



## Opening Exercises of the Fourteenth Industrial Exhibition.

An extremely large audience greeted the managers of the Mechanics' fair at the Grand Opera House Tuesday afternoon, and the attention given to the programme evinced a more than ordinary interest. Upon the stage were seated some of the representative men of San Francisco. The exercises were opened by the rendition of the Grand Exhibition march. The orchestra, under Prof. Schultz, showed its powers as an artistic combination in its musical abilities displayed in this selection, which is an original composition of Prof. Schultz. Few selections are, in our opinion, superior to this home composition. The opening address was delivered by Irving M. Scott, Esq., in a very able manner, and his remarks were frequently applauded. The address was as follows:

### The President's Address.

*Ladies and Gentlemen:*—The progress of mechanical arts is more wonderful than the magic power of Aladdin's lamp, and illumines the aphorism, "Truth is stranger than fiction."

Bud and blossom precede the mellow fruit and golden grain; the ideal the reasoning; roseate youth, grave and philosophic age.

The early conceptions of the forces of nature, and acquisitions of science, art and religion, are full of poetic imagery.

*Principles, properties and achievements* were personified as supernatural beings.

Aeolus, Neptune, Vulcan, Minerva, Odin, Wodin and Brahma, coming to us with the mist of ages, were the buds whose after fruit gave us a Christian religion with a Divine power as its center.

The search for the philosopher's stone, the alchemist and a universal solvent, brought from crucible and closet truths upon which was founded the noble science of chemistry.

The search for a universal remedy for all diseases, with witches' spells and incantations, has blossomed into a materia medica, founded upon a correct and intelligent diagnosis, as the only substantial basis for the treatment of disease.

They who sought to forecast the future, and read their destinies in the stars with symbols and "mathematic sign," plowed the field from which astronomy reaps her golden grain.

And they whose superstitions and fears translated the electric forces into Jupiter's fulminations, hurling the fiery bolts of heaven in divine wrath, wonder at the marvelous deeds of telegraph and telephone, and await the coming harvest, whose ripening grain is so full of promise.

The architect, sculptor and painter of antiquity, rearing and adorning triumphal arches, mausoleums, amphitheaters and temples, were the avant couriers of

"First, unadorned and nobly plain,  
The manly Doric rose;  
The Ionic then, with decent matron grace,  
Her airy pillow heaved;  
Luxuriant, last, the rich Corinthian,  
Spread her wanton wreath."

The Romans add the Tuscan and composite, and from ancient rites bloom these five unrivalled orders in mechanic art.

They who sought perpetual motion and the impossible, mingling superstition and craft with honest effort, laid the rails for the ear of mechanical progress, whose telescopic eye sweeps beyond the horizon of their time; whose metallic tongue tells the world's gossip; whose analytical nose determines and defines with perfect truth all component relations; whose mechanical ear will tell the future of the present through indestructible plates; the reach of whose arms enfolds all other.

And whose achievements lead her students

"Into regions yet untrod,  
And read what is still unread  
In the manuscript of God."

Of the seven wonders of the world, representing the advancement of antiquity in the mechanic and elegant arts, with the exception of giving employment to vast labor at the price of individual liberty, and in furnishing classic models, only the *Pharos* was, so far as known, of practical benefit.

The talent, genius and study of those remote ages, seem to have been devoted largely to the art of war; luxury, ornamenting structures for games and the worship of idols.

Prior to Archimedes little progress had been made in analytical or practical mechanics. With the screw and specific gravity came the exclamation, "Give me where to stand, and I will move the earth."

The doom of Sanipson. "They put out his eyes and bound him with fetters of brass and he did grind in the prison house," indicates the use of millstones to belong to a remote age.

The improvements of the Romans in hydraulics—in using water to drive stamps and for mill purposes—though limited, is described by a writer of those days: "Cease ye maidens, ye who labored in the mill; sleep now and let the birds sing to the ruddy morning, for *Ceres* has commanded the water nymphs to perform your task."

The commerce of antiquity was mostly inland. The directive power of the magnet, the key of maritime commerce, was not known in Europe until late in the twelfth century, though the Chinese claim its discovery 2,634 years before the Christian era.

The agriculture of the ancients was carried on by rude implements; plowing with a crooked

stick. The Romans added the colter and mold board and iron shares.

Pliny the elder states in the first century of the Christian era, in the lowlands of Gaul, large vans with projecting teeth were driven on two wheels through the standing corn, the ears of which were torn off and fell into the van. A yoke of oxen pushed it before them; this was the beginning of our modern reaper.

Pottery, porcelain and glass were in some instances carried to great perfection.

Fabrics of linen and cotton date almost back to the fig-leaf.

The cere cloth from Egypt comes well preserved 4,000 years old, and hemp is as old, and silk came from the Orient 2,600 years before the Christian era.

Gold, copper, bronze, and their workings, come from the earliest times. After these came the age of iron.

The Huns, early Britons, Greeks and Romans used iron largely for armor and arms.

The residuum of the early Roman iron furnaces in the Dean forests, England, supplied 20 furnaces one hundred years. The working of iron was considered of the first importance in the arts of civilization.

Accepting the classification of Lucretius, that man's earliest arms were fingers, teeth and nails, and stones and fragments from the branching woods; then copper next, and later the tyrant iron.

As representing three periods in the progress of a nation's development from barbarism to civilization, it will be seen the Romans had made the greatest advancement. The fall of the Roman Empire stranded the Admiral of the fleet of ages. Her vast treasures were scattered, war drank the blood of millions.

One by one the lights of science, art, literature and civilization flickered and went out. Darkness settled over the world.

Centuries went and came till the genius of Copernicus, Galileo, the Bernouillis, Kepler, Leibnitz and Newton, prince of philosophers, lifted the darkness and let in the light of the brightest day since the dawn of creation.

The evolving the Copernican system of astronomy.

The discovery of the law of falling bodies.

The laws enunciated by Kepler; the laws of attraction; the principles of fluxions on the differential and integral calculus; the inventions of the telescope and time-keeper.

Problems in philosophy and mechanics, terrestrial and celestial, were resolved by the touch of a wand more potent than that of the magician.

The foundations of the grandest and loftiest temple of knowledge were laid broad and deep in eternal truth.

Chemistry rose from the mystic arts of the conjurors, to the dignity of science; the affinities of matter and the combining proportions of its atoms were established upon a firm basis; matter was shown subject to a change of form, but not to destructibility.

Geology rose from the hypothetical to the real, and students read from fossils, strata and formations, the history of the earth back millions of years.

The discoveries and inventions of the last three hundred years equal, if they do not exceed, those in all preceding times.

Rumford discovered that "heat is a mode of motion." Chemical analysis showed matter to be indestructible. More recent investigations prove force indestructible. The heat and light of the sun stored in the coal fields ages ago is now developed in the motion of the steam engine and the electric light.

The heat of the sun lifts the waters to the clouds; they fall in beneficent rain, supplying the wants of life. Every blow of the hammer, all animal movements, the heartfelt sigh, the trickling tear, the merry laugh, thought of the brain—all have their mechanical equivalent in the sun's heat.

In an enlarged view, the study and application of force in its myriad forms, taken in connection with inert matter, constitutes the province of the mechanic. His field of research is upon the land and upon the sea—in the earth and air, and in the starry heavens. Conscious that reason is heaven's richest endowment, he fearlessly follows her lead, though it be where "angels baskful loom."

Printing and printing presses—the application of steam to the engine, steam navigation, reaping machines, sewing machines, locomotives and railroads—cotton and woolen goods, and their mechanical appliances, with which a child of to-day directs the motion of six thousand spindles, and makes from a pound of cotton a thread one thousand miles long, and does over six thousand times the product of the best spinster of a hundred years ago.

Mark the progress of mechanical art.

The telegraph, telephone, electric light, photograph and spectroscope are a few culled from the vast treasures of the world.

By whose peculiar functions intelligence is communicated with the fleetness of the lightning's wings from person to person, from city to city, across continents, and through the seas.

Speech in the exact intonations of the speaker's voice addresses the ear miles away.

Or reposes for the time to discover, the present to posterity.

The electric light reappears as pure as when cycles ago it darted from its solar fireside.

The features and expression of animate and inanimate nature, terrestrial or celestial, are delineated at sight.

And the composition of the sun, stars, com-

ets, nebula, determined with the precision of chemical analysis.

Contemplating these achievements, the mind unbidden exclaims,

Science! Oh, beautiful science! How delicately frail thy youth! How often was thou prostrated in the dust by the monster ignorance! But as often rose and grew in goodly proportions till now, the Nadir is the footstool! The Zenith thy diadem and systems of rolling worlds thy toys! Atoms, myriads of suns and systems are in thy ken! And star dust in thy grasp; science, mechanics, civilization, and their economies fellow-citizens you inherit.

And in the conflict of races their fate is in your hands, you are face to face with the problem of life on a more economic basis than Californians have hitherto submitted to, and this re-adjustment shows much chaffing and discontent, which will test the principles of our pioneers.

And prepare the coming generation for their task of building homes, whose social roots must be sent straight down into the soil of truth and virtue, and manly self-reliance.

We must prove our faith in ourselves by being our own customers and keep the wheels of industry moving and the hands of labor employed at home.

These annual exhibits gather under one roof the aggregate product of our industries, and to the observing student mark our advancement or our decline.

Beginning with the rude and fragile canoe, causing but a ripple upon the water, there have arisen, as by enchantment, vast fleets, ploughing the ocean's wave in every clime, and mighty navies, whose thunders shake the foundations of rock-built cities.

These, as also the rude cabin, the cottage and palace, the halls of learning, the domed capitol of nations, the temples of justice and of worship, with their lofty and symmetrical spires, the hamlet and vast cities, the useful and ornamental, the grand and the beautiful, are all the works of the mechanic.

Not an improvement in agriculture and commerce and domestic affairs, tools in manufacturing, instruments employed in any way of the learned professions thread spun, fabric wove, article made, garment or jewel worn, nor letter printed, but that it is of the works of the mechanic; the pen and sword—the plow and gun; the implements of peace and the implements of war are alike the works of his hands.

By his efforts this is made a *live* world; the mind, individually and collectively, is refined and elevated.

Comforts are secured, and civilization rendered a fact.

The pages of history contain the declarations—

I am a physician! I am a lawyer! I am a divine! Made suggestive of the old Roman's pride, in using the password of the world, *I am a Roman citizen!* But now and henceforth let the prouder password be, *I am a mechanic.*

The poem of Miss Julia Clinton Jones, "Mechanic Art," was delivered by Mr. T. W. Keene in an unapproachable manner. The poem itself is a gem, and Mr. Keene proved himself equal to the occasion.

The "Dream of Love," rendered with cornet solo by Prof. Henry Mehden and orchestra, was so beautiful that we were sorry when the finale was rendered.

Dr. Thomas Guard, delivered the oration of the 14th exhibition in an able and interesting manner, riveting the attention of the audience by his wit and by his solemn eloquence, and we are sorry our space will not admit his remarks in full.

The closing piece by the orchestra, "Overture" by Hermann, effectively concluded the opening exercises, and declared the 14th Mechanics' fair open to the public.

**BARREL CLEANING MACHINE.**—A brewery at Mouchain, in France, has been using for some time a patented machine for cleaning barrels. Four barrels are washed at once inside and outside. In the center of the machine is a shaft on which is a piece of metal so arranged that four iron hoops about three feet in diameter can be bolted on. These four hoops have each two sheet-iron plates mounted on pivots, and between these plates an attachment screw catches the barrels. Brushes fixed on springs are placed on a hoop outside the machine, and so arranged as to touch the four barrels at the same time. The circle of brushes is eccentric to the shaft. A reservoir under the machine has hot water for washing the outside of the barrels. A chain brush is placed in the interior of the barrel. The machine is worked by an ordinary pulley fixed on the main shaft. This latter carries the four barrels round, like the sails of windmill. The exterior brushes being stationary, produce a friction on the barrels which causes them to rotate on their pivots, so that two circular movements are obtained at the same time. The tables of the screws throw water on the barrels when they come to the upper part, so that they are continually kept wet.

The United States Consul at Gibraltar has been threatened with death unless \$3,000 is forthcoming.

The severest storm for years raged in England Saturday night, causing great damage.

**SEA WEEDS FOR THE HERBARIUM.**—The recipe for pressing sea weeds for preservation used by the Rev. A. B. Hervey, of Troy, N. Y., well known as an expert in that process, is as follows: Float out each specimen by itself in salt water, in a white dish, like a washbowl. Put the paper under the plant in the water; arrange the plant on the paper and carefully draw it out. Lay the paper with the plant upon it on drying paper and spread over it a piece of white muslin. Then spread over this a layer of drying paper, then more plants, and then more cloth, drying paper, etc. Put all under a board, and weight it with 40 or 50 pounds of store or other heavy substances. The next day change the cloths and drying paper, and in one day more the plants will be dry and ready to go into the herbarium or the album for permanent preservation.

**PRESERVING INSECTS.**—A. Labouliere recommends plunging the insects, in the fresh state, into alcohol which has been saturated by digestion with arsenious acid (1½ pint will take up about 14 Troy grains of arsenic). The living insect put into this preparation absorbs about 0.003 of its own weight. When soaked in this liquid and dried the specimens are safe from the ravages of moths, *anthrenus* or *dermestes*. This treatment does not affect the color of blue, green or red beetles, if dried after soaking for 12 to 24 hours. *Hemiptera* and *orthoptera* can be treated in the same way; also the nests, cocoons and chrysalides of insects.

An important improvement in regard to the river Po, in Italy, is recommended by Garibaldi.

The Pacific Coast has such a varied climate it would be hopeless to expect any one to write a horticultural and floral handbook that would be exactly suitable for each particular locality. Mr. Shinn has come as nearly accomplishing this, however, as is possible within the limits of such a small volume. He has a remarkably graceful and pleasant way of presenting what, in the hands of another, would be only a dry statement of facts. There is a delicious vein of humor permeating the pages of his little volume. It crops out in the most unexpected places and in the most unexpected manner. There are few books of a practical nature which we have read with as much pleasure as this little handbook. To the amateur in horticulture, floriculture and kindred diversions it will be of especial interest and service. Mr. Shinn, who is a practical gardener, has written of what he knows, and consequently writes with authority. He tells you how to lay out an orchard or a flower garden, how and when to sow your seeds and plant your shrubs and trees and insure success. His book contains 15 essays on rural life and occupations, and a table of desirable plants for the garden, the field, the forest and the orchard. It is a book that we can heartily recommend to all persons engaged or interested in rural pursuits. — *Bulletin*.

The "PACIFIC RURAL HANDBOOK," written by CHAS. H. SHINN for the publishers of the PACIFIC RURAL PRESS, will be sent, post-paid, in substantial cloth binding for \$1; in full leather, \$1.50; in cloth, interleaved with fine ruled paper for memoranda, \$1.50. Address

DEWEY & CO., PUBLISHERS,  
No. 202 Sansome Street, San Francisco.

### Books on Agriculture, Etc.

The following among other books will be sent post-paid on receipt of publishers' prices, annexed: Tobacco, its culture, manufacture and use, 500 pages, \$3.50; The Patrons of Husbandry, 500 pages, \$3.75; The Women of the Bible, 77 engravings, \$4; Wells' Every Man His Own Lawyer, 612 pages, \$2.75; American Husbandry, 2 vols., \$1.50; Gray's Agricultural Essays, \$1; Langstroth's Honey Bee, \$1.50; Randall's Sheep Husbandry, \$1.50; Agricultural Engineering, \$1.50; New Bee-keepers Text Book, \$1; Pacific Rural Handbook, \$1; Rupp's Easy Calculator, \$1; U. S. Land Law, 50 Cts.; Woodward's Grapes, Etc., \$1; Sugar from Melons, 25 Cts.; Strawberry Culture, 50 Cts.; Layre's Better Letters, \$1; Holt's Map of California and Nevada, to subscribers, \$1; Back Volumes PACIFIC RURAL PRESS (bound) \$5; unbound, \$3; Picturesque Arizona, \$2. Address DEWEY & CO., Publishers, 202 Sansome St., S. F.

**ANDERSON SPRINGS.**—These celebrated hot and cold sulphur, iron and soda springs are situated in the midst of a pine and spruce forest, in Lake county (a distance of 19 miles from Calistoga, and 10 miles—by an excellent road—from the Great Geysers; the nearest and most accessible pine grove, to San Francisco and Sacramento), beside a living trout stream and surrounded by splendid mountain scenery; in the most invigorating and health-giving climate in the State. Good attention is given to the health and enjoyment of all visitors. Prices are very reasonable. Address Anderson Springs, Lake Co., Cal.

Fare attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographic. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

SETTLERS and others wishing good farming lands for sure crops, are referred to Mr. Edward Frisbie, of Anderson, Shasta County, Cal., who has some 15,000 acres for sale in the Upper Sacramento valley. His advertisement appears from time to time in this paper.

**HOW TO STOP THIS PAPER.**—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

**SAMPLE COPIES.**—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate the copy sent.

**EXTRA COPIES** can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.

For information in music matters send a postal to Kohler & Chase.

SEND to the Great Music House of Kohler & Chase for anything in the music line. 137 and 139 Post street, S. F.







## Agricultural Articles.

## The Famous "Enterprise,"

PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in habbitted boxes.

Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs.

All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

HORTON & KENNEDY,

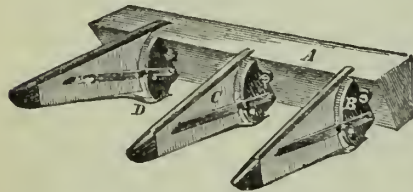
GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.



## BONNEY'S PATENT

Adjustable Grain Lifter  
FOR HEADERS.



GRAIN BELTS, GRAIN LIFTERS,  
Drapers, and Draper Sticks  
AND FINDINGS

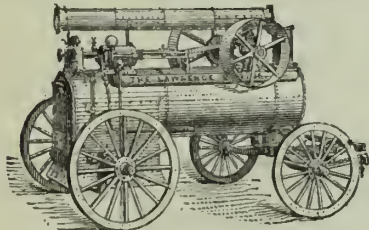
Of wood work for all kinds of Farming Implements furnished at short notice. Also,

**HAY RAKES**  
AT COST PRICE.

At O. BONNEY'S,

No. 221 Mission Street, San Francisco, Cal.

## The LAWRENCE ENGINE.



The Best Farm Engine in the World.

AUTOMATIC CUT-OFF,

Less Fuel, Less Water, Less Repairs than any other Portable Engine.

No Commission to Agents! Bottom Price to Purchasers!

Engines for all purposes, with and without Wagons. You can save money by buying direct of us. Order early for next season's use. Send for Illustrated Catalogue and Price List.

ARMINGTON & SIMS, Lawrence, Mass.

ARMINGTON & SIMS were lately with the J. C. Hoadley Co

MATTESON & WILLIAMSON'S

AMERICAN CHIEF

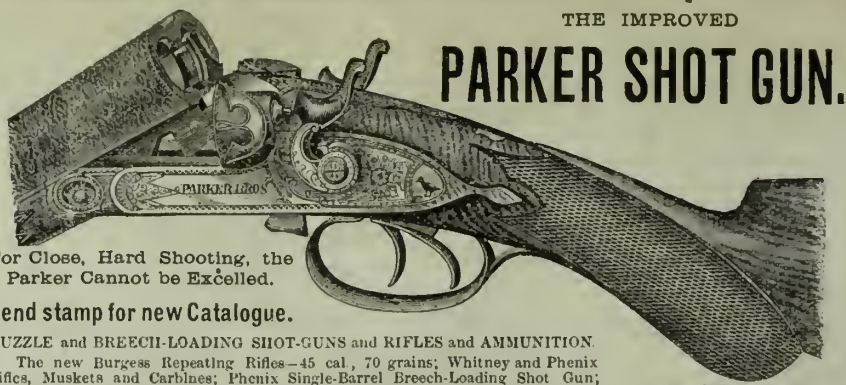


GANG PLOW.

Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,  
STOCKTON, CAL.



For Close, Hard Shooting, the Parker Cannot be Excelled.

Send stamp for new Catalogue.

MUZZLE and BREECH-LOADING SHOT-GUNS and RIFLES and AMMUNITION.

The new Burgess Repeating Rifles—45 cal., 70 grains; Whitney and Phenix Rifles, Muskets and Carbines; Phenix Single-Barrel Breech-Loading Shot Gun; Allen Rifles, 22, 32, 38 and 44 caliber, rim fire, very cheap; Lovell & Sons Revolvers, the best and the cheapest.

E. T. ALLEN, Agent for Pacific Coast,

NO. 515 MARKET STREET, - - - - - SAN FRANCISCO, CAL.

—OFFICE OF THE—

## BLACK POINT PACKING AND SLAUGHTER HOUSE.

MERRY, FAULL & CO., Proprietors.

## TO OWNERS OF LIVE STOCK!

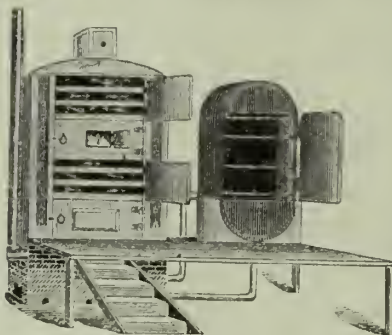
We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

## SQUARE DEAL and FULL MARKET PRICES

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices.

Please address our

Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.



## BUTTS'

IMPROVED ANTISEPTIC "CHALLENGE"

Fruit, Vegetable and Hop Drier  
AND CANNING APPARATUS.

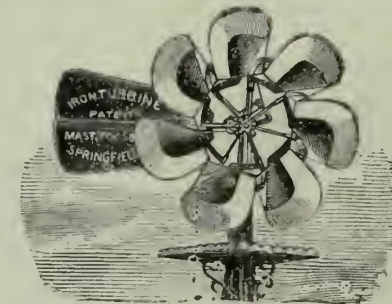
The cheapest, quickest and greatest labor-saving Drier ever introduced. Retains the quality, color and flavor of the fruit. The Canning Apparatus has a capacity of from 500 to 4,000 cans per day. Machines varying from 500 lbs. to 10 tons capacity per day constantly on hand. For Circulars, prices, etc., address

WM. BUTTS, Patentee,

S. E. Cor. Spear and Mission Sts., San Francisco.  
P. O. BOX 1,859.

1/2 State, County and Individual Rights for Sale.

## Iron Turbine Wind Engine



## AND BUCKEYE FORCE PUMP.

This machine made of iron, wheel, vanes, etc., made of No. 24 sheet iron, bound and braced with best quality of wrought bar iron, gives more power than any other wheel of same diameter. No wood to swell, shrink, rattle or be destroyed by the wind. The most durable and the best Windmill ever invented. For particulars, price lists, etc., address

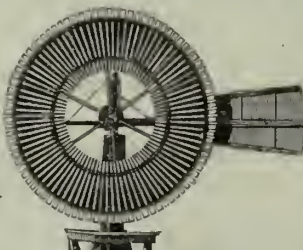
D. E. GOLDSMITH, State Agent,  
419 Sansome street, San Francisco.

\$50.

The New  
Worthington

Windmill

Manufactured by



W. D. PARSON,

1364 San Pablo Avenue, Oakland, Cal.  
Also, maker of the "Colorado Wind Engine," Wind Grist Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern of Deep Well and Artesian Lift Pump Cylinders. Circulars free.

## AMERICAN MACHINE AND MODEL WORKS.

Experimental and Fine Special Machinery, Planing, Gear Cutting, Patterns, Models for Inventors, etc. Printing Press and General Machine Repairing. Punches, Dies, Taps, Reamers, etc., made and repaired

I. A. HEALD, Proprietor.

514 Commercial Street, above Sansome, San Francisco



Single samples will be mailed from this office for 50 cents, postpaid. Wholesale and retail agents wanted.

## PLEASANT SUMMER READING.

THE NEW PENELOPE

Stories of California Life.

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. For sale by

A. L. BANCROFT & CO.

PRICE, \$2 00.

## Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.

## AGENTS, READ THIS

We will pay Agents a salary of \$100 per month and expenses, or allow a large commission, to sell our new and wonderful inventions. We mean what we say. Same free. Address SHERMAN & CO., Marshall, Mich.

60 Chromo, perfumed, Snowflake & Lace cards, name on all 10c. Game Authors, 15c. Lynau & Co., Clintonville, Ct

## Stock Notices.



## SPANISH MERINO SHEEP.

Choice stock of thoroughbred Bucks and Ewes, guaranteed free from disease. Purchasers are invited to examine. About 10 minutes' walk from the Railroad terminus, adjoining State University.

E. W. WOOLSEY,  
Berkeley, Alameda County, Cal.

## BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

18th and A Streets, Sacramento City, Cal

## ANGORAS AT THE FAIRS.

The undersigned would announce to those interested in ANGORA GOATS, and the public generally, that he will have a lot of

## Choice Angora Bucks

On Exhibition at the State and District Fairs

This fall, namely: At the State Fair at Sacramento, the Golden Gate Fair at Oakland, the Nevada State Fair at Reno, and the Oregon State Fair at Salem.

These Bucks will be sold at fair rates.

JOHN S. HARRIS,

Hollister, San Benito Co., Cal.

## Thoroughbred Spanish Merino Sheep FOR SALE.



Wool Growers and Sheep Breeders desirous of improvement are invited to examine the Banner and Premium flock of the State. All 1st Premiums taken at State Fair in 1878, with strong competition. No sheep superior in the world. 100 head yearling and 20 head 2-year old Rams for sale, large sized carcasses free from wrinkles. Heavy shearers, long staple of white glossy wool. A few young Ewes also for sale. All Sheep warranted free from Disease. Send for circular and price list or come and see us at once. Laurel Ranch, Hayward, Alameda County, Cal. One mile from depot on C. P. R. R.

J. H. STROBRIDGE.

## RAMS FOR SALE.



400 THOROUGHbred  
And Graded  
SPANISH MERINO

Rams For Sale.

Bred from the first importation of Spanish Merino Sheep to California, in 1859.

Prices to suit the times. Residence, one mile north of McConnell's Station, Western Pacific Division C. P. R. R.

P. O. address, MRS. E. McCONNELL-WILSON,  
Elk Grove, Sacramento Co., Cal.

## JOHN ROGERS &amp; SONS, GENERAL STOCK AND SALE YARD,

Corner Market and 9th Sts., San Francisco.

HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN. Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

## MONEY TO LOAN

AT LOWEST RATES

On Country Real Estate and Grain in Warehouse.

McAFEE BROTHERS,

202 Sansome Street, San Francisco.

TRADE



MARK

## LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant.

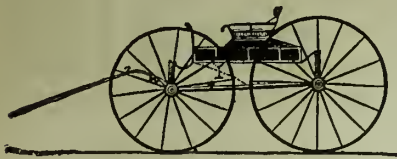
Price, \$2 per gallon. For directions and testimonials, apply to

FALKNER, BELL & CO.,  
Sole Agents, 430 California Street, S. F.

50 Perfumed, Snowflake, Chromo, Motto Cards, name in gold and jet 10c. G. A. SPRING, E. Wallingford, Ct.



H. J. HASKELL,



MANUFACTURER OF

CARRIAGES,  
BUGGIES,

— AND —

SPRING WAGONS,  
At the Lowest Rates.

Corner of Alameda and White Streets,  
SAN JOSE, CAL.

Anderson's Springs,  
LAKE COUNTY, CAL.

Nineteen miles from Calistoga, five miles from Middle-  
town, and ten miles from the Great Geysers; between  
which and Anderson's Springs there is a good stage road.

HOT SULPHUR WATER

For Rheumatism, Paralysis, etc.; Cold Sulphur for Dys-  
pepsia, Diseases of the Stomach and Bowels. Scenery un-  
surpassed. Climate mild and equable. Consumptives  
generally improve in health, and asthmatics are invari-  
ably relieved.

TROUT FISHING ON THE GROUNDS.

Deer Hunting in the Immediate Vicinity.

Accommodations and Cookery good. Board from  
\$10 to \$12 by the week.

ANDERSON & PATRIQUIN, Prop's.

IMPORTANT!

We wish to open correspondence immediately with one  
or more enterprising parties in each township upon the  
Coast to

Establish an Agency

Of our valuable publications, among which are the "Pic-  
torial History of the World," Stanley's  
Through the Dark Continent," "Chase's  
Improved Recipes," the Farmer's Account  
Book, and many others. Ministers, teachers, farmers  
and others will find this profitable. Ladies especially are  
successful. Address for full particulars,

A. L. BANCROFT & CO.,

No. 721 Market Street, San Francisco, Cal.

J. P. JONES. J. THOMPSON.

JONES & THOMPSON.

Wholesale and Retail Dealers in

Hay, Grain and Feed.

Also, Store and Sell on Commission at  
Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will  
receive prompt attention, and returns forwarded as soon  
as sales are made. For further particulars address as  
above,

1535 Mission St., San Francisco.



A Card to Grangers and Farmers.

HAY, GRAIN, HORSES and CATTLE.

The undersigned is now prepared to receive and sell Hay,  
Grain, Horses and Cattle that may be consigned to him at  
the Highest Market Rates, and will open a trade direct with  
the consumer without the intervention of middlemen. He  
also asks consumers of Hay and Grain and Stock buyers to  
co-operate with him, and thus have but one commission be-  
tween producer and buyer. Address S. H. DEPUY, Nos. 11  
and 13 Bluxome St., San Francisco.

ROOMS TO RENT.

Elegantly Furnished, and with Gas and  
Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

The New Beekeepers' Text Book.

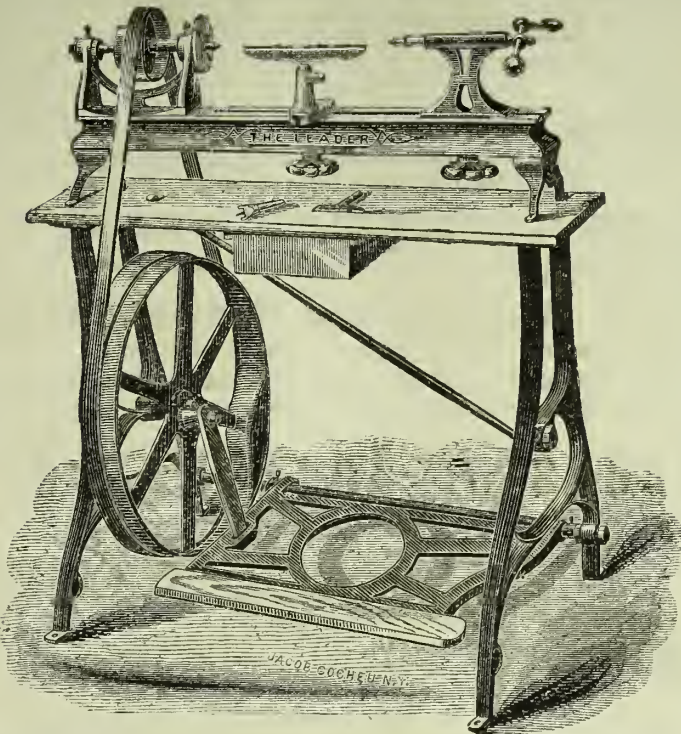
By N. H. and H. A. KING. The latest work on the  
Apiary, embodying accounts of all the newest methods  
and appliances. Fully illustrated. Sent by mail, post-  
paid, for \$1. DEWEY & CO., 202 Sansome Street, S. F.

Dewey & Co. Patent Ag'ts.

# Dunham, Carrigan & Co.,

Nos. 107, 109 & 111 Front Street, S. F.

Lathe Without Saw Attachments.

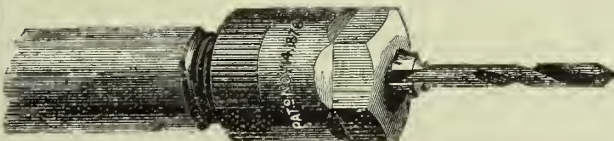


This lathe has been made especially to meet a want felt by many for a really good and substan-  
tially made Foot-Lathe at a reasonable price, and we think that it is by far  
the best Lathe ever placed on the market at the price asked. The bed, head, and tail stocks are of  
iron; the spindles of steel. The bearing of the head stock is conical, so that the wear can be  
easily taken up.

Material fifteen inches long and eight inches in diameter can be turned upon it.  
The pieces that accompany this Lathe without extra charge are two T rests, two plain centers,  
one spur center for wood turning, and one face plate.

Price of Lathe without Saw Attachments.....\$45. Price of Lathe with SCROLL Saw Attachment.....\$55.  
Price of Lathe with both Scroll and Circular Saws, \$70.

## Trump Drill Chuck.



Chuck for drills 1/2 and under,  
Price.....\$1.50  
Chuck, for drills 1/2 and under,  
Price.....\$2.25  
They are made on solid steel  
plug, centered and readily fitted  
to Lathe or Drill Press.  
SEND FOR CIRCULAR

FOR SALE.

## COMPLETE THRESHING OUTFITS,

Consisting of HOADLEY'S STRAW-BURNING ENGINE, 15 horse power, JACKSON'S REMODELED PITT  
THRESHER, with Feeder, Elevator, Derrick, Forks and Water Wagon,

\$2,500 to \$3,000,

Fully Guaranteed to Equal the Best Improved Outfits in the Market.

Also, one four-sided, six-inch SMITH'S MOLDING MACHINE, and one HOADLEY WOOD-BURNER 12-horse  
power, at a bargain. Also, new 3 1/2-inch Thimble-Skein Wagons at \$75, and 10-foot WINDMILLS at \$80.

Machine Work and Castings of all Kinds to Order.

— FOR CIRCULARS ADDRESS —

Jackson Agricultural Works,

S. E. Corner of Sixth and Bluxome Streets, near S. P. R. R. Depot, San Francisco

## LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins  
have adopted A NEW LABEL, bearing their Signature,  
thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE  
SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper.  
Wholesale and for Export by the Proprietors, Worcester; Crosbe & Blackwell, London,  
&c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

## MISSION ROCK DOCK AND GRAIN WAREHOUSES.

SAN FRANCISCO, CAL.

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

GRAIN consigned to us by water insured in open policy at Special Rates. Wheat shipped by railroads via Stock-  
ton, care of the CALIFORNIA STEAM NAVIGATION CO. will be received by them at Stockton and delivered at  
Mission Rock Warehouse at same rate of freight as to Oakland Wharf. Freight paid, Fire Insurance and Loans effect-  
ed and proceeds forwarded free of commission. Money advanced at bottom rates, Interest payable at end of loan.  
Fire Insurance 1% per annum. Short Rates of Storage—First month, 30 cents per ton, or 40 cents per ton if deliv-  
ered. Each month thereafter 20 cents per ton. Weighing in, free. Weighing out, 10 cents per ton.

CHAS. H. SINCLAIR, Superintendent.

Or to the California Dry Dock Co., Office, No. 318 California Street. San Francisco.



Pyrethrum Cinerariae Folium—A California  
Production.

THE MOST WONDERFUL DISCOVERY OF THE  
NINETEENTH CENTURY.

This wonderful Insect Powder will exterminate Flies,  
Weevils, Caterpillars, Mosquitoes, Midges, Crickets, Cock-  
roaches, Spiders, Tarantulas, Scorpions, Ants, Hawk-bugs,  
Phylloxera, Plant Lice, Moths, Beetles, Grasshoppers, Lo-  
custs, Bed-bugs, Fleas, and every species of Insects.

Remember that none is genuine unless my Trade-Mark  
is attached to every package.

Put up in eight-pound cans at \$10 per can, wholesale. Ask  
your druggists and grocers for it, and take no other to  
rid yourself of Insects. Sold at \$1.50 per pound or 12 1/2 cents  
per ounce, retail. Agents wanted everywhere.

\$100 WILL BE PAID IF IT FAILS TO KILL ANY INSECT.

Endorsed by Prof. F. W. Hildard, of the University of  
California, and by Prof. C. V. Riley, Chief Entomological  
Commissioner at Washington, D. C., and pronounced supe-  
rior to any imported article, and perfectly harmless to man  
and beast.

G. N. MILCO.

Patentee and Sole Manufacturer, Stockton, Cal.

## ARITHMETIC MADE EASY BY ROPPS Easy Calculator.

This valuable work is used by thousands of farmers,  
mechanics and business men, and is highly recommended  
for its practical utility and convenience.

It embodies an entirely new system of calculation, by  
which a vast amount of figures and mental labor—required  
by the ordinary methods—and fractions with their com-  
plexities, are absolutely avoided.

It is so simple and easily comprehended that even the  
most illiterate is enabled, in a few minutes, to reckon  
with absolute accuracy and speed; while its original and  
rapid methods, benefit and delight the most scholarly.

It shows at a glance the accurate value of wheat, corn,  
rye, oats, barley, cattle, hogs, hay, coal, lumber and mer-  
chandise, from one pound to a car load, and for any price  
the market is likely to reach.

It gives the interest, simple and compound, on any sum,  
or any time, at six, seven, eight, and ten per cent.; the  
exact measurement of boards, scantlings, timbers, saw  
logs, cisterns, tanks, wells, granaries, bins, wagon beds,  
corn cribs, etc., the wages at various rates, for hours,  
days, weeks and months; besides numerous other impor-  
tant methods, rules and tables.

It is printed on fine tinted paper, is well and elegantly  
found in pocket-book shape, and accompanied by a sil-  
icate slate, pocket for papers, and memorandum, which  
can be replenished in the two latter styles.

It answers the purpose of a pocket book and diary, and  
costs no more, although it was gotten up at great expense  
and labor, and is unquestionably one of the most useful  
publications ever issued from the press.

Price, bound in Fine English Cloth, \$1.00.

Sent direct from the Eastern publisher, postpaid, on  
receipt of price, by P. O. order, registered letter or  
receipted by express. Address

DEWEY & CO., San Francisco.

## THE WILSON ADJUSTABLE CHAIR,

With 30 Changes of Position.

Patented in the United States and Foreign Countries,  
BEST CHAIR IN THE WORLD.

Parlor,	Combining
LIBRARY,	Beauty,
Invalid Chair	Lightness,
Rocker,	Strength,
BED or	Simplicity
LOUNGE.	and
	Comfort.

READING POSITION.

Same Chair in Cane Seating, very useable for summer.  
Manufactured of the best of wrought iron and rivets.  
Castors made purposely for the Chair. Everything to an  
exact science. **IT WILL LAST A LIFE-TIME.**

Has been awarded Medals, Prizes and Diplomas for its  
superiority and merit wherever it has been exhibited.  
Orders by mail promptly attended to. Goods shipped to  
any address. C. O. D. Send for Illustrated Circular.

Address the WILSON ADJUSTABLE CHAIR MFG CO.,  
535 Washington St., Boston

M. COOKE. R. J. COOKE

## PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,  
AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREGORY.

SEND FOR THE  
\$1.50

## Homeopathic Medicine Case.

Containing 12 principal remedies, with directions for  
use. Also Veterinary cases and books. Send for cata-  
logue. Address BOERICKE & TAFEL,  
Homeopathic Pharmacy, San Francisco.

60 Elegant Perfumed Cards, Chromo, Motto, Lily, Etc.,  
15c. Gift with each pack. H. M. SMITH, Cliftonville, Ct.



## Commission Merchants.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCE.—Tradesmen's National Bank, N. Y.; E. H. Wanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

BRYANT & COOK,

Commission Merchants,

AND DEALERS IN

GRAIN, FLOUR, ETC.

No. 8 Davis St., near Market, San Francisco.

CHARLES NAUMAN.

FRANK NAUMAN.

C. & F. NAUMAN & CO.,

Wholesale Commission Merchants

— AND DEALERS IN —

GRAIN, POTATOES, FRUIT, BUTTER, POULTRY, EGGS, GAME, ETC.

227 & 229 Washington St., San Francisco.

Consignments Solicited.

A. GALLI & CO.,

General Commission Merchants,

AND WHOLESALE DEALERS IN

Tropical, California and Oregon Fruits, Nuts, Produce [Butter, Cheese, Poultry, Eggs, Honey, Hides, Potatoes, Grain, Wool, Etc.]

516 and 518 Sansome St., San Francisco.

Cash can be drawn for immediately upon receipt of account of sales.

[NEW ADVERTISEMENT.]

"The Principles of the Republican Party are not for a Day, but for All Time."

## Regular Republican STATE TICKET.

Election, Wednesday, September 3, 1879.

FOR GOVERNOR:

GEORGE C. PERKINS..... San Francisco.

FOR LIEUTENANT GOVERNOR:

GEN. JOHN MANSFIELD..... Los Angeles.

FOR SECRETARY OF STATE:

DANIEL M. BURNS..... Yolo.

FOR CONTROLLER:

DANIEL M. KENFIELD..... Tuolumne.

FOR TREASURER:

JOHN WEIL..... Sierra.

FOR ATTORNEY GENERAL:

AUGUSTUS L. HART..... Colusa.

FOR SURVEYOR GENERAL:

JOHN W. SHANKLIN..... Alameda.

FOR CLERK OF SUPREME COURT:

FRANK W. GROSS..... San Francisco.

FOR SUPT. PUBLIC INSTRUCTION:

FREDERICK M. CAMPBELL..... Alameda.

FOR CHIEF JUSTICE:

AUGUSTUS L. RHODES..... Santa Clara.

FOR ASSOCIATE JUSTICES:

A. P. CATLIN..... Sacramento.

ISAAC S. BELCHER..... Yuba.

JARRETT T. RICHARDS..... Santa Barbara.

JAMES E. HALE..... Placer.

MILTON H. MYRICK..... San Francisco.

E. D. WHEELER..... San Francisco.

STATE BOARD EQUALIZATION—(1st District):

JAMES L. KING..... San Francisco.

RAILROAD COMMISSIONER—(2nd District):

TIMOTHY G. PHELPS..... San Mateo.

FOR MEMBER OF CONGRESS—(1st District):

HORACE DAVIS..... San Francisco.

By order of the Republican State Central Committee.

M. D. BORUCK,

W. W. MORROW,

Secretary.

Chairman.

BODIE!!

THE —



New Route!

170 MILES SHORTEST,

And made in about One-half the Time!

— BY THE —

Pioneer Stage Line,

AS FOLLOWS:

LEAVE SAN FRANCISCO—Monday, Wednesday and Friday at 4 P. M. for Stockton; leave Stockton at 8 A. M. on Tuesday, Thursday and Saturday, connecting with stage at MILTON at 9:30 A. M., arriving at BODIE at 4 P. M. next day.

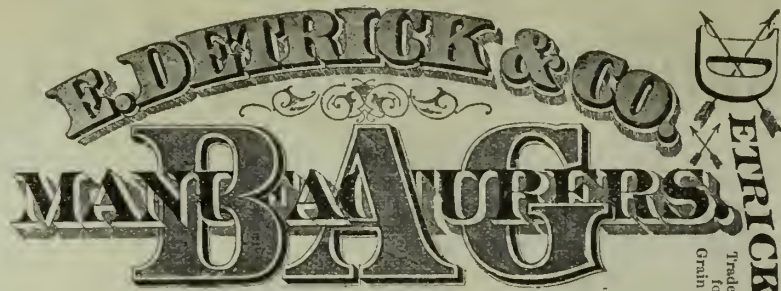
LEAVE BODIE Sunday, Tuesday and Thursday at 6 A. M. and connecting with train at MILTON at 10:40 A. M. next day, arriving in SAN FRANCISCO at 5:15 P. M.

T. J. Matteson & Ed. Harrison, Agents.

— OFFICE WITH —

BILLINGS, HARBOURNE & CO.,

3 Montgomery St., S. F.



SOLE PROPRIETORS AND MANUFACTURERS

## Celebrated Detrick "E W" 22x36 Grain Bag.

CALCUTTA, DUNDEE and PACIFIC JUTE HAND-SEWED BAGS always on hand. OUR No. 1, No. 2 and No. 3 SECOND-HAND GRAIN BAGS selected and graded with care.

**TWINES.** 3, 4 and 5-ply for Grain Bags, 6 and 8-ply for Potato Gummies, 3-ply EXTRA FINE for Flour Bags, made expressly for our trade and QUALITY GUARANTEED.

FLOUR BAGS Printed to Order WITHOUT EXTRA CHARGE. POTATO GUNNIES, Wool, Bean, Ore and Salt and Seamless Cotton Bags.

## Tents, Awnings and Hydraulic Hose.

ORDERS PROMPTLY FILLED AT LOWEST MARKET RATES.

119, 121 and 123 Clay St., and 118 and 120 Commercial St., San Francisco.

## Winchester Repeating Rifle,

MODEL 1873.



One-third size by Dr. E. H. Pardee.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder.

JOHN SKINKER, No. 115 Pine Street, San Francisco.

SOLE AGENT FOR THE PACIFIC COAST.

JUST PUBLISHED.

## The Voice of Worship,

PRICE FOR CHOIRS, \$9.00  
\$1 00. FOR CONVENTIONS, PER DOZ.  
FOR SINGING SCHOOLS.

THE VOICE OF WORSHIP, by L. O. EMERSON, is, like other Church Music books by the same author, pre-eminent for graceful and beautiful music, and for the fine skill and judgment displayed in selection and arrangement.

The First Hundred Pages.

include the SINGING SCHOOL COURSE, in which are found many fine harmonized songs or glee for practice and enjoyment.

The Second Hundred Pages

are filled with the best of Hymn Tunes, Sentences, &c., a large, new and fresh collection.

The Three Hundred Pages

contain a capital set of ANTHEMS. Specimen copies mailed, post-free for \$1 00

EMERSON'S VOCAL METHOD (just out) has a novel arrangement of syllables, and other improvements which are sensible and useful. Please examine. Price \$1.50.

OLIVER DITSON & CO., BOSTON.

C. H. Ditson & Co., 843 Broadway, N. Y.

WANTED.

A position as Superintendent of a Gentleman's Estate or Commercial Establishment, by a first class man in all departments. Thoroughly understands from long, practical experience, Farming, Gardening, Fruit raising in all its details, raising of Cereal and Root Crops, handling of all Agricultural Machinery, raising Stock and Sheep raising, and growing of all Fruits in Orchards, Vines and Vineyard Culture; Packing and Marketing Fruits and all Farm products; Irrigating and running Water Levels. Has managed all the above, and handled 3,000 acres.

Address, MANAGER,  
P. O. Box 94, Placerville, El Dorado Co. Cal.

## Pocket Map of California and Nevada.

Compiled from the latest authentic sources, by Chas. Drayton Gibbs, C. E. This map comprises information obtained from the U. S. Coast and Land, Whitney's State Geological, and Railroad Surveys; and from the results of explorations made by R. S. Williamson, U. S. A., Henry Degroot, C. D. Gibbs and others. The scale is 15 miles to 1 inch. It gives the Judicial and U. S. Land Districts. It distinguishes the Townships and their subdivisions; the County Seats; The Military Posts; the Railroads built and proposed, and the limits of some of them; the occurrence of gold, silver, copper, quicksilver, tin, coal and oil. It has a section showing the heights of the principal mountains. The boundaries are clear and unmistakable, and the print good. 1878. Sold by DEWEY & CO. Price, postpaid, \$2; to subscribers of this journal, until further notice, \$1.

20 Lovely all Chromo Cards with name, 10 cents, postpaid. J. B. Husted, Nassau, N. Y.

Baling  
Fencing  
Telegraph  
Telephone  
Galvanized

WIRE

## Barbed Fence Wire.

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the Trademark.



A. S. HALLIDIE

Wire Mills.

Office, No. 6 California St.

SAN FRANCISCO.

## WIRE ROPE and CORDAGE

Of every kind on hand or Made to Order.

R. J. TRUMBULL & CO.,

SUCCESSORS TO

R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGS, GARDEN HARDWARE.

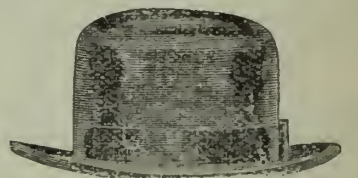
Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

\* \* \* Guide to the Vegetable and Flower Garden, will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL & CO.,  
419 and 421 Sansome Street, S. F.

## HERRMANN'S HATS

ARE THE BEST!



Try one and you will Wear no other.

Spring and Summer Styles,

— AT —  
336 Kearny St., bet. Bush and Pine,

— AND —  
910 Market St., above Stockton.

Send for Illustrated Spring Style Catalogue.

CHEAPER YET!

## Tension Sewing Machines!

A large number of nearly new genuine SINGER, WHEELER & WILSON, HOWE, WOOD, WILSON, GROVER & BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

NO TENSION MACHINE.

Wilcox & Gibbs' S. M. Co.,

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.

E. CHAMBERLAIN, JR.

THOS. A. ROBINSON



SEND FOR CIRCULAR

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 69 Gold St., N. Y. Agent for Pacific Coast Joseph H. Dorety, 120 Sutter St., S. F.





Volume XVIII.]

SAN FRANCISCO, SATURDAY, AUGUST 16, 1879.

Number 7.

### Landscape Gardening.—No. 3.

Written for the RURAL PRESS by J. B. ARMSTRONG.

We come now to the location of roads, about which there are some axioms laid down that it will be well to remember.

First: Keep the approach well away from boundary lines; the reasons are obvious.

Second: Never proceed in a straight line, nor up and down hill.

Third: When possible select the lowest level for an approach; because the higher ground shows better from it.

Fourth: Let there be an apparent reason for every curve; a tree, a rock, or the side of a hill; but, no meaningless bends. In short, study to conceal the hand that guides. The margin of a valley offers the most suitable route. When girt with rocks, and trees and cliffs, there are nooks of picturesque beauty at every turn. The bends of a stream, the near and retreating hills, the bold projecting cliffs, are so many studies for all times and generations to admire. Sometimes we cannot avoid carrying our road through the point of a hill. Let it not be an angular cutting; but finish the work like that in Fig. 5, and it becomes an ornament of rounded outlines.

From the entrance of the grounds the approach, if not level, must always ascend. To decline at the gateway is fatal. Never cross a hill; go around. Let the course wind easily and naturally around all obstacles, with curves flowing in graceful lines, and avoiding straight ones. If at any point where a bend seems fitting, and there appears no natural obstacle to justify it, do not build a pile of stones for rock-work like Fig. 6. Such shams offend the eye. A formal pile is not natural, nor is there any beauty in it. Plant a tree, or a clump of trees. Rocks covered with moss and vines, or overshadowed by a tree, are pleasing objects. Fig. 7 is an example of the natural.

For the encouragement of the amateur the writer will mention that no engineer plunges into his work without long and careful preliminary examination. He studies it like the good doctor scans his patient, that he may make no fatal mistakes. Every railway in the country depended on these explorations. The most experienced engineer always went forward, sometimes in the saddle, often on foot, to search for the best route, while the surveyors followed and recorded his work. There were times, of course, in cases of doubt, when elevations were nearly alike, that nothing but an instrumental test settled the question. An apparent looseness in the method is not what it seems to the uninitiated; for a good engineer will carry vertical and horizontal lines in the eye from long practice. Signs unnoticed and unknown by other men; the looming of distant hills, or the ripple of a stream, indicates the varying changes of height by which he corrects his mental horizon. And why not? since dumb animals are sure to go around a hill rather than over it. The paths of buffalo were found unerring guides for the location of transcontinental railways when no other routes were passable.

First walk over the ground and carefully study its contour. Let the eye scan every un-

dulation of its surface with a view to locating the approach, as nearly as possible with regularity of grade, without much regard in the preliminary view, as to its directness. Having mastered the route which seems best adapted, go over it again with paper and pencil in hand, trace its curves; mark the points on the ground with stakes, and make a thorough working map. In passing frequently back and forth take care to make such improvements as upon reflection seem needed. By the time these surveys are completed and transferred to the working map, which should embrace a plan of all the grounds, the situation of the approach, relative to the other parts of the lawn, can be studied at leisure; then such changes can be made in direction and grades as seem best. Without adopting this plan there will be no design—no base to work from.

Having settled the line of approach, such instrumental measurements may be taken as are necessary to define the curves and grade lines. This is only required when the work is to be committed to others for completion, which we sup-

pose will not often happen, as the proprietor would naturally prefer to oversee its execution. In that case, if he has mastered the situation, and possesses an eye with the least bit of mechanical certainty in its measurement, no other aid, besides a good tape-line, will be needed for a very fair location. But if he distrusts himself, he will do well to call in the aid of a professional landscape gardener to settle the outlines of the work, leaving the details to be filled in at leisure.

Avoid much road making; the fewer there are the better for the unity of the grounds. We have seen places cut up with numerous paths and roads ending nowhere? When they lead to a fine point of view, the garden, a waterfall, or the conservatory, they are not meaningless. Roads are troublesome to keep clean, which is another good reason for limiting their number. In a preceding paper the method of building a road-bed was fully described. One of the directions will bear repeating, that it may be remembered: Do not cross a stream where an embankment will be required. Rather deviate from the direct course by following the base of a hill to some point where the crossing may be effected with higher banks.

As respects the embellishment of level sites, the owner must mainly depend on smooth shaven lawns, and trees, and flowers. The approach must not be straight, nor should it wind

with unmeaning curves. Its beauty will be enhanced by the skillful planting of rare kinds of trees and shrubs, in addition to well-known native varieties. Besides the architectural improvements, level land can only be adorned with the simple forms of graceful trees and flowers. Everything, therefore, depends upon their management in the composition of the landscape. It would mar its expression if we rear a pretentious structure which is not in harmony with the situation. A mansion in the Italian style, with sky-lines of low, broad roofs, bracketed cornices, and clusters of ornamental chimney tops, would be in keeping with its expression of still life and home.

There seems to be good reason for bestowing much more care on the improvements of such grounds than if they partake of a picturesque character. Suppose the mansion stood on an elevated site where the view commanded the whole demesne. Then the eye would take it all in at one glance, and the conditions would be changed at once. They might work such reformation of the original plan, which was only

America is the Central Park of New York city. A tract two miles long and half a mile wide, rocky, and a waste when the writer first knew it, has been converted into an Eden of beauty. Under the guidance of Fred. Law Olmsted, Calvert Vaux and Col. Waring, backed with several millions of money, and after the labor of about twenty-two years, the great work is about finished. Rocks were blasted to make way for roads; pits were filled, lakes dug, fountains and bridges erected; and great trees were moved, in winter time, with balls of frozen earth. Yet it does not possess a view, from any point, that some of our readers, somewhere, cannot show its counterpart, ready to enter upon without waiting a lifetime for trees to grow.

### American Dairy Implements in England.

The English recognition of the eminent excellence of American dairy products is so general, and their admiration for our processes and appliances so genuine, that they are disposed to

open their grand dairy exhibitions to American competition. Of course their generous welcome has a practical side in that they think they may learn something from our experience and inventions, but that is perfectly legitimate. The latest evidence of British partiality for our dairy system and methods is to be found in the fact that the British Dairy Farmers' Association intends to make an exhibit of improved American dairy implements a feature of their coming show, and had intrusted the matter to our occasional contributor, J. P. Sheldon, late resident professor of agriculture at the Royal College, and author of the new work on dairy farming now in course of publication by Cassell & Co. Prof. Sheldon has appointed as assistant in this country Prof. Henry E. Alvord, of Easthampton, Mass., who will give all detailed information desired on the subject. Active measures are now being taken at the East to make this exhibit worthy of our American inventors and manufacturers, and illustrative of our advanced processes of dairying. Manufacturers are invited to contribute a merchantable sample of any improved dairy apparatus or utensil made by them, or a working model, together with well prepared show cards, stating plainly the address of the maker, and the price of the article. It would certainly be an interesting exhibit if some enterprising manufacturer of California butter-making apparatus would send on samples of our butter boxes, butter worker and molds which are characteristically Californian, and admirably adapted to our uses and in some respects adapted to use in other parts of the world. If any manufacturer will furnish the material we will aid in getting it properly submitted to the English show.

UTILIZATION OF WASTES IN BEET-SUGAR MAKING.—We notice in Mr. Gennert's correspondence from Alvarado, that the new beet sugarie is to have 3,000 sheep at hand to eat up the beet pulp, and possibly the number may be doubled after the factory is well running. The refuse pulp is admirable food for dairy cows, which would be a point to consider if the beet-sugar industry should be proposed in any of the "dairy regions" of the State.



Fig. 5. Rounding the Point of a Hill.



Fig. 6. Bad Rock Work.



Fig. 7. Natural Rock Work.

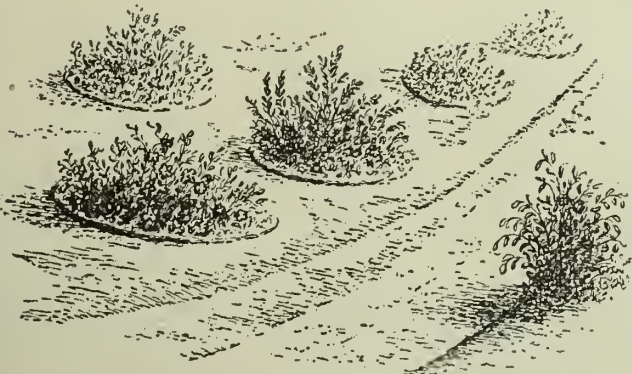


Fig. 8. Flower Beds along the Driveway.

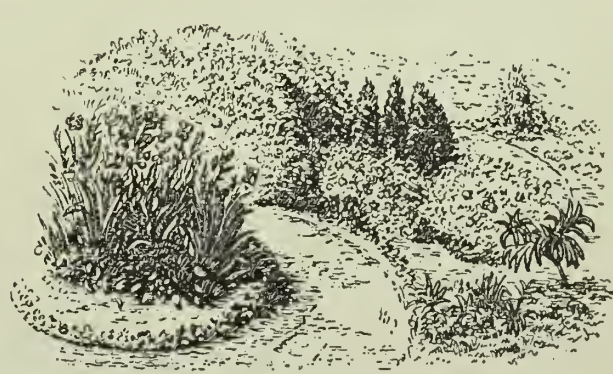


Fig. 9. Shrubs beside the Walks.

adapted to limited scenes of quiet beauty, as to require alterations in the approach, and in the planting and grouping of trees to correspond with the different expression worn by nature. But, on the level lawn bordering the carriage way, where the eye has a limited range, ornamental heds of flowers and clusters of rare shrubs are always in good taste and serve to connect groups of trees. Figs. 8 and 9 are common methods of planting flowers and shrubs; though beds of fancy patterns look pretty when well cared for. Be careful to avoid crowding; for the design is not to strew a flower garden along the road side.

The utmost neatness will be constantly required to keep the paths and roads looking well. Grass must not be allowed to grow in the gravel. The margins should be kept smoothly mown with a lawn mower, as the scythe is not a fit tool for the work. Every plant, large and small, must be forked around often, and carefully staked, and tied and mulched. The little vine planted at the base of a ledge of rocks, where it will bear red berries in the autumn, needs the same attention. Its successful growth is as much a triumph as any other achievement. Attention to small details marks the successful gardener; while brambles, weeds and thriftless management will ruin any fine place in a few weeks. The best example of landscape gardening in



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds

### Sub-Irrigation.

EDITORS PRESS:—I notice in your valuable paper of the 26th ult., an elaborate article explanatory of the *modus operandi* of the new system of irrigation known as the "asbestine," or sub-irrigation. Now what your readers would naturally like to know, would be the practical results, which I will give, having been an eye-witness to the same from its earliest inception, about three years since. It had its origin in the inventive brain of E. M. Hamilton, of East Los Angeles, who by assiduous study and various experiments has brought it to its present state of perfection, which ere long will work wonders in the development of the agricultural and horticultural resources of California, and will prove to be of more substantial value to it than all the gold mines ever unearthed in it.

This system places the water warm from the tank just where it is wanted, at the roots of the trees—sending them down instead of to the surface, and where the greatest amount of good may be obtained from the least amount of water. It obviates the exposure of the irrigator to the water, thus protecting his health and saving him from the grasp of the "medicine man," which is no small consideration. The work of irrigation may go on while the husbandman is engaged in other business on the premises, or slumbering in the arms of Morpheus. The surface of the ground does not require cultivation after irrigation to keep it mellow. The crowning glory of this system is that it is like unto the leaven that leaveneth the whole lump—it spreads moisture over the whole orchard or all the ground for many feet from the pipes—rendering it sufficiently moist to grow luxuriantly almost any crop.

Mr. Hamilton showed me two rows of apple trees, of the same age, planted at the same time, one of which was irrigated on the surface system one year; the other on the new system the same length of time. The difference in the appearance of the trees was remarkable; those irrigated on the new system were about one-half larger than the others, and possessing altogether a more healthy and vigorous appearance. It is the same with the orange tree, the growth of which has been prodigious, with bright and healthy foliage of unsurpassing beauty. Another very commendable feature is the uniformity of the size of fruit and its delicate flavor and healthy appearance. I could not discover any small fruit on the trees—all was of a large size; likewise the watermelons that grew between the rows of trees and covered much of the ground. They could not hide the huge fruit that seemed like dead-weights to curb the traveling propensities of the parent vines. The weights of many of these melons were from 50 to 60 pounds, and of the most delicious flavor.

I also visited the fruit ranch of M. P. Grove, near West Los Angeles. Mr. Grove has six acres in fruit, and irrigated on the same system, which has but recently been completed, and consequently the results are not so fully developed, but enough to insure a grand success. While I was there, Mr. Grove turned the water on to show me the operation, remarking at the same time that he could irrigate a few acres and entertain his friends at the same time. I examined many of the dirt guards, or "wells," at the trees, and found the work of irrigation going on simultaneously. He likewise, with the vigorous application of the shovel, called my attention to the moist condition of the earth about the trees and midway between the rows, in which I was not able to discover but little difference. Mr. Grove has a well and windmill which afford sufficient water for all his irrigation and domestic purposes.

This system, it seems to me, is destined to become universally popular, as it has many advantages; one especially in the great saving of water, as it requires not more than one-tenth as much as in surface irrigation.

N. LEVERING.

Los Angeles, Cal., Aug. 5th, 1879.

### Ancient Chestnut Trees.

EDITORS PRESS:—Believing that the patrons of your interesting paper would read with pleasure a description of two of the most ancient chestnut trees in the world, I will transcribe it with pleasure. In the *Gentleman's Magazine* of 1770 we are told of a Spanish chestnut measuring 57 feet in circumference, growing in Gloucestershire, England. It is supposed by Evelyn and Bradley to have been planted in the reign of King John, from mention of it in records of that antiquity, and if so, it must have been about 600 years old. According to Dr. Howel the famous chestnut tree of Mount Etna is 160 feet in circumference (which would give 33½ feet in diameter), but quite hollow within. In the cavity of this tree the people have constructed a commodious house, which they use for various purposes; it is called "the tree of a hundred horses," as so many may be sheltered under its boughs. From chestnut timber the ancient wainscoting of the market of St. Germain, in France, are made; also the joists which are of great length and thickness, and perfectly sound, though more than 400 years old.

W. C. McDUGALL.

Merced, Cal.

## THE DAIRY.

### Wages on Dairy Farms.

This is a question of importance to all dairy farmers throughout the country, and the Hon. N. A. Willard treats the subject, in a letter to the *Country Gentleman*, as follows:

The question of prices for farm labor is often discussed by farmers, but no general rule, based upon farm receipts, appears to be adopted. There is a great difference in hands, and some are cheaper at a large price than others at low wages; and this difference applies to men whose strength and endurance in the performance of work are equal. Some men are more profitable to employ than others, because they are more careful, more to be relied upon; have clear perceptions as to how work should be done, and take more interest in the affairs of their employers. There are men capable of doing a large amount of work who are dear hands at a low price, because they are wasteful and destructive; because they are careless and forgetful, and neglect things intrusted to their charge. A man that has ingenuity and can turn his hands to different kinds of work, that understands running "farm machinery," that is conscientious in the performance of duties, is often cheap at a large price. So that it is not easy to grade the price of labor upon dairy farms, unless it be on certain kinds of work; such as chopping, plowing, pitching hay, or the like, instead of a great variety of work.

There is no doubt that farm wages should bear a proper ratio to the real value of the work performed. The successful manufacturer calculates closely the cost of the article manufactured, and if it has a fixed price in the market, the cost must be below that price, or the manufacturer must soon go to the wall. Years ago, when there was a plentiful supply of farm hands, experienced dairymen, who had calculated the ratio that wages bear to the price of dairy products, found the following rule to be equitable to both parties: The wages of good hands, say for eight to ten months, during the busy season, were reckoned at the rate of a dollar and one-half per month and board for each cent per pound received for good marketable cheese. Thus, when the average price of cheese was eight cents, the ratio of wages would be \$12 per month and board. If cheese went at 10 cents per pound, wages were fixed at \$15 per month; cheese at 12 cents warranted the paying of \$18 per month and board. This was the guide set up by these dairymen, and they affirmed that wherever a dairyman paid more than the ratio here indicated, it was more than his business warranted, except perhaps for extra hands skilled in all the various kinds of work required on the farm, when an addition of \$2 or \$3 per month might be made to conform to circumstances.

It may be said that the price of labor can only be regulated by supply and demand, and this is in a measure true; but it is also true that many farmers do not know what wages their business will warrant, and hence they pay all kinds of prices, according to circumstances; or they regulate the price by that fixed upon by some neighbor. I have thus known one man to fix a high price of labor for a whole neighborhood.

Farm hands should be paid liberally for their labor, but, of course, there are certain limits which cannot be overstepped with impunity. If the expense for labor is more than the crop will sell for, it is only a matter of time that will send the farmer into bankruptcy. In these times, when dairymen are feeling the pressure of low prices, it is quite proper that a fair estimate be made as to the ratio that wages should bear to the value of the crop, and whatever be the price paid for labor, the employer and laborer should have a clear understanding of the whole matter.

Laborers not unfrequently get the impression that they are paid less wages than the farmer can afford, and on this account become indifferent, taking little or no interest in managing and saving the property of their employer. A man who is indifferent as to whether the cows in his charge are milked clean, whether a barn door is left open, whether a break in the fence is not immediately repaired, will be likely to cause more loss to his employer than his whole wages for the season.

Of course the farmer must keep an eye on his business, but there are many things that must be intrusted to hired help. The labor question on farms is not so easily regulated as many would at first sight suppose. There are few neighborhoods of farmers where there is any concert of action. If one man pays \$20 per month for hired help—extra hands—ordinary hands will insist on the same wages on neighboring farms, and if they are hired at a much less price, they often feel that they are not well dealt with, though it can be proved that they are saving more money than the employer. And this may be said of many dairymen, the present year, who are struggling along under a heavy load of debt, the interest of which cannot be met with the small receipts from dairy goods.

If any one has an easy solution of this matter, there are thousands of farmers who would be glad to get it.

A FRESNO COUNTY DAIRY HOUSE.—The Fresno Republican has the following: S. M. Toft, of the C. C. colony, has just completed a dairy house at his place which, for convenience, cheapness and utility, is hard to beat. The building is about 12x16 in the clear. The walls are of adobe and 19 inches thick, instead of making the adobe into bricks, he made a frame of boards and filled between with moist adobe, and as soon as dry enough the boards were raised and the process repeated. Outside and in, it is plastered with cement so that no moisture is absorbed, and the driving rains of winter cannot harm it. The floor, which is of the same material as the walls, is also cemented and is a trifle higher than the ground on the outside. On entering you descend about three feet to a narrow alleyway which runs nearly across the building. A flange four inches in height protects this passageway from the water which is constantly kept on the main floor to a depth of two or three inches, being changed every day. The windows, covered with wire gauze, are opened at night and cold air admitted. In the morning the shutters are closed tight, keeping out the hot air. During our hottest days the thermometer does not go above 68, which is amply cool for milk or butter. Almost anyone could put up such a building, and the cost of material is trifling. People in need of a cool room for any purpose would do well to call and examine this before building.

## THE FIELD.

### Cane-Sugar Industry Proposed.

EDITORS PRESS:—Some three years ago I wrote an article for your instructive paper on the subject of sugar culture in California. "But as long as stock gambling prevails in California, we have but little hope for the improvement of our agricultural, commercial or manufacturing interests. To this curse of our land I attribute the present oppressive hard times, of which I will speak in future," showing that nearly every dollar, outside of the theaters and drinking saloons, goes into stock gambling. Merchants, preachers, mechanics, chambermaids, house and hotel servants, are infatuated with this swindle; and every idler who can raise a dollar is seen lurking around this den of corruption. Excuse this digression.

As a good thing will bear repeating, I will write again on the same subject. I have been informed that some persons left on the last steamer for Honolulu on the sugar speculation. Among those that left were ex-Senator Gwin and family, the president of the great sugar refinery of this city, and others. I hope, instead of purchasing sugar farms on the islands, they may import a large cargo of sugar cane to plant in California, where lands can be brought under irrigation. There is no country, except the tropics, where it is indigenous and grows to a great size, that is more favorable to the growth of cane. I have seen but one winter in 30 years that would effect it by frost in this State, and I doubt that its saccharine qualities would have been injured for granulation. Knowing, as I do, the manner of cultivating the sugar cane, I have expressed my astonishment that the California farmers should neglect so valuable a production. They remind me of a flock of sheep, force the bell sheep in the boat and the flock will follow. Men who are planting their thousands of acres of wheat and barley, and the small farmer follows suit. Sugar cane is easily cultivated and far less expensive than corn, wheat, barley or potatoes. It requires the ground to be put in good order; open a furrow on your four-furrow ridge and lay your cane down and cover with your plow, and cultivate it as you would corn. This planting, mind you, will bear cultivation for three successive crops. The first and second crop are about equal. The third will yield about three-fourths of a crop.

You ask how this is done. In cutting your cane, you leave about two joints standing, and from those joints you reap the benefits of your second crop, with the same cultivation as the former, and for your third crop, you will cut your cane closer, leaving but one joint. The cultivation of the three crops will leave your ridge too high for further cultivation and the following year you plant again. From the field your cane is hauled to the grinding mills, where the cane will pass through three iron rollers to express the saccharine matter from it, which is conducted into the boilers. From thence it is placed in hogsheads to granulate. After the molasses is done dripping from the hogshead, it is then barreled up for shipment.

In making sugar, it requires some skill and care in passing it from one boiler to the next, and skimming and cleansing it. The quantity of lime used for cleansing will be governed by the appearance of the froth that arises, and when it arrives at the consistency of thick syrup, it is ready to be thrown in the coolers, square boxes, 12 inches high and four feet square. This operation requires to be quickly done, in order to prevent scorching or burning. As soon as your kettle is emptied of what is termed a strike, the boiling juice in the larger kettle is removed into the battery, or kettle just emptied.

The body of the sugar cane is strong, but brittle. When ripe, it is of a fine straw color, inclined to yellow. It contains a soft pithy substance, which affords a copious supply of

juice of a sweetness the most agreeable in nature. The length of the cane in very strong lands is sometimes 12 feet; its general length, however, is from four to seven feet. In very rich lands the roots have been known to put forth upwards of a hundred suckers or shoots. A pound of sugar from a gallon of raw liquor of the cane is reckoned a very good yield. A sugar plantation, well conducted and in favorable soil, is computed to yield as many hogsheads of sugar annually, of 1,600 pounds weight, as there are acres.

W. C. McD.

## SHEEP AND WOOL.

### Woolly Wyoming.

On our first page last week was a paragraph alluding to the wool interest of Wyoming and alluding to statements "on another page." These statements were accidentally omitted last week, but we give them below. The Cheyenne Sun says:

In a few days Mr. M. E. Post, the sheep king of the Territory, will leave for Nevada to receive and bring to this market 17,000 head of California sheep. They were purchased by Mr. Post several months ago. Knowing that he designed to depart at an early day on his mission, a Sun reporter called upon him yesterday afternoon for the purpose of getting some facts and figures relative to the wool-shippments from Wyoming to the East during the present season. Mr. Post, it is well known, is the most extensive shipper we have of this valuable product to the Eastern markets. Besides his purchases, his own vast flocks grow an enormous amount yearly. For the most part his dealings have been with the wool growers of our own county, as will be seen by the following table of purchases and shipments made by him this season:

	Pounds.
E. W. Whitcomb, Crow creek.....	11,000
Whitcomb & Rice, Bear creek.....	9,000
G. B. Dunham, Upper Horse creek.....	5,000
Hay & Thomas, Lone Tree.....	6,000
T. W. Chaffee, Lodge Pole.....	17,000
Knight Bros., Hay creek.....	9,000
James Davis, Fort Laramie.....	6,000
J. B. Simpson, Laramie plains.....	10,000
J. M. Culver, Muddy creek.....	15,000
I. P. Caldwell, Laramie City.....	9,000
Hulbert Bros., Pole creek.....	18,000
Mrs. W. L. Kuykendall, Crow creek.....	11,000
George F. Chase, Upper Horse creek.....	6,000
Riner & Martin, Muddy creek.....	9,000
J. M. Chudwick, Pole creek.....	25,000
Cassidy & Farley, Medicine Bow.....	10,000
Total.....	176,000

In addition to the above, the following named wool growers (some of whom have already shipped and others preparing to do so) do their own shipping and make a very creditable exhibit:

	Pounds.
Hay & Thomas, Lone Tree.....	10,000
Duffey Bros., Hazard.....	12,000
Miner & Warren, Lone Tree.....	60,000
J. E. Rugg, Muddy creek.....	25,000
Rose & Rockwell, Spring canyon.....	10,000
T. Dyer, Pole creek.....	15,000
Total.....	141,000

Mr. Post shipped of his own growing 34,000 pounds.

	Pounds.
M. E. Post, for self.....	34,000
M. E. Post, purchased from others and shipped.....	176,000
Shipped by the growers.....	141,000
Total.....	351,000

The average price for wool is 20 cents per pound giving a sum total of \$70,200 revenue from wool, the major portion of which, as can be seen, was grown in Laramie county. Mr. Post says that while the wool-growing interest tributary to Cheyenne as a shipping point is very extensive, he has no doubt the shipments from Laramie City and other places on the line of the Union Pacific road are equal if not more than from Cheyenne. At such estimate the total number of pounds of wool produced this season in Wyoming is 702,000, with a cash value of \$140,400.

It is evident that no State or Territory in the Union can make a better showing than this, taking into consideration the fact that our sheep men began their labors less than eight years ago. Some of them were wholly without experience. In fact, the sheep business was simply an experiment.

It is fully demonstrated that Wyoming is a good sheep country. The losses last winter were very light, although the season was a very severe one, and unusually hard on both cattle and sheep.

With such encouragement, those already in the business will increase their flocks, and many others will embark in the fruitful occupation which has grown to be such a great source of revenue to the sheep owners, and consequently additional wealth to Wyoming.

### Loss of Sheep En Route.

It appears from an item which we find in a Nevada paper that the drive of sheep for Wyoming is rather a dangerous one. The Eureka (Nevada) Leader, of August 1st, evidently alluding to the sheep spoken of by the Cheyenne Sun, says: "A flock of sheep numbering about 12,000 arrived at the Willows yesterday. They were driven from Kern county, California, by Gen. Beale, and were transferred by him to Mr. M. E. Post, of Wyoming, who will drive them to Cheyenne. Between 7,000 and 8,000 head perished on the deserts between here and Kern county."



## THE VINEYARD.

## The Occurrence of Mildew on Vines.

EDITORS PRESS:—With pleasure I read my highly esteemed friend Dr. Saxe's preventative for the mildew on grapevines, and from what he says (for his word is better to me than some men's oath) I do not doubt in the least its efficiency, as the doctor is an amateur florist and horticulturist of many years' experience in this State and a close investigator. But with all due regard for the benefit which viniculturists will probably derive from his disinterested publication, I feel at liberty to take exceptions to his supposition as to the original cause of the pest, and will try to prove to his own satisfaction that he must be mistaken.

The southwest surroundings of Santa Clara are more celebrated for the geniality of their residents than they are for the absence of dust in the roads, and I do not wonder that "Agnes" has chosen that heading, the "Dusty Highway of Life," for her articles in the *RURAL*, as she resides in that very locality, and I was for six years her nearest neighbor. In that section the Doctor is well acquainted with the road leading from Owens' corner to San Jose, and of all dusty highways it certainly was the dustiest I ever saw. On the right and leeward side of the prevailing bay winds, on the first farm from said corner, is a vineyard, with the former owner of which, who is now dead, I once talked mildew. Says he: "I am not troubled with it, the dust of the road prevents it;" and he cited some of his neighbors who used road dust instead of sulphur with the same beneficial effect.

Now for my theory: I am well convinced that the origin of mildew is due to the obstruction, from some cause, of the prevailing winds. As a rule, but not without exception, the vines in this section are free from mildew, from its being a vast open plain, without interposition to the free circulation of the air; but as groves of timber, windbreaks, or orchards and other obstructions are growing with marvelous rapidity, in a few years look out for mildew. A vineyard about a mile west of Santa Ana, which is exceptionally free from dust but close to a belt of gum trees, is badly affected with mildew.

While living in Ohio I planted a vineyard open to the west but surrounded by timber on the three other points of the compass, and not only the white mildew but also the black, which is unknown in California to my knowledge, ruined my crops until I cleared the east side of timber, which checked the pest.

That the Doctor's vines are so badly affected proves the correctness of my theory. Although not as much exposed to dust as some in the country which are free from mildew, they are not only surrounded by houses but by a wild profusion of ornamental shrubbery with which he has embellished his modest but elegant home, and are almost entirely excluding a circulation of air, which further proves the correctness of my humble opinion. H. G. Santa Ana, Los Angeles Co.

RECLAIMING A MOUNTAIN VINEYARD.—One of the greatest engineering undertakings of the century, well fitted to rank with many attempted in Holland, not even excepting the projected draining of the Zuyder Zee, is the successful accomplishment of works by which the Appenine lake has become a thing of the past, and some 35,000 acres of the richest land recovered for cultivation. The labor of making the tunnel necessary for the task, and other works, has occupied nearly a quarter of a century, and Prince Torlonia has expended on the work more than ten millions of dollars. All the water has disappeared, except a small basin used to drain the surrounding district. The greatest length of the lake was formerly some 10 miles, and its breadth about seven, while the towns of Avezano and Pescina are no longer in danger from the sudden rising of the water in this volcanic district. The idea of draining it is not a new one, and the remains of the aqueduct constructed under the reign of the Emperor Claudius were formerly shown to the traveler. This has been made use of in the present undertaking, and after the lapse of so many centuries the people of this Appenine district, some 2,200 feet above the level of the sea, are rejoicing over the completed work. Upon visiting the spot a few years hence it will be difficult to realize that those vine-clad hills were covered with water within so brief a period.

COLORING FOR WINE.—Nessler has been thus far unable to ascertain when the coloring matters of mallows and bilberries are used to color wine, and he considers it very probable that the natural red coloring of the grape does not differ essentially from these foreign substances.

A NEW PROCESS OF GLAZING.—A new process of glazing has been introduced by which putty may be altogether dispensed with. Vulcanite is the substance that is to take the place of the old material. The window sashes under the new system are to be so arranged that the glass may be fixed into the grooves prepared for it, and, coming into contact with a strip of vulcanite attached to the frame, the glazing is complete. Any unskilled workman can fix the glass, and, when fixed, there is no putty to perish under the action of the atmosphere.

## HORTICULTURE.

## What a State Horticultural Society Might Do.

EDITORS PRESS:—This is a practical age. Men have grown tired of long-winded compliments, and mutual admiration societies. Nothing lives any longer on mere pompous display, on words, on titles, or on decorations. Nobody wants a Horticultural Society for the mere sake of being able to say that we have it. If any one has a private ax to grind, or a private grievance to air, or wishes merely to bring his pet theories before the public, the coming Horticultural Society cannot afford to devote much time to that sort of thing. If we clearly know, however, what we most need, we shall doubtless be able to attain it.

Now, in the first place, an organization to be of any value must be educational. In some living way it must make, A. a better florist, B. a better gardener, C. a better nurseryman, D. a better pomologist, etc. That is to say, it must bring to each one of us some new light on our pet business; it must make us respect our fellow-workers more than ever before; it must become a working machine of a vital sort, picking up this man's work, and that man's work, this theory and that chain of facts, showing their relationships and subtle harmonies. A mere naked-walled room where a few rather glum horticulturists come and loaf about for a short time each month, perfunctorily attend to business, monotonously read a paper, and soberly disperse, will soon find itself in the Sargasso sea of wrecks and worthless weeds. A quiet, but busy place where real investigations are going on, where people come because they want to, where botanists bring their discoveries, florists their new importations, fruit-men their seedlings, and lovers of beautiful homes their plans for rural developments—such a society will live by virtue of its own inner strength. It will not need much money, it will grow with the growth of our State, and broaden down the currents of time, and those who help to found it will hereafter be called benefactors of their age.

It is for us to choose. The State Horticultural Society must put itself fairly in accord with scientific thought, and work in harmony with the University, the Academy of Science, the various county organizations, the Southern California Society, and whatever efforts, either individual or organized, which look toward the education of the people in matters pertaining to horticulture. We can have carefully prepared papers on the grasses best adapted to this coast; on the eucalypti, the acacias, the conifers, or some other important family of plants, giving uses, characteristics, culture required, and many other practical points. We may also work up monographs of single plants of textile, medicinal, or economic value, and do much to introduce valuable plants adapted to our climate. In the course of time we may collect those books and publications which treat of these subjects, and so have a nucleus around which to gather further acquisitions, and so insure our own permanence by fostering a sense of responsibility and a feeling of honest pride in our success.

These are, briefly, my views of the kind of work which such a society must try to do. Still further condensed, the proposition I have advanced is that a State organization of this nature ought to assist the growth of horticultural knowledge among the people, and it ought to develop scientific methods of thought among its members. CHARLES H. SHINN.

Niles, Cal.

## Influence of Irrigation on Citrus Trees.

EDITORS PRESS:—Mr. Frisbie, of San Diego, in your last number, asked for information if the irrigation of citrus trees while in bloom will cause the trees to drop their fruit?

I hope whoever answers will give the public information relative to the irrigation of the orange and lemon. Small orchards of these trees have been planted in the central part of the State by farmers who have had no experience in the irrigation of them. I noticed that the orange trees in the Sacramento valley on high red plains land, that received but little water grew more rapidly and withstood the frost better than those on bottom land, and better than those that had been more thoroughly irrigated. Suppose I state a case and ask questions, then if some of your correspondents who have had practical experience will answer the questions, many of your inexperienced readers will receive practical information.

How often should an orchard of orange and lemon trees on mesa or plain lands with a rocky or clay subsoil, in a climate where the rainfall averages 18 inches, be irrigated?

How soon in the spring should this irrigation commence?

When should irrigation cease?

In what month should water be withheld so as to allow sufficient time for the new wood to harden and thus fit the tree to withstand light frosts?

In what way should the system of irrigation

differ if the land on which the orchard was planted was a deep sandy loam?

How should irrigation differ as between young growing trees and trees that are in bearing? Answers to these questions and such other remarks as they may suggest, will oblige a large circle of your readers as well as to me.

B. B. R.

San Francisco.

[We hope these questions will receive treatment from our horticultural correspondents. Let each one give his experience upon any one or upon all of the points advanced as his work or research gives data for conclusions. The questions are certainly of great practical importance to many readers.—EDS. PRESS.]

## Summer Pruning.

EDITORS PRESS:—As this is the important time for assisting in the proper maturity of fruit-bearing wood, as also for budding, these subjects are timely. The subject of budding I will enter on in my next communication.

To assist nature in the better maturing of fruit-bearing wood, summer pruning is now generally practiced, it being most important for the tree and fruit. There is also generally more time just now than in winter. It is now especially a favorable time for pruning softer wooded trees and bushes, as peach, blackberry, raspberry, grapevine, and some of the vigorous growths of apples and pears. The large cross limbs though are perhaps better left for the winter time, as there may be fruit on them just now. But if these are cut off now, be sure to apply shellac dissolved in alcohol to the wound.

Currants and gooseberries may not suffer as much if done now as in winter. Both of them should have the old or black wood well thinned out and encourage the young white wood; and where the pith draws much back, leaving a hollow, it is better not to shorten the young wood, but thin out from the stock this old wood a little every year. Don't allow the bushes to sucker, but make them grow from one stock or trunk, cabbage-head like.

Head your trees off well and keep them low. It will not require a 15-foot or 20-foot ladder to get the fruit, and the lower fruit is the best. In heading back or pruning, about one-third might generally (or more in the more vigorous growers) be cut off of this year's growth.

## Special Points.

I may add that there are certain trees and even localities or soils where pruning is often injurious to trees, sometimes even two trees same kind and close together will require different treatment, which requires a practical eye or practical experience or experiment to detect.

I would call attention and suggest a remedy to one of the main and perhaps most destructive evils to fruit growers in this State, outside of the borer. It is the sun-burning caused by the hot sun at noon that first burns the young bark of trees. In the nursery they are somewhat shaded and protected, being close together, but when planted out finally have not as they should have some shade or other protection of the kind. Two shingles put upright, corn or sorghum planted within a few feet, which is certain to be watered and eared for, whereby the young tree gets water and additional care as hoeing, etc., which it generally only requires the first few years, as I am opposed to watering fruit trees over six years old constantly.

When planting out trees from the nursery, care should be taken not to reverse its north or south position as it grew, at least without supplying shade as I mentioned before. M. J. O'BRYEN.

Merced, Cal.

THE BANANA.—A writer in the *Boston Cultivator* says: We get the banana, unlike other tropical fruits, in its perfection; it is not a whit better eaten fresh picked from the tree, than it is when brought here, after having been picked green and then allowed weeks to ripen, at sea and on shore. It rather improves while other tropical fruits are spoiling, and is never better than when, half blackened and looking too soft and far gone to be fit to eat, it "peels" at a touch, and leaves a delicious fruity pulp to be enjoyed deliberately. Miss Frederika Bremer, 30 odd years ago, on reaching one of our American cities, eagerly went for a taste of a banana. She spit it out, averring that it tasted like a bite of soap; but she, like most others, quickly learned to like the banana, and soon found it to be almost indispensable.

COAL ASHES AND GOOSEBERRY MILDEW.—A correspondent of an Eastern exchange writes as follows: Every one who has tried them knows how difficult it is to grow the larger and finer kinds of English gooseberries on account of mildew. Recently there has come to the knowledge of the writer two instances in which the growers have succeeded with them, the choicest English kinds proving as hardy and free from leaf-blight as Houghton's or any of the native seedlings. The mildew was prevented by the application of a liberal coating of common soft coal ashes; and coal ashes, so far as relates to the imported gooseberry, may be considered a specific for mildew—at least on some soils.

## The Fruit Shipping Industry of the Sacramento Valley.

The Sacramento *Record-Union* of last week had an article giving many facts about the shipment of fruits and vegetables for Eastern consumers. We give the following extracts from which the extent of the industry can be learned: Comparatively few people outside those directly interested have a correct idea of the extent of the fruit and vegetable shipment business of Sacramento. There are nine houses engaged largely in fruit and vegetable shipments and several in a small way. Sacramento is the most prominent fruit shipping point in the State, because of the centrality of its location, and its being at least two days nearer the consumer at the East. It commands the producing region of the largest fruit growing section of the State, and draws its supplies therefrom to nearly the full capacity of the regions named for choice fruit fit for exportation. This section of country may be said to be embraced by a line of which the circuit would be made by commencing at Courtland, on the Sacramento river, running thence down and about the island region, across to Vacaville, thence to Woodland, thence to Marysville, to Newcastle, to Coloma and Placerville, to Folsom, and across country to complete the circuit to Courtland again.

All kinds of fruits are shipped to Omaha. East of that the shipments consist mainly of plums, pears and grapes. Chicago, St. Louis, Philadelphia and New York are the distributing points for all the country east of Omaha. There is no demand at the East for California apples and peaches. At certain seasons Omaha gets apples and peaches from California because of their being earlier than the Eastern grown, but that trade is not long-lived nor so extensive as in other fruits. All along the way between Sacramento and Cheyenne or Omaha, there is a constantly growing local fruit trade, which draws entirely upon Sacramento. This local trade embraces the chief points of consumption and local distribution in Nevada, Utah, Wyoming and Colorado.

## The Vegetable Shipping Business

Does not extend greatly beyond Cheyenne and Denver; indeed Denver is a heavy distributing point, and now calls on Sacramento for more of fruits and vegetables especially than any other point this side of Chicago. Besides the ordinary fruits, oranges, limes, lemons, etc., are sent forward from here in abundance, the supply being drawn mainly from Los Angeles and the sea islands.

The earliest fruit comes in from the American river and Sacramento river bottoms. As these fail the buyers reach out into the foothills where the fruit is later. The Marysville region furnishes this market with much early fruit. The melon supply is kept up by a section embraced in a ten-mile circuit of this city. Earliest apples come from within the same circuit, and later ones from El Dorado county and other distant sections.

## How Shipments are Made.

All the fruit shipped here goes East in specially made fruit boxes, each separate piece being carefully wrapped in paper. Prior to this the fruit is all closely inspected, and any that has the slightest defect, in the way of speck, bruise, over-ripeness, or which in any way indicates to the examiner that it will be likely to decay while in transit to the East, is rejected and put upon the immediate market for sale. Thus only choice fruit goes East. This business of selecting the fruit is one requiring experts. These men become so skillful in examining fruit that almost the instant they touch a plum, pear or peach, they can tell whether it is likely to stand the eastward trip. All the greater caution is required to be exercised, because not only will faulty fruit be liable to rapid decay itself, but it will contaminate all the fruit lying near it. The packers become exceedingly skilled in the business, and will wrap in paper and pack a box of fruit before an ordinary person will be able to arrange the first layer.

## Most of the Packing

Of fruit is done at the orchards by men employed by orchardists, who are superintended in many cases by experts sent out by the fruit houses through which the shipments are to be made. Packing at the orchards is greatly advantageous, as it saves one handling of the fruit and puts it in a condition to be shipped direct with the least possible damage and delay. By this system fruit is packed in the early morning, selected, packed, brought to Sacramento, shipped and sent nearly 100 miles on its way within the same day. On the other hand, fruit shipped from San Francisco has to be transported across the bay to that place, and then shipped and sent across the bay again before it starts upon its journey eastward. The saving in time is about two days in favor of Sacramento, which in this business is a vital element. Some fruit is packed in Sacramento to accommodate smaller growers who grow lots which would not justify the employment of packers at the orchard. This keeps from 20 to 30 packers busy in the city all the time during the fruit season.

Fruit packed in this dry climate is found to keep better than that put up where the atmosphere is more humid. All the boxes used are made here of lumber brought from the mountains and thoroughly seasoned, and are found to keep the fruit better than boxes made in a moist climate. All the finer fruits and the more per-

[CONTINUED ON PAGE 106.]



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### Aids to the State Fair.

EDITORS PRESS:—As the welfare of the State requires aid from all sources, "tillers of the soil" should stand head and front in the ranks, awaken from the lethargy existing over the State, sustain and build up the State Society, making it an object worthy of the support of all. Thus the results of our diversified agriculture could be woven as one grand whole, beautiful to the eye and instructive to the mind. The power lies in your hands, worthy Patrons, to mold and fashion the Society in beauty, strength and symmetry. Let not the opportunity pass without embracing it. Combine your strength and make the State fair of 1879 one of the finest exhibitions ever seen on the Pacific slope and worthy the name of agriculture.

The benefits to be realized may be seen and felt in many ways if we combine our strength, show our products, gather instruction and draw out light by presenting the growth, cultivation and habits of articles on exhibition. To the horticulturist lies the interest in fruits, their variety, beauty of form, training and perfection. To the florist is the chance to exhibit the culture of flowers in all their combination of color, growth and beauty. Our thoughts may also turn to the variety of cereals, gathering a fine representation of those grown within our State, which would awaken an interest in all growers. Let samples of every description be gathered in our valleys, along the coast and on the hills, and their mode of culture, climate, effects of wind, fog, rust and atmospheric influence described. Let the fruit grower present the same ideas in his line, show the obstacles he has to contend with in way of insects, fungus growth, their remedy, etc.; the wine grower bring his samples of best wine and brandies, and give an outline of their manufacture, standing in market and points of interest hearing on the subject. Our raisin and dried-fruit producers should show their excellent brands and describe their modes of operation and success. The culture of semi-tropical fruits in various portions of the State is awakening an interest in them; bring samples of every variety under that head, with any new varieties, of late growth, perfect or partially matured. Let it be known and shown what our soil and climate can produce.

Thus each in their own way may contribute, and notes of value be obtained, both instructive and new, and facts that might be lost by each remaining distant or uncommunicative. Perhaps, by that mode, a nucleus may be formed to form a horticultural society, or aid in that way.

Agriculture is ennobling. Its study in all branches is food for thought, choice meat from the shell. Brothers and Sisters, lend a helping hand. The Directors are with you in spirit and furtherance of the cause, and are worthy of your help and support. Work with them, aid and sustain them, and by so doing your labor will show its fruits in many channels heretofore unseen. R.

Sacramento, Cal.

### Grange Suggestions.

There is a spirit abroad among the weak and discouraged Granges to do their first works over—and first of all to ascertain the causes of the decline in life and energy. This is striking at the root of the matter. Find out where the trouble is, and what is necessary to be done will be plain enough. When the difficulties are out of the way, mark a certain line of work—social, literary, scientific, pecuniary; any one or all, and stick to it. Let it be something which will give both pleasure and profit, and go to work at it at every meeting as though you meant business, and thus start in the new life. Some things should be done, not talked about.

There is a common notion that the post of Lecturer in the subordinate Grange is one of great labor, demanding skill, learning and talents. We do not know that these qualities are any disadvantage, and the election to the office is a fair indication that one's fellow Patrons believe him to be qualified for the duties in these respects. The fact is, the Lecturer has the easiest place of all. If he will only half do his duty, he can set others to work, can assign to particular persons, in advance, something to do which will bring pleasure or profit, or both, to all present, and then look on with satisfaction at the intellectual array he has brought about; or, enjoy, without effort, the choicest selections and readings of the others. It is too commonly the case, however, he prefers to wear his honors with dignity and without effort. In short, to let the Grange do its own work without his help. In this case we advise the members to turn questioners and ply that worthy official with all sorts of farm questions.

In the same county, and composed of the same class of materials, we not infrequently find two Granges the counterpart of each other—the one in earnest, diligent and progressive;

the other, to all intents and purposes, dead as a coffin nail. Now, what is the cause of this difference? Sift the whole matter and it will be found that the whole lies in zeal on the one part, and a want of it on the other. The life and activity will also be in proportion to the general zeal. A few zealous members may keep a Grange alive, but it is only when this spirit takes hold of many that it becomes a power. Brother Patron, is your Grange a success? Have you done, and are you doing your part to make the meetings pleasant and useful? If yes—then infuse some of your zeal into the others. If no—then turn over a new leaf. Remember, what you attempt to do, strive to do well.—*Grange Bulletin.*

### The Grange and the Colleges of Agriculture.

At meetings of farmers and agricultural associations, recently held in Michigan and the Dominion, we have observed the Order of Patrons of Husbandry recognized in such a way as to be of sufficient importance to form the subject of favorable comment. In Michigan, at a late meeting of the State Board of Agriculture at Lansing, representatives of the State Grange were present, and all together visited the various buildings of the State Agricultural College, inspected the live stock, and held a consultation in regard to the objects and work of the college. President Abbott spoke of the fact that the three organizations, the College, the Grange and the State Board, were working together for the same end, the elevation and education of the farmers, and he was glad to have them all present at the college at the same time, as he was glad to welcome any person or associations who might visit them, and give the institution encouragement, advice or criticism. Hon. J. Webster Childs and Hon. J. J. Woodman both spoke in behalf of the Order of Patrons. The State Grange of Michigan is composed of 800 representative farmers, and through its channel fully 20,000 farmers in the State are directly reached. The Grange in Michigan has ever been a unit in favor of the State College of Agriculture, and for its aid and encouragement by the State, and last year petitions from more than 400 subordinate Granges were sent to the Legislature to this end, although these petitions were disregarded. At the close of this meeting resolutions were passed recognizing that these three institutions—College, Board of Agriculture and Grange—were working for the same end, that of educating and elevating the farming class; suggesting an annual meeting of these bodies at the college for the purpose of giving aid, advice and friendly criticism; commending the work of the college and expressing regret that the last Legislature made no appropriation for its support.

A similar meeting to the above has just been held at the Agricultural College of the Dominion of Canada at Guelph. This visit of the Dominion Grange was made to the college on invitation of the President, Prof. Johnston, at which time all the departments of the institution were visited, as well as the live stock, the experimental grounds, gardens and farm out-buildings. The college farm consists of 550 acres, and the experimental plots of five acres, where experiments are being carried on with different grains, grasses, manures, etc. Upon the farm are specimens of Short Horn, Hereford, Ayrshire, Aberdeen Polled and Devon breeds of cattle, and of numerous breeds of sheep, pigs, and other classes of farm stock. Following the inspection of the buildings and stock, a dinner was extended to the visiting gentlemen, at which many distinguished persons were present. President Johnston presided, and welcomed the members of the Dominion Grange to the college. Various speeches were made, and in the course of his remarks, Dr. Orton, M. P., said the idea which many persons entertained, that the Grange was opposed to other classes, was a most erroneous one. On the other hand, it was a binding together of farmers to advance their interests, and by so doing further the material prosperity of the country. He spoke earnestly in support of the college, and believed it would prove one of the most powerful motors for the education of the young farmers of the Dominion, to place them in their proper position in the nation. He wanted to see the day when the Ontario government would devote a large amount of money to establishing the beet root sugar industry, and he also hoped to see the day when the Agricultural College would be the center of a sugar industry. In his speech, Mr. E. H. Hilborn, Master of the Dominion Grange, referred to the fact that the Order was established for the purpose of advancing the agricultural interests of the country in every possible, legitimate way—practically, financially and socially; and he was sure every member of the Order felt an interest in the great success of the college.

We have referred to the meetings of these different bodies in this department, because we see in them a just recognition of one of the leading objects and principles of the Grange. This, in whatever section it exists, is the elevation, improvement and education of the farmer. Some men are drawn to an association like the Grange, and can work through it better than they can work in any other society, and as the cause of improved agriculture and agricultural education needs the aid of all the workers in all the various bodies and clubs and associations, it is wise and well for those who do not belong to the Order of Patrons to recognize the good objects for which its members work

and invite them to the general co-operation and labor. The examples given above, therefore, cannot but be conducive to this desirable end—a united work of all organized bodies, clubs, Granges and societies for the good of agriculture, and the improvement of the farmer, educationally and socially.—*American Cultivator.*

### Causes of Hard Times.—No. 1.

EDITORS PRESS:—It is possible that the hard times through which we are passing are peculiarly severe in the southern counties of this State. It is to be hoped that the central and northern parts are better off, though reports from all parts of the State indicate that we are all in one boat, hatching a common storm. These financial storms are somewhat periodical, occurring twice or thrice in a generation. The writer of this article has witnessed perhaps half a dozen during the last 50 years. This, however, through which California is passing differs from any he has heretofore seen, in that it is spending its fury principally upon the farmers and producers. Hitherto the rule has been, when these storms occurred, that the hanks and great commercial and manufacturing houses were the first to cringe and fall before the blast; but the farmers, though crippled, were never broken up to any serious extent. But the hard times through which we are passing have this peculiarity, they began with the farmers and are breaking them up root and branch, while the merchants, bankers and money lenders are firm and strong, and will only be broken up, if at all, by the failure of the farmers.

In this part of the State, so deplorable is the condition of the agriculturists, that I do not believe one farmer in ten, if forced to meet his paper, could do so without losing every acre he owns. And the prospects for the future are gloomy enough; indeed, I have witnessed more foreclosures of farm mortgages during the last 18 months than in my whole life previous to that date. In the East where I lived, it was an almost unheard-of thing—the bankruptcy of a farmer. Here the bankers, and merchants, and money lenders are rich and strong, but the toiling farmers, as a class, are bankrupt, disheartened and without hope. Many have left our State, and 10,000 would leave to-morrow if they could. I propose in this and a subsequent article to consider some of the causes which have brought about this state of things, and after that consider what we may do to extricate the farming interest from its thralldom.

I will attack the main cause (or what I believe to be such) first. That cause of hard times among farmers in this State I declare to be the horrid rates of interest the farmers have been obliged to pay on notes and indebtedness. That rate, taking the agricultural districts through, has averaged about 14% per month. That this is exorbitant and ruinous is known by all men of experience in farming and other honest and ordinary vocations. No man can hire land at current rates, buy his outfit and cultivate the ordinary crops during a series of 10 years, and find as the net result fair wages for himself and 8% interest on his investment. In nine cases out of ten, he will not realize 6% per annum. Exceptions there may be, but they are few and far between. A large farmer, who keeps very accurate accounts, told me the other day he did not net 3% per annum on his investment, taking a period of 10 years into the account. I affirm that the man who loans money in this State at 6% per annum, in nine cases out of ten, makes more money by that loan than the borrower. Capitalists know this well, and often talk over with each other the short time it will take to "close out" their victims. The agriculturists of this State ought to have been able to borrow money at 6%. Instead of that, through the bad custom handed down from mining days and through the insatiable greed of money lenders, they have been obliged to pay, on an average, 14% a month, or 15 cents per dollar per annum.

Let us now see what this excessive interest will do for the borrower during a period of eight or ten years. The average farmer in this State may fairly be regarded as carrying a debt, taking one year with another, say, of \$1,500. This debt of \$1,500, at 14% per month, interest compounded once a year, would amount in 10 years, in round numbers, to \$6,000; and the bare interest the farmer pays is \$4,560.

Now, let us suppose the farmer had only paid a fair rate, that of 6% per annum. In the course of 10 years, the entire debt would have been only \$2,686, and the interest alone only \$1,186, and the interest in excess of 6% would be \$3,375. Let this excessive interest, averaging to each \$3,374, be paid back by the usurer to the farmers of the country, and how quickly their debts would be canceled, mortgages lifted, and comfort and prosperity ensue. In the valley where I live, on a space 2 miles wide by 14 long, it is estimated that the farmers have been owing for the past 10 years a total average of \$100,000, and the amount of interest they have paid in excess of 6% has been over \$200,000. Were this paid back, these men would be well off, all out of debt and thriving. As it is, they are nearly all either broken up or in danger of it. Do we not then find in this excessive interest paid by farmers the efficient cause of their discouragement and bankruptcy? S. BRISTOL. San Buenaventura, Cal.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### COLUSA.

WHEAT.—*Sun*, Aug. 9: Wheat is coming in rapidly, but owing to the advanced price, there is not much being stored. Some wheat is being hauled across the railroad to the river, and we think it would pay more of them to do so, as there is a prospect of a lively competition in freights. It can be considered as certain that freight will not be more than a dollar and a half to San Francisco and two hits less than that to Vallejo. Then it is the duty of every one to keep the river up, and more especially to patronize the San Joaquin Company. That company has made hundreds of thousands of dollars for the farmers of this valley.

THRESHING.—*Cor. Yolo Democrat*, Aug. 7: The largest day's threshing we have yet learned of was done a few days ago by G. W. Hoag, near St. Johns, Colusa county, the amount threshed being 2,748 sacks, weighing 135 pounds to the sack. The separator was a Mammoth Gold Medal, 44-inch cylinder, and the engine a Gaar, Scott & Co., 25-horse power, straw burner. The work was done between sunrise and sunset.

#### CONTRA COSTA.

EDITORS PRESS:—In the southeastern part of our county threshing is nearly over, the grain turning out well. On Marsh creek and adjoining valleys, threshing is progressing. I saw several steam threshers in Ignacia valley busily at work. Threshing will commence in the upper San Ramon valley this week. At present, threshing has not commenced between Walnut Creek and Danville. Hay pressing is going on with vigor. Around Dublin the hay crop is immense. Between Dublin and the town of San Ramon crops were never better though foulness has militated against the grain yield. In Sycamore, Tassajara and Green valleys, crops are above the average, and where threshed are turning out well. The grape crop will not be up to the average neither in quality or quantity. Since my last, several valuable barns with their contents have been burned to the ground. About two weeks ago a heavy wind seriously damaged the orchards by blowing down the fruits. I saw to-day in Marsh canyon, a man threshing with a flail. This is the first time since my boyhood, that I have seen this primitive separator in operation. The man's crop was not very large, and it was doubtless the best he could do, as it would not pay a thresher to go in after it. Southeast of Clayton threshing is nearly over, and much of the handling done. Everywhere else all over the county threshers are in urgent demand, especially in the San Ramon and adjacent valleys. Around Danville grain that bid fair to yield a large return has not turned out well. In Green valley, not over four miles away, the yield has been very good, and the grain excellent. This checkered condition prevails everywhere in our county. Hay is being hauled from the region of Lafayette to Oakland, and there sold for \$9 per ton. This does not pay the farmer. Around Dublin hay may now be bought in the field unbaled at \$3 per ton. A gentleman from Danville sent 20 miles for a thresher last week, but though he sought carefully and thoroughly could not get the promise of any for weeks to come, engagements ahead preventing.—W. H. T., Martinez, Aug. 12th, 1879.

THE COUNTY FAIR.—*Gazette*, Aug. 9: The county fair is to be held this fall a week later than in most former seasons, and will open Monday, September 29th, holding five days, and closing on Friday, October 3d. The board of officers is making provisions for an attractive fair, and reasonably rely upon the people of the county to support their efforts, which will be of little avail without such support.

#### FRESNO.

SCANDINAVIAN COLONISTS.—*Republican*, Aug. 9: Almost every nation of Europe has a representative on some one of our colonies, and almost to a man they are industrious, frugal and excellent citizens. But among all of our colonists, foreign or native born, none as a class can excel the Scandinavians in all the requirements necessary for successful colonists or farmers. The farms on Fig Avenue, C. C. colony, from North to Central avenues, are nearly all occupied by Danes and Swedes, and prettier homes cannot be found anywhere. On Sunday last we visited A. O. Anderson's place, Mr. Toft's and several others, and were agreeably surprised at the improvements they had made in the last two or three years. In place of a dry, barren waste, you see now comfortable homes surrounded by all kinds of fruit and shade trees, nice patches of alfalfa, on which are being pastured cows as fat as seals, and looking as happy and contented as "Swimley's boarders." Acres of raisin vines crushed down to the earth from the weight of their rich fruit, and in fact everything requisite to make farm life attractive and profitable. The principal industry on this avenue is dairying, which has been found to pay well.

#### LOS ANGELES.

PROLIFIC CORN.—*Downey Outlook*: A stalk bearing ten well-developed ears of pop-corn, the ears ranged alternately on opposite sides at the joints, from bottom to top, was grown on the ranch of J. W. Venable.

#### NAPA.

GRAPES.—*St. Helena Star*: A large grape-grower informs us that he has been offered \$22, \$18 and \$16 for this year's crop of grapes; the



ormer for Zinfandel, the next for all other foreign varieties, and the latter for Mission.

**SUNBURNE GRAPES.**—Harvey Lewelling informs us that some of the grapes in his father's vineyard have been badly sunburned this year—the worst he has ever known. This is the case particularly on gravelly land. The damage was done mostly last week, during the extreme heat of Thursday and Friday. Frank Pellet has also remarked the evil; but thinks it not worse than two years ago. He says the Malvoisies have suffered worst, and that the Bergers—a variety that is usually most vulnerable to the sun—have this year suffered less than other varieties. Since writing the above a grape grower shows us several bunches badly burned, and thinks that 20 % of the crop throughout the valley is thus spoiled. Black grapes have suffered much more than white ones. Grapes on gravelly land have also suffered much more than others, because that land gets much hotter than any other—as has been found by actual test.

**DRY PLOWING.**—Napa Register, Aug. 9: A farmer near town, having harvested his crop of grain, is preparing for another seeding. With a team of five horses and a gang he is plowing the hard ground, raising a good deal of dust. This is the first plowing for the coming crop in this section.

#### MENDOCINO.

**FAIR.**—The first annual fair of the Mendocino County Agricultural Association will be held at Willitsville, commencing September 15th, and ending 20th. Entries to the races close at 9 A. M. September 1st.

#### SACRAMENTO.

**IMPROVED TOMATOES.**—Record-Union: California produces the tomato in the greatest perfection. The climate and soil seem to be peculiarly adapted to its growth and perfect development. We saw yesterday some of the finest specimens of tomatoes we have ever seen. They were produced by G. T. Bascom, on the old Hoyt place, near the City Cemetery, Sacramento. Two varieties shown are the product of Mr. Bascom himself, by selection and hybridizing—the other is an old standard variety, known as Livingston's Acme. One of the varieties originated by Mr. Bascom he calls Bascom's Trophy, and it is an excellent shipping tomato, of medium size, perfect shape, and very compact and heavy. The other and unnamed variety is certainly one of the most superior tomatoes we ever saw. It is a cross between the old Trophy and the Hathaway. It is large, very regular in form, and is all meat—a splendid shipper and canner. Mr. Bascom very truly remarked that great astronomers have discovered other and distant planets, but these worlds and planets had never added anything to the food of man, while he who improved a tomato or other product of the soil added to the comfort and happiness of man and should not be overlooked. Our old friend John Smith, of the Sutter Gardens, will have to get up early in the morning to beat this new candidate for public favor in the tomato line. Mr. Bascom asks us to name his new product. We will christen it "Bascom's Sacramento Favorite."

#### SOLANO.

**FLAX.**—Dixon Tribune: We have referred before to the field of flax planted by Isaac Brinkerhoff, near Batavia. There were 130 acres of it and it has just been threshed out. The yield was twelve bushels to the acre, and it will sell at two dollars and a half per cental. The land on which the experiment was tried is the heaviest adobe. By some, the result of the experiment is regarded as proving that there is a more profitable use for all of our adobe land than wheat raising. The Republican says flax growing has been followed for some time and with good success about Rio Vista. N. C. Butler, Felix Drum and L. Prevost have all grown good crops of flax during the past few years, and some of them raised a good crop this year. Mr. Prevost proposes to import some new varieties of seed which he thinks will be specially adapted to the soil and climate.

**SEED WHEAT.**—Geo. C. McKinley, of Dixon, who has been experimenting with different kinds of wheat more extensively than any other farmer in the State, has raised this year some very fine White Toulzel. He has enough to sow two acres next year, and expects it will prove to be one of the best kinds of wheat ever tried on the plains. The berry is very large. Mr. McKinley has experimented with over twenty other kinds of wheat which he has discarded as unsuited for this soil and climate. He has produced a modification of the club wheat which is known here as the McKinley club. His method is to plant the wheat in rows and cultivate it, and every year to save and use for seed only the most perfect kernels.

**CHINESE CLING PEACHES.**—Robert Parke, of Vacaville, has a new variety of peaches, which bore this year for the first time. They are called the Chinese cling. They bear very large fruit, some of his peaches measuring 11½ inches in circumference. They are said to be very prolific.

#### SONOMA.

**MAKING SWISS CHEESE.**—Santa Rosa Democrat, Aug. 7: Mr. F. Korbel, of the firm of Korbel Bros., made us a call on Friday morning, and left us a specimen of "Swiss Cream Cheese," which they are going into the manufacture of to a great extent. The firm have taken the land which they have cleared of redwood timber to supply their mills, and have planted numerous different kinds of grasses, both American and European, which have grown

both on the hill and bottom land, with varying success. Some have taken root and grown well, others not as well, and as this year the result of experiments is known, they will profit by it in time to come. One eleven-acre patch of alfalfa in the bottom, near the site of the old mill, they have cut three times already this season and expect to cut it once or twice more. In using it as feed, a circumstance occurred that is worthy of notice: feeding it while newly cut, it gave the milk a bitter taste, and caused the cheese made from this milk to swell or puff to more than twice the size it was molded; but to cut it one day and feed it the next, this was entirely obviated. The firm have constructed all the buildings necessary to carry on the above-mentioned business, and have fitted them up with all the necessary apparatus. They have also recorded a trade mark, tastily in design, to place upon the cheese packages. We expect to hear that their enterprise is crowned with success, as there is a large home demand for the article. Mr. Korbel says that the land that has been denuded of timber in this and adjoining counties makes the very best kind of pasture land when it has once been thoroughly seeded. This is a valuable suggestion to the owners of such lands, and should induce them to follow the example set by this enterprising firm.

#### INJURY TO FRUIT GRAPES AT HEALDSBURG.

**Flag:** P. S. Peck, of the Laurel Dale Nursery informs us that he never experienced such blasts of hot winds as on Wednesday, Thursday and Friday of last week. They were so severe as to entirely destroy his Hamburg and Tokay grapes whether exposed to the sun or not, and to cook many of his apples half way through from the side exposed to the sun. His other grapes were not injured. We learn from others, however, that the damage to the grape crop is severe and general; Dr. Brotherton reports severe damage to his vineyard. Nevertheless the threshers worked under all head in the full glare of the sun. Stockmen came in from the mountains on horse-back, and farmers generally went on with their work as usual, without a single case of sunstroke or other physical giving out that we have heard of. Since writing the above Mr. J. H. Curtiss has left at this office specimens of fruits from his orchard, which were baked or demi-baked by the sun rays during the late hot weather. The specimens consist of apples, pears and blackberries, of which last Mr. Curtiss estimates he has lost 1,000 pounds. The apples and pears are fairly cooked on their sunny sides, the dividing line between the parts so cooked and the shady sides being sharply defined. Two of the apples and one of the pears, probably more exposed than the rest, were, in fact, cooked entirely through. The blackberries, ripe, partly ripe, leaves and all had the appearance of having been scorched with fire.

**DISEASED HOGS.**—Healdsburg Enterprise: Several stock men at Dry creek have been losing hogs from a disease known as the blind staggers. Bleeding is the only known remedy that will check the disease, if not deferred too long.

#### TUOLUMNE.

**EDITORS PRESS:**—The fruit crop is more abundant than expected in the spring. Many peach, apple, and pear trees are breaking down, requiring to be supported by stakes. The peach crop is very superior in size and quality. Drying has commenced, but the great demand from Bodie and the San Joaquin plains will lessen the usual supply for San Francisco market. The apple crop will be affected somewhat by the "coddling moth," but the effects of strong lye, scrapers, etc., is quite apparent, and few are falling compared to last season. I made a visit to Columbia and Sonora last week, and was well pleased with the outward appearance of the gardens, dwellings, etc. Everything has the appearance of permanence, comfort and thrift. Houses are neatly constructed and newly painted, outbuildings whitewashed, etc. Fences are in good condition. As time moves on in its mysterious march, the growth of vegetation around the dwellings is beautiful, and even marvelous, when we consider the infancy of the place and the material composing the rural population; for they came from all countries and followed various occupations. With only a tithe of attention and experience grand results are obtained. The weather has been exceedingly warm for a few weeks, ranging from 100° to 110° in the shade, making irrigation very necessary, and calling for close attention to fruit as it ripens. Grain is now coming freely to market. Flour is being shipped to Bodie by the millers. The immigration over the mountains is continuing, and supplies of all descriptions make a continuous stream of teams over the Mono road, and forms quite an item in the money receipts of this county.—JOHN TAYLOR, Mount Pleasant.

#### YOLO.

**SHEARING.**—Democrat, Aug. 7: Sheep shearing has commenced in several parts of the county. We are informed the clip will be an average yield and that sheep are in good condition.

#### NEVADA.

**WONDERFUL OATS.**—Reno Journal, Aug. 9: Sandy Crocker, of Glendale has about 50 acres sowed to oats, which has attained the wonderful height of seven feet. It is the second year the piece of land has been plowed, and the yield is without irrigation or rain. The crop is so thick that they cannot bind it by machinery. It is a most marvelous growth. Should any be skeptical we have a bunch in this office taken at random which overtops a six-footer by 12 inches. Don't slur sagebrush land any more.

#### Meeting of the State Board of Agriculture.

Present—Pres. Larue, and Directors Rose, Jones, Shippee, Perkins, Hancock, Newton, Coleman and Flint. After reading and approving minutes of last meeting the bids for pool selling were read and discussed, and the award was finally made to Killip & Co. for \$2,250.

#### The Races.

The entries to the trotting races were then taken up, and it was found that a number had been received by the Secretary since the publication yesterday.

The four-year-old races not having filled, was declared off. No. 15 for two-year-olds, having but two entries, the time for entries was extended ten days for additional entries.

There being but three entries in No. 23, the 2:20 class was declared off, and a free-for-all race was ordered advertised for same day and with the same purse, and that three be required to enter and two to start, the entries to close on the 15th instant with the Secretary. Three entries were made at once and others are expected. There being but four entries in No. 16, the three-year-old purse, the purse was reduced from \$600 to \$500, and the Secretary directed to notify parties entering that the race would be considered filled if satisfactory.

The colt stake foals of 1878, to be trotted in 1881, having eleven entries, was reopened, to close again November 1st. Same conditions.

Pardy's detective ticket was adopted for the annual membership.

A new die for the gold medal was ordered, and the Secretary was ordered to secure one made.

The matter of a rifle shooting match under Creedmore Rules was referred to the citizens of Sacramento.

The running races, 5, 10 and 12, the hurdle stake, the all-ups, carrying 100 pounds, and the amateur riders' stake, were reopened, to close September 1st on the same conditions. The Ladies' Tournament was fixed for September 10th, at 10 A. M. Some of the principal clerkships for the fair were filled, but most of the appointments were deferred till a future meeting.

The Grand Stock Parades were fixed for Tuesday and Friday, September 9th and 12th.

Hack tickets were fixed the same as last year—\$10 for two horses and \$7.50 for one horse. Director Newton was appointed to take special charge of the stands and Jones of the gates.

The Board withdrew all the premiums in the fine art department and appropriated \$850 to be expended to make an exhibition under the management of the artists of the State, and appointed director Coleman to act with the Executive Committee already appointed by the citizens meeting, the exhibition to be located on the large balcony on the west side of the pavilion, properly inclosed and lighted. Directors Rose, Shippee and Hancock, with the President, were appointed a committee to appoint judges at the park for stock, agricultural machinery, etc.

By a vote the county Board of Supervisors were requested to paint the ceiling of the upper hall some light color; also, to prepare the temporary art gallery on the balcony.

**FIRE AS A MASTER.**—Those who go out into the farmer's fields for hunting or camping should always repeat to themselves each morning, noon and night the old saying about fire being a valuable slave but a terrible master, and then they should exercise care accordingly. It is a serious matter to burn a field of dry feed, although the thoughtless or ignorant act as though it were not so. And then from dry fields fires spread to crops and buildings, or catch in the timber and destroy property of immense value. Let all who carry matches or shoot burning wads here and there remember this. If a lesson of the evil is needed, read what was done in Sacramento county last week. Some shooters carelessly ignited the grass on the Norris grant. A strip of country eight miles long by three wide was burned over and valuable feed destroyed on both the Norris and the Cox & Clarke tracts. On the latter ranch 100 cords of wood were burned up. A force of men, under Superintendent Patton, fought the flames for many hours. It is the intention to hunt up and prosecute the hunters who set the grass on fire. Certainly something should be done to free the country from such wanton destruction.

**WHAT SHALL WE CALL OUR FAN PALM?**—According to an item which we read in the *Gardener's Monthly* it seems that the fan palms, which are growing so beautifully in many of our gardens, have to beat around considerably to get themselves into good botanical society. The *Monthly* says: "The *Washingtonia* of Kellogg, as applied to the mammoth tree of California, having failed because of the distinction between it and the prior genus *Sequoia* not being maintained, Wendland, a noted authority on palms, now proposes this for the *Pritchardia filifera*, the famous palm of the Colorado river, which he contends, from recent examinations, is not a *Pritchardia* at all. This palm seems unfortunate in finding a home in nomenclature. First it was *Brahia*, then *Pritchardia*, and now to be *Washingtonia*." It would indeed be fitting that so splendid an American plant should have a distinctively American name.

#### News in Brief.

THE Kuldja question has been settled. The Zulu king has not offered to surrender. GERMANY intends to adopt silver as money. TENNESSEE has voted to repudiate her debts. YELLOW FEVER has slaughtered 11 Americans at Hayti.

ANOTHER Montreal bank bursted, the Ville Marie. \$700,000 gone.

A NEW town named Beulah is to be laid out at the Mineral King mines.

FRANCE, Italy, Spain and Portugal show an immense deficit in silk crops.

A BANKERS' CONVENTION is being held at Saratoga, to discuss taxation of banks.

DR. CHARLES BEARDSLEY has been appointed fourth auditor of the treasury.

THE river Mersey has overflowed, and caused much damage to crops in Lancashire.

GAMBITTA's fete cost \$30,000. One more victory for freedom and increased taxation.

J. BOLIER, who grossly assaulted a child 11 years of age at Fort Fairfield, Me., was lynched.

THE 14th Mechanics' fair, now in progress in San Francisco, is said to surpass all former exhibitions.

THE drouth is such in Shreveport that many citizens are compelled to buy water for drinking purposes.

REV. DR. LAWRENCE McMAHON was consecrated Bishop of Hartford diocese yesterday in St. Joseph's Cathedral.

IT is stated that W. L. Gibson, late cashier of the Citizens' National Bank, Detroit, is short \$20,000 in his accounts.

THE Indianapolis Tile works were destroyed by fire Saturday night. Loss, from \$30,000 to \$40,000; insurance, \$30,000.

A NEW trial, in the suit of Whalen against General Sheridan, for damages during the war, has been denied the plaintiff.

THE hilliard pool championship match, between Knight and Morris, at New York, was won by the latter—21 games to 19.

SALMON are very abundant in the Mokelumne river this season, and the Indians are catching large quantities on the riffles.

THREE THOUSAND miners of Silverdale, North Staffordshire, have struck against an increase of hours and a reduction of 10% in wages.

LARGE amounts of United States funded bonds are being freely taken up in London on American account, and shipped to New York.

TRADE in California wines is increasing in New York; fully 1,000,000 gallons of wine, and 100,000 gallons of brandy have been shipped so far this year.

A CALL has been issued for a Prohibition State Convention at Altoona, Pennsylvania, September 9th. It is expected a State ticket will be nominated and an address issued.

WITHIN about two weeks the New York city banks have paid into the Sub-Treasury the enormous sum of \$55,000,000 in legal tender notes, in payment for 4% bonds.

THE warm weather has considerably improved harvest prospects in France. French producers are frightened at the decline in prices of French wheat, caused by heavy imports from America.

SAFET PASHA has promised the Greek Minister that the Porte will appoint commissioners to negotiate relative to the boundary, although it would prefer to have the matter settled by the mediation of the Great Powers.

MANMOTH CITY, Mono county, is between 10,000 and 11,000 feet above the sea level. Though within the regions of perpetual snow, the winters are spent comfortably, and last winter's work was hardly suspended for a day.

THE Virginia Enterprise says: A chicken has been hatched on the Divide with two heads and three eyes. One eye is located between the two heads, and the other eyes are placed on the outside of the heads. [This is the Cyclops.]

IT is said that the San Diego Indians will celebrate the feast of San Luis Rey at Pala on the 27th inst. The celebration is expected to be a grand affair. A great many whites will be present. Bull fights will be among the chief attractions.

THE Rumpa disaffection in India is spreading. The insurgents are badly armed, but conduct a guerilla warfare. Operations against them will not be successful until after the rainy season is over, when troops can follow the insurgents into their fastnesses.

SOME Italian gardeners near Stockton lately poisoned a number of melons for the benefit of the parties who were in the habit of foraging on them nights. Some of these melons got into the hands of innocent parties, and two children have been poisoned in consequence.

THE Los Angeles Commercial says: Gold continues to be found in the northwestern part of the county, where the first gold ever known in California was discovered and sent to Philadelphia by the late Don Ahel Stearns. A nugget of the value of \$400 was discovered Thursday, by a Spaniard, about seven miles from Newhall.

THE INCREASED DEMAND FOR CALIFORNIA WINES.—The New York Wine and Liquor Circular, of August 11th, shows the importation to this port of French still wines in July, to be nearly 111,000 gallons, besides an increase of about 250 cases, against 47,000 gallons in July, 1878. The editor says the trade with California is wonderfully extending. So far this year fully 1,000,000 gallons of wine have come from California, and 100,000 gallons of brandy.





### The Cottage Gate.

In the sultry time of mowing,  
When the fields are full of hay,  
Pretty Janet brings her sewing  
To the gate at close of day.

Do you wonder that she lingers—  
Often glances down the lane?  
Do you ask me why her fingers  
Seem to find their work a strain?

Love dreams held her in their tether:  
Love is often (as we know)  
Idle in the summer weather,  
Idlest in the sunset glow.

Now the toil of day is over;  
Janet has not long to wait  
For a shadow on the clover,  
And a footstep at the gate.

How is this? The slightest sheeting  
Has been taken up anew;  
Very quiet is her greeting,  
Scarcely raised those eyes of blue.

Now he leans upon the railing,  
Tells her all about the hay;  
Till his plans seem unavailing—  
Very little will she say.

If you think it strange, my reader,  
Learn a lesson from the rose—  
From the garden's queenly leader,  
Fairest flower that ever blows.

Not at once she flaunts her petals;  
First a bud of sober green;  
By and by the stretching sepals  
Show a dash of red between.

Breezes rock her; sunbeams woo her;  
Wide and wider does she start,  
Opens all her crimson treasures,  
Yields the fragrance at her heart.

Ah! the rose buds will not render  
All their secrets in one day;  
And the maiden, shy and tender,  
Is as diffident as they.

### Mr. Palmleaf's Proposal.

White and glistening like a mammoth bridal veil, the December sun lay over all the New Hampshire hills; dark and delicate, like the tracery of lacework, the leafless woods held up their boughs against the dazzling winter sky—and the Rev. Peter Palmleaf, studying over an embryo sermon in his own especial sanctum, glanced up where a blackbird was whistling in the casement, and thought to himself what a lovely world the Lord had made.

When, all of a sudden, a shrill voice called through the entry,

"Peter, the horse is ready."

"What horse?" asked the Rev. Mr. Palmleaf.

"Our horse; to be sure!" said Miss Paulina, his sister.

"What for?" demanded the parson, staring through his near-sighted spectacles at the door.

"To take you to Mr. Darrow's."

"Why am I going to Mr. Darrow's?" further questioned the man of theology.

"Well, I never!" said Miss Paulina, bouncing into the study, with a yellow pocket handkerchief tied around her head and her sleeves rolled in a business-like fashion, up to her elbows, "Peter, you grow more moony and absent-minded every day of your life! Have you forgotten our discussion at the breakfast table? Why, you are going to Mr. Darrow's after a girl, to be sure!"

"A—girl!" repeated the young minister, dreamily, rubbing his forehead. "Oh, I do recall something of the conversation. A hired girl."

"Yes," nodded the lady briskly. "She's going to leave Mr. Darrow's this morning, because the family is so large and work so heavy. She can't find that fault with our establishment, I guess. Ask her how much wages she wants, and how old she is, and ask her if she has any followers—tell her a follower is one thing I can't tolerate, and be sure you bring her back again with her bundles; as I must have her or some person to help me before cousin Philinda's folks come from the city."

"But suppose she won't come!" said the young minister dubiously, fitting on the fingers of his gloves.

"Then you must make her come," said Miss Paulina, hurriedly retreating, to look after a certain kettle, which was noisily boiling over, at the back of the house.

And thus, charged with his mission, the Rev. Peter Palmleaf got into the one-horse cutter, and jingled merrily away.

Mr. Darrow's farmhouse nestled under a hill, in the protecting shadow of a cluster of evergreens, with a green fence in front of it, a red barn at the rear, and a colony of dovehouse at the sunny southern angle, and Mr. Darrow himself, a ruddy-faced elderly man with a fringe of white whiskers around his chin, was shoveling away the pearly masses of snow in front of his door.

"Eh!" said Mr. Darrow, leaning on the handle of his spade, as the bells jingled up in front of his gate, and then stopped. "How? Why, it's the minister! Good morning! That

there Sunday sermon of yours was a masterpiece. Me and Squire Sennex—"

"Yes," said Mr. Palmleaf, leisurely alighting and tying the horse to the post. "But I have called on business this morning."

For Mr. Palmleaf was emphatically a man of one idea, for the time being, the "hired girl" had chased all theology out of his head.

"Eh!" said Mr. Darrow; "business?"

"I've come after a young woman," said the minister.

Mr. Darrow dropped the spade in the middle of the snow drift.

"Do you mean Dolly?" he said.

"If that's her name—yes," asserted the minister, solemnly.

"You don't mean that—it is to be an engagement?" cried Mr. Darrow.

"Well, yes—that is, if we suit each other," said Mr. Palmleaf, mildly.

"Jerusalem!" said Mr. Darrow, who had always heard that Mr. Palmleaf, like most men of genius, was an "eccentric," but had never realized it before. "Have you spoken to her?"

"Certainly not!" answered Mr. Palmleaf. "Of course I shouldn't think of such a thing without seeing you first."

"Very straightforward of you, I'm sure," said the farmer. "But, of course, I can have no objection if Dolly herself is suited. Though," and he smote one red-mitted hand upon his knee, "now I come to think of it, you've never seen Dolly."

"No!" said the minister serenely. "But that need make no difference."

"Jerusalem!" again uttered the farmer. "It wasn't the way I used to look at things when I was a young man."

"Tastes differ," said Mr. Palmleaf, a little impatient at this lengthened discussion.

"Oh, of course you can see her," said Mr. Darrow. "She's in the dairy, skimming milk. Dolly!" raising his voice to a wild bellow. "Here's the Rev. Mr. Palmleaf wants to see you! There's the door just to the left, sir."

And, in his near-sighted way, the minister stumbled into Farmer Darrow's dairy, where a rosy-cheeked girl, with jet-black hair, brushed away from a low, olive-dark brow, and eyes like pools of sherry wine, was skimming the cream from multitudinous milk pans into a huge stoupe.

"Young woman," said Mr. Palmleaf, turning his spectacles upon her amazed face, "do you want to engage yourself?"

"Sir?" said Dolly, her spoon coming to an abrupt standstill amid the wrinkly and leather-like folds of the cream on a particular pan.

"In other words," explained Mr. Palmleaf, do you want a good home?"

"Indeed, sir, I never thought of such a thing!" said Dolly all in a flurry.

"How old are you?" questioned Mr. Palmleaf.

"I am eighteen," said Dolly, in some confusion.

"Have you any followers?"

"Sir?" fluttered Dolly.

"Beaux, I mean," elaborately explained the clergyman.

"Of course I haven't," said Dolly, half inclined to laugh, half to be angry.

"Then I think you'll suit me," said Mr. Palmleaf; or, rather my sister. Our family is not large; the work is light, and Paulina is a most considerate mistress. Get your bundle."

"My—what!" said Dolly in bewilderment.

"Your clothes. I am to take you back with me immediately," said Mr. Palmleaf, "Paulina expects company. It is essential that we obtain help at once."

Dolly Darrow looked up with cheeks crimson like any rose, eyes full of deep brown sparkles, and lips around which danced a perfect galaxy of dimples.

"Wait a minute, please," said she.

"Certainly," said Mr. Palmleaf.

And he sat down on a wooden stool in the corner, and fell to meditating on the "thirdly" of his uncompleted sermon, while Dolly sped up stairs, three steps at a time.

"Father," cried she, flying into the presence of her parents, "the minister has mistaken me for Bridget!"

"Eh?" said Mr. Darrow.

"You don't tell me!" said Mrs. Darrow.

"And he wants to hire me," said Dolly, her eyes gleaming with fun. "And I'm going. Quick—where's my hat, and shawl and mufflers?"

Mrs. Darrow rose up in the majesty of her black silk gown and gold watch-chain.

"Dorothy Darrow," said she, "you're never going to hire as a servant."

"Yes, I am," said Dolly. "It's better than private theatricals. He's so nice and absent-minded, and Paulina is a jewel! Oh, make haste or he'll be tired of waiting!"

And Dolly succeeded in carrying her point. Fifteen minutes later she had got into the cutter, with a parcel, which Mr. Palmleaf stowed snugly away under the seat, and the minister drove home with secret exultation.

Miss Paulina was in the kitchen frying sausages for dinner, when Dorothy walked in, with cheeks like carnations, hair blown all over her face, and the bundle under her arm.

"Here I am, Miss Palmleaf," said she. "The hired help, at your service!"

Miss Paulina stared.

"Why, it's Dorothy," said she. "And I sent Peter after—"

"Yes, I know," said Dolly brightly. "But Bridget was gone, and he mistook me for her, and he has engaged me to work here. And oh, Miss Paulina, please don't deceive him. Be-

cause I am a smart little housekeeper, and I can help you just as much as any Irish girl could. Just give me a trial, that's all."

Miss Paulina had a shrewd appreciation of a joke; her hard features relaxed with a smile, as she stood looking down at the radisut little brunette.

"Well," said she, "I don't mind if I do."

For one month, Dorothy Darrow officiated as hired girl at the parsonage. Then she came to the clergyman one day:

"Mr. Palmleaf," said she, "I am going to leave the place!"

Mr. Palmleaf looked in amazement and dismay.

"I hope, Dolly," said he, "that neither my sister nor I have unwittingly offended you?"

"No!" said Dolly, patting her little foot on the staring green leaves in the study carpet, "but, oh, Mr. Palmleaf, I have done wrong, and I earnestly beg your pardon!"

"Dolly!" cried out the Reverend Peter, in mild surprise.

"Because you are so good and true," sobbed the girl. "I am not a hired girl, and I only came here for a joke, and I can't bear to think I'm de-de-deceiving you!"

And Dolly began to cry pitcously, behind the corner of her apron.

"You come here for a joke, eh?" said the minister.

"Y-yes!" confessed Dolly, behind her apron.

"Well, then," said the minister, gently drawing her toward him, "suppose you stay in earnest?"

"Sir?" faltered Dolly.

"My dear," said Mr. Palmleaf, "I have got used to you around the house. I should miss you terribly if you should leave us. Do you think I am too old to think of a blooming young wife like you?"

"Not a bit!" cried Dolly indignantly.

"Old—you?"

"Do you like me a little bit?"

"A great deal," said Dolly, laughing and blushing.

"Then you will stay with me always?"

And Dolly promised that she would.

Everybody wondered how so bashful a man as Rev. Mr. Palmleaf ever mustered courage for a proposal; but nobody knew that the "engagement" begun for a joke turned out in sober earnest.

### Music in the Home.

EDITORS PRESS:—In making a recent trip to Sonora, I had occasion to spend one night at the farm residence of J. Ralph, on the Mono road, one mile from Sonora. An immigrant party was camped under the fruit trees for the night; all bound for Bodie and Bridgeport. On nearing the house, music greeted the ear from organ and fiddle. Strong sons of toil, wearing overalls and check shirts, were delighting a country audience by strains of beautiful music. It was a sight to see the workman's fingers move with lightning speed over keys and fiddle strings. Anon the fiddler played the organ keys as if at home, and the organist played the flute. Then followed fiddle and flute for a change. My thoughts ran on the oddity of the scene: Grandfather sat in his easy chair with a satisfied appearance, as if the scene was of common occurrence. A call was made for songs, and the young members responded. A girl of eight summers and a boy of six, stood forth unembarrassed and sang two songs, the boy taking the second. Then all went to slumber and refreshing rest, with no canopy but the protecting shade of a friendly fig tree. Happy family! Where music is cultivated the briars and thistles of discontent find no lodgment. At early dawn the travelers were on their way blithe and gay with the sense of riches which Bodie cannot furnish—the consciousness of freedom from guile and souls filled with power of song.

JOHN TAYLOR.

Mt. Pleasant, Aug. 7th, 1879.

CHARITY.—Night kissed the young rose, and it bent softly to sleep. Stars shone, and pure dew-drops hung upon its bosom, and watched its sweet slumbers. Morning came with its dancing breezes, and they whispered to the young rose, and it swung to joyous and smiling tones. Lightly it swung to and fro in all the loveliness of health and youthful innocence. Then came the ardent sun-god, sweeping from the east, and smote the young rose with its scorching rays, and it fainted. Deserted and almost heart-broken, it drooped to the dust in its loveliness and despair. Now the gentle breeze, which had been gambling over the sea, pushing on the home-bound bark, sweeping over hill and dale, by the neat cottage and still brook, turning the old mill, fanning the brow of disease, and frisking the curls of innocent childhood, came tripping along on her errand of mercy and love. And when she saw the young rose, she hastened to kiss it, and fondly bathed its head in cool, refreshing showers, and the young rose revived, and smiled in gratitude to the kind breeze. But she hurried away, for she soon perceived that a delicate fragrance had been poured upon her wings by the grateful rose; and the kind breeze was glad in heart, and went away singing through the trees. Thus charity, like the breeze, gathers fragrance from the flowers it refreshes, and unconsciously reaps a reward in the performance of its offers of kindness, which steals on the heart like rich perfume, to bless and to cheer.—London Telegraph.

### About Jokes.

Dr. Hall says: "Joke" is not slang, but a respectable word honestly descended from the Latin *jocus*, and reproduced in the French "jeu." And a joke is not a vulgar or coarse thing, nor a thing inherently bad, but has its place in the economy of human life, and only becomes a bore, or a nuisance, when out of place. The organization of the human face provides for laughter; for it will not be alleged, we presume, that the effort to laugh developed the muscular capacity, any more than the effort to articulate made the organs of speech.

The first and best arena for the joke is the family, everyone is known and trusted, and every member is or ought to be at home with a budget of fun collected from the ridiculous side of human nature during the day. Family life has many dark and cloudy days from toil, sickness, losses, bereavements, apprehensions. It is entitled to its sunshine and its hours of gladness. The play of wit, the unexpected turn, the grotesque collocation of words, or ideas, and the absurd suggestion, are in order. Like the wild flowers of the green, without arrangement, and without labor, they give a simple pleasure that costs nothing, and does no harm in any direction. If men would only take the pains to "make fun" for the "folks at home" that they sometimes take to "make the table ring" abroad, they would add no little to the sum of human happiness.

But even the grave business of life may be helped on by a joke. Mind works on mind sometimes as iron on iron. Friction, sparks and abrasion follow. The lubricating oil of a timely witticism prevents these ill consequences. Unpalatable truths can be sweetened by a good saccharine witticism; and insipid communications can be made palatable by a sprinkling of "Attic salt." President Lincoln, with a strong, original, and shrewd mind, grew up among fresh and original combinations, and in his varied contact with men noticed much which he remembered. He knew well that an anecdote, a droll saying, or even a common saying made droll by manner, will persuade many, when a cogent argument would bewilder, irritate or repel them. It is probable that he is, and will be, credited with far more "stories" than he ever told; for the echoes of voices in such high places are many, fitful, and far resounding. Dean Swift, Sidney Smith, and other men like them, get credit for more than they ever said. But even allowing for all this, it is certain that he made many a happy hit, which had all the value of a blow without the hurt, through "stories," incidents, and quaint speeches of which he was "reminded." That his own mind rested, in some degree, while thus disporting itself, and was thus helped to bear the weight of care, is an ingenious theory; but it is far from being certain. There was, all through, a chain of grave purpose. The "funny" things were but flowers thrown around it. It is more nearly true to say, that Lincoln—a remarkable man at the outset, with a remarkable training, such as only Western public life could give—"brought forth fruit after his kind," and did his persuasion in his own way because he could do it, and had found it effective.

A joke is a useful instrument in a public address. Men listen better after the facial muscles have been exercised.

Of course wit is as various in its kind as the races of men; but, as with the races, it has common underlying properties, for there are jokes current to-day, and new so many, which are at least 2,000 years old, and which have passed through all the nations of historic Europe.

There is English wit which Scotchmen do not appreciate; and there is a "sly, pawky" Scottish wit which takes best in Scotland, but is not without the power to enlist outsiders, as one may see in Sir Walter Scott, or in Norman McLeod, or in the genial author of Rab and His Friends. There is an Irish wit which Carlton, Lever and Lover have illustrated, though one must live in Ireland to get it in perfection, just as one must go to the lands that grow them to get oranges at their best. It is marked at once by abandon, ingenuity, and shrewdness, and often owes something, as does "Yankee" humor, to the tones in which it is enlarded, and to that natural dramatic power which many Oriental races possess. How often the prefatory "Ah, thin, yir honor" relaxes the muscles that work in laughter, and—like a good introduction to a speech—brings you to a receptive frame of mind for what's coming.

When you are sure that the droll or quaint or humorous turn is part of the man—like his voice, or his accent—you are not to blame him even when the oddity turns up "in meeting." The man who was converted "in spots," according to his account of himself, was not open to common censure.

It is out of place when it is plainly "prepared for the occasion;" when you are dragged by a long, circuitous route in order to get the witty thing forward, and when the point of the thing needs to be explained. A good joke is like a mathematical axiom. It shines in its own light. It is its own interpreter, and nothing is sadder, in its way, than to see a poor tyro in wit floundering through an explanation of his abortion of a joke. It is as if somebody lit a candle to show you his fire-works!

THREE THOUSAND barrels of liver pills are consumed annually, and still a man occasionally is left for a railroad collision.



## Chaff.

TRUTH is mighty—mighty scarce.  
RED-PAINT is the oldest theater-gore.  
If a man says he lies, and tells the truth, he lies.

A TAXIDERMIST is a man who upholsters animals.  
HEADS that have much to account for: Bill-heads.

CAN you tell why a blackberry is always red when it's green?

IF matches are made in heaven, where do they get the brimstone.

HOW does a horse regard a man? As the source of all his woes.

WHICH side of a horse invariably has the most hair on? The outside.

FLIES have so many eyes that it is no wonder they leave their specks everywhere.

A POLITICAL convention has decided that the United States is a nation. That settles it.

BEER drinkers beware! 40,000 pounds of glycerine are used annually in sweetening beer.

THE Butte Co. *Weekly Mercury* has found a stratum of "lunbago" in the old Banner mine.

WHERE is money first mentioned in the Bible? When the dove brought the green back to Noah.

A HANDKERCHIEF flirtation is a very simple thing. It only requires two fools and two handkerchiefs.

A MAN in this city is said to have his heart on the right side. Why not? Would you have it on the wrong side?

A YOUNG writer wishes to know which magazine will give the highest position quickest. We suggest a powder magazine.

GEORGE WASHINGTON never made but one pun in his life, and that one he forgot before he could tell it, hence his respected memory.

A CITIZEN of Fleming, Ky., fired at a rat, struck a keg of powder, blew his house up, and had to jump in the river to keep from burning up. The rat remains unhurt.

AN Albany girl was frightened into convulsions by a brass band, and died. Usually the results of such inflections are not fatal, but tend to produce bad language and insanity.

ETIQUETTE requires that a call should not be more than fifteen minutes. This rule does not apply to newspaper offices. Editors don't have anything else to do but receive visitors.

"REMEMBER who you are talking to, sir," said an indignant parent to a fractious boy, "I am your father, sir!" "Well, whose to blame for that," said young impertinence, "taint me."

JUDGE —, now a very able judge of a Western court, when he first came to the bar was a very blundering speaker. On one occasion, when he was trying a case involving the right of a client to a lot of hogs, he addressed the jury as follows: "Gentlemen of the jury, there were just 24 hogs in that drove, just 24 gentlemen, exactly twice as many as there are in that jury box." The effect can be imagined.

BRIDES' DRESSES.—The richest bridal dresses worn recently have been made of white satin, trimmed with lace. Cut in the princess style, the overdress of lace, or lace arranged as scarfs, forms the entire drapery. The garniture consists of flowers in masses and trailing fringes. The prettiest bridal dress of the season was of rich white satin, covered with myriads of rows of finely plaited Breton lace, and garnitured with natural rosebuds and orange blossoms. No artificial flowers were used. The veil was attached to a full, close wreath of the same flowers, but the bouquet was composed entirely of white rosebuds. The effect of Breton lace is particularly soft and foamy, much more becoming to youthful brides than heavy point lace. A very pretty and much more simple bridal dress is of white barege, trimmed also with quantities of delicately plaited Breton lace. The garniture of this dress is white satin ribbon. No flowers used, except a great bunch of natural lilies of the valley and white rosebuds at the front of the corsage. Artificial flowers are not now considered *distingue* as a garniture for bridal dresses. Bridesmaids adopt the English fashion of wearing large quaint hats or bonnets. At a recent wedding the bridesmaids wore princess dresses of pale pink, a combination of silk and brocade, and large hats of the Gainsborough shape, trimmed with Breton lace and immense crushed roses.

GOOD ADVICE TO READERS.—If you measure the value of study by the insight you get into subjects, not by the power of saying you have read many books, you will soon perceive that no time is so badly saved, as that which is saved in getting through a book in a hurry. For if to the time you have given you had added a little more, the subject would have been fixed on your mind, and the whole time profitably employed; whereas, upon your present arrangement, because you would not give a little more you have lost all. Besides, this is overlooked by rapid and superficial readers—that the best way of reading books with rapidity is to acquire that habit of severe attention to what they contain, that perpetually confines the mind to the single object it has in view. When you have read enough to have acquired the habit of reading without suffering your mind to wander, and when you can bring to bear upon your subject a great share of previous knowledge, you may then read with rapidity; before that, as you have taken the wrong road, the faster you proceed, the more you will be sure to err.—*Sydney Smith*.

## Young Folks' Column.

## Two Little Kittens.

[Written for Young Folks by WINNIE WINTER.]

Two little kittens  
That frolicked all day,  
Lived in the barnyard,  
Underneath the hay.

One was a black kit,  
The other was white;  
And their eyes like diamonds,  
Were sparkling and white.

Ont in the sunshine,  
Merrysome and gay,  
Through the summer days  
Here they loved to play.

Over and over,  
They tumbled and rolled,  
In mimic battle,  
So valiant and bold.

Around and around  
In circles they went,  
Backward and forward,  
On pleasure intent.

Jumping and skipping,  
With a lighthearted bound,  
Whirling and twirling,  
Like wheels going round.

And when they were tired  
Of romping and fun,  
They lay down together,  
To bask in the sun.

Dreamed not of the morrow  
These kittens so gay,  
But lived in the present,  
And thought of to-day.

Each to the other  
Was ever so kind,  
That neither one could  
With the other fault find;

And so their sweet lives  
Flowed peacefully on,  
Like a calm river  
That smoothly doth run.

The moral of this  
You plainly will see,  
Is children be happy,  
While children you be.

Let kindness abound  
In all that you do,  
And ever for the right,  
Be valiant and true.

## Advice to the Young Men.

Remember, son, that the world is older than you are by several years; that for thousands of years it has been so full of smarter and better young men than yourself that their feet stuck out of the dormer windows; that when they died the old globe went whirling on, and not one man in 10,000,000 went to the funeral, or even heard of the death. Be as smart as you can, of course. Know as much as you can, without blowing the packing out of your cylinder heads; shed the light of your wisdom abroad in the world, but don't dazzle people with it. And don't imagine a thing is so simple because you say it is. Don't be too sorry for your father because he knows so much less than you do, remember the reply of Dr. Wayland to the student of Brown's University who said it was an easy enough thing to make proverbs such as Solomon wrote: "Make a few," tersely replied the old man. And we never heard that the young man made any. Not more than two or three, anyhow. The world has great need of young men, but no greater need than the young men have of it. Your clothes fit you better than your father's fit him; they cost more money, they are more stylish. Your moustache is neater, the cut of your hair is better, and you are prettier, oh, far prettier than "pa." But, young man, the old gentleman gets the biggest salary, and his homely, scrambling signature on the business end of a check will drain more money out of the bank in five minutes than you could get out with a ream of paper and a copper-plate signature in six months. Young men are useful, and they are ornamental, and we all love them, and we couldn't engineer a picnic successfully without them. But they are no novelties, son. Oh, no, nothing of the kind. They have been here before. Don't be so modest as to shut yourself clear out; but don't be so fresh you will have to be put away in the cool to keep from spoiling. Don't be afraid that your merit will not be discovered. People all over the world are hunting for you, and if you are worth finding, they will find you. A diamond is not so easily found as a quartz pebble, but people search for it all the more intently.—*Burlington Hawkeye*.

A DOG AND HIS MASTER'S LIKENESS.—An English paper tells a story of a dog and his master's likeness. His master had an artist paint his picture in oil colors, and it was very life-like indeed. The master then tells this story: When it was brought to my house my old dog was present with the family at the "unveiling;" nothing was said to him nor invitation given him to notice it. We saw that his gaze was steadily fixed on it, and he soon became excited, and whined, and tried to lick and scratch it, and was so much taken up with it that we—although well knowing his intelligence—were all quite surprised; in fact, could scarcely believe that he should know it was his likeness. We, however, had sufficient proof after it was hung up in our parlor; the room was rather low, and under the picture stood a

chair; the door was left open without any thought about the dog; he, however, soon found it out, when a low whining and scratching was heard by the family, and, on search being made, he was in the chair trying to get at the picture. After this I put it up higher, so as to prevent it being injured by him. This did not prevent him from paying attention to it, for whenever I was away from home, whether for a short or long time—sometimes for several days—he spent most of his time gazing on it, and as it appeared to give him comfort the door was always left open for him. When I was long away he made a low whining, as if to draw attention to it. This lasted for years, in fact as long as he lived and was able to see it.

## GOOD HEALTH.

## Nerve Stimulants.

Dr. Brunton has the following interesting and suggestive remarks on this subject in a recent article in the *Contemporary Review*:

There are two nerves, known as the "fifth pair," which are distributed to the skin of the head and to the mucous membrane of the eyes, nose and mouth. These nerves are closely connected with the heart and vessels, and by stimulating their branches the circulation may be greatly influenced, as in the case of fainting. It is a curious fact that people of all nations are accustomed, when in any difficulty, to stimulate one or another branch of the fifth nerve, and quicken their mental processes. Thus, some persons, when puzzled, scratch their heads, others rub their foreheads, and others stroke or pull their beards, thus stimulating the occipital, frontal or mental branches of these nerves. Many Germans, when thinking, have a habit of striking their fingers against their noses, and thus stimulating the nasal cutaneous branches; while in other countries some people stimulate the branches distributed to the mucous membrane of the nose by taking snuff.

The late Lord Derby, when translating Homer, was accustomed to eat brandied cherries. One man will eat figs while composing a leading article; another will suck chocolate creams; others will smoke cigarettes; and others sip brandy and water. By these means they stimulate the lingual and buccal branches of the fifth nerve, and thus reflexly excite their brains. Alcohol appears to excite the circulation through the brain reflexly from the mouth, and to stimulate the heart reflexly from the stomach, even before it is absorbed into the blood. Shortly after it has been swallowed, however, it is absorbed from the stomach, and passes with the blood to the heart, to the brain, and to the other parts of the nervous system, upon which it then begins to act directly. Under its influence the heart beats more quickly, the blood circulates more freely, and thus the functional power of the various organs in the body is increased, so that the brain may think more rapidly, the muscles act more powerfully, and the stomach digest more easily. But with this exception the effect of alcohol upon the nervous system may be described as one of progressive paralysis. The higher centers suffer first, and the judgment is the first quality to be impaired, and this becomes the more so as the effect of alcohol progresses, although the other faculties of the mind may remain not only undiminished by the direct action of the alcohol on the brain, but greatly increased by general excitement of the circulation. By and by, however, the other parts of the nervous system are successively weakened, the legs fail, and the person falls insensible. It is evident, then, that only the first stages of alcoholic action are at all beneficial, the later stages being as clearly injurious.

NOURISHMENT IN TYPHOID FEVER.—UN SOUND LOGIC.—Dr. Samuel Peters (*N. Y. Medical Record*), in a paper on typhoid fever, refers to the importance of supporting the strength by nutriment, and adds: "I once had a case, a lady of large frame and plenty of adipose tissue, who drank every day four quarts, by measure, of pure milk. I was frequently inquired of as to the probability of her recovery. I answered that she could not die, because she was able to appropriate so much nourishment. She recovered," etc. Now it so happened that the present writer also had a case of typhoid fever, a young lady of good constitution, who was able to relish and appropriate an ample quantity of the same nourishment, and who died notwithstanding. No serious symptoms occurred during the first two weeks, and no active medication was required or employed. In the third week nervous and cerebral disturbances set in, with the result mentioned. Therefore, a patient can die in typhoid fever, even when well nourished. Dr. Peters is not the only medical writer who has made hasty and illogical conclusions.—*Pacific Medical and Surgical Journal*.

POTATO DISEASE AND DIPHTHERIA.—It seems now fairly established, says the *Chemical Review*, that *Botrytis infestans*, the parasite which occasions the potato disease, is the same which gives rise to diphtheria.

## DOMESTIC ECONOMY.

MUSKMELON PRESERVES.—Take ripe muskmelons, remove seeds and peel, and cut in pieces. Put into a stone jar and cover with scalding vinegar; let them stand until the next day and pour off the vinegar; heat it and pour on them again. Do the same every day until the fourth day. Weigh the melon, and to every five pounds add three pounds of white sugar, and one quart of the vinegar, and spice to suit. Put all together and simmer till tender. The next day but one, pour off the syrup and boil it down so there will be just enough to cover the melon. You may think it will be a tiresome job, but if you try it you will be well pleased with it.

SPICED GRAPES.—A writer in the *Farm and Fireside* says: In canning grapes, they are better if the seeds are removed. This may be done by slipping the pulp out of the skins and scalding them; then press through a colander and return to the kettle with the skins sweetened to taste, and as soon as boiling hot put in cans and seal. Spiced grapes are nice to eat with meats. Remove the seeds the same as for canning; then to seven pounds of fruit add three and one-half pounds of sugar, one pint of vinegar, one tablespoonful of cloves, one of cinnamon and one of allspice; boil until as thick as marmalade. It is better to tie the spices in small bags made of thin muslin.

GREEN CORN.—Last summer, in cooking green corn, I tried steaming it instead of boiling, and we thought it an improvement. A delicate pudding may be made from green corn after the following recipe: Allow one long ear of sweet corn for each person. Take half a pint of milk, one egg, a desert spoonful of white sugar, one of butter, and a little salt to every two ears of corn. Split each row of corn down the middle, then cut from the cob with a sharp knife and scrape the cob. Add the milk and other ingredients, and bake in a hot oven in custard cups or a pudding dish until the top is nicely browned but not hardened.

MAKING TEA WITH COLD WATER.—Did any one ever try making tea with cold water? If you never did, just do so the next warm day, when a cool, refreshing beverage is desired. Place the tea in a pitcher in the morning with just enough cold water to cover it. At dinner time fill the pitcher with cold water from the well and you will have the best cup of tea you ever drank—that is for warm weather. The finer qualities of tea are much more fully retained than when steeped upon the fire. And who wishes a cup of scalding tea on coming in straight from the hot harvest field and the scorching glare of our August sun?

LIGHTENING CAKE.—Persons who "just drop in" are a nuisance in the opinion of many housewives, who, nevertheless, will be glad to learn of a cake of which the making and baking occupies only 15 minutes, and which, therefore, will serve to conceal the nakedness of the larder when unexpected guests appear. Take the yolks of four eggs, three tablespoonsful of sugar, the same of flour, about two tablespoonsful of milk, and the juice of half a small lemon; the whites of three eggs are beaten to a stiff froth and mixed with the yolks, flour, etc., the compound then being put in a buttered pan and placed in a quick oven.

CHOCOLATE.—To each quart of new milk, or half milk and water, allow three heaping tablespoonsful of scraped chocolate. It is best to set a coffee-pot, or any convenient dish, into a kettle of boiling water; pour in the milk and as it heats add the chocolate mixed to a paste with a little milk; boil for two or three minutes and serve. Some prefer to boil chocolate only one minute, others 15, while others boil it one hour, setting aside to cool that the oil may be removed, and then reheating when wanted.

CHICKEN CHEESE.—Boil two chickens in water enough to make them tender; take them out when done, remove all the bones; mince the meat very fine; season with salt, pepper and butter, and return them to the water in which they were boiled; cook until the liquid is nearly gone; pour into a deep dish; lay a plate over it, put on a weight, and set away in a cool place. When ready to be eaten, cut it in slices, and it will be as firm as cheese, and is as firm as tea.

PRETTY TABLE COVER.—A small table cover of unique design is made of black satin. On this are sewed three or five parallel strips of maroon, dark blue or black velvet, as preferred, and between the strips (the number of which is regulated by the size of the cover) fans of different colors are embroidered in slip-stitch done with floss silk. The fans follow each other straight up and down in regular succession and colors, blue, green and red.

SPONGE CAKE WITH WATER.—Three cups of sugar, four cups flour, one cup cold water, six eggs, one teaspoonful soda, two of cream tartar; flavor with rose and orange water combined. Beat the eggs light; add sugar and beat again four or five minutes; then add two cups of flour, beat well, and bake in a moderately hot oven.

A GOOD SALAD.—Take a tomato, not over-ripe, and cut into slices, as you would a cucumber; take a small onion and cut it up as fine as you can, sprinkle it over the tomato slices, add salt, pepper and vinegar at discretion,





DEWEY &amp; CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 202 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No NEW names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line..... .25 .80 \$2.00 \$ 5.00  
Half inch (1 square).....\$1.00 \$3.00 7.50 24.00  
One inch..... 2.00 5.00 14.00 40.00

The Scientific Press Patent Agency.

DEWEY &amp; CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, August 16, 1879.

## TABLE OF CONTENTS.

**EDITORIALS.**—Landscape Gardening—No. 3; American Dairy Implements in England, 97. The Week; The Day of Small Things, 104. Otatoes from Citrus Fruits; An Ingenious Automatic Ventilator, 105.

**ILLUSTRATIONS.**—Landscape Gardening, 97. Crouch's Automatic Ventilator; The 'Zeuille' for Otto Making, 105.

**CORRESPONDENCE.**—Sub-Irrigation; Ancient Chestnut Trees, 98. Causes of Hard Times—No. 1, 100.

**QUERIES AND REPLIES.**—Dodder and Alfalfa; Seedling Peaches—Prunes; Grape Scale Insect; Seedling Figs, 105.

**ENTOMOLOGICAL.**—The Corn-Ear Caterpillar; Old Clothes and Coddling Moths; A Deluge of Chafers; Development of Sexes in Bees; Diabroticas, 104.

**THE DAIRY.**—Wages on Dairy Farms; A Fresno County Dairy House, 98.

**THE FIELD.**—Cane-Sugar Industry Proposed, 98.

**SHEEP AND WOOL.**—Wooly Wombling, 98.

**THE VINEYARD.**—The Occurrence of Mildew on Vines; Reclaiming a Mountain Vineyard, 99.

**HORTICULTURE.**—What a State Horticultural Society Might Do; Influence of Irrigation on Citrus Trees; Summer Pruning; The Banana; Coal Ashes and Gooseberry Mildew; The Fruit Shipping Industry of the Sacramento Valley, 99-106.

**PATRONS OF HUSBANDRY.**—Aids to the State Fair; Grange Suggestions; The Grange and the College of Agriculture, 100.

**AGRICULTURAL NOTES** from the various counties of California 100-101.

**NEWS IN BRIEF** on page 101 and other pages.

**HOME CIRCLE.**—The Cottage Gate (poetry); Mr. Palmleaf's Proposal; Music in the Home; Charity; About Jokes; Chaff; Brides' Dresses; Good Advice to Readers, 102-103.

**YOUNG FOLKS' COLUMN.**—Two Little Kittens; Advice to Young Men; A Dog and his Master's Likeness, 103.

**GOOD HEALTH.**—Nerve Stimulants; Nourishment in Typhoid Fever; Unsound Logic, 103.

**DOMESTIC ECONOMY.**—Muskmelon Preserves; Spiced Grapes; Green Corn; Making Tea with Cold Water; Lightening Cakes; Chocolate, Chicken Cheese; Pretty Table Cover; Sponge Cake with Water; A Good Salad, 103.

**PISCICULTURE.**—Notes on the Fishes of the Pacific Coast—No. 3, 106.

## Business Announcements.

Howe's U. S. Standard Scales, David N. Hawley, S. F. Thoroughbred Jack, J. C. Heddin, Bernardo, San Diego. Farms for sale, W. B. Stewart, San Diego Co., Cal. Strawberries, Ellwanger & Barry, Rochester, N. Y. Fruit and Flower Picker, Dunham, Carrigan & Co., S. F. Sharp's Rifle Co., Nathaniel Curry & Bro., Agents, S. F. Eclipse Incubator, H. W. Caldwell, S. F.

## The Week.

The State is full of watering scenes. The grain is gathering at the water's edge and beside the railways. The threshers are hurrying along, but in some parts of the State are unable to catch up with the demand for them, and men are driving about after threshers as though they had been sent for doctors. Most of the grain is being hauled to the storehouses, as growers believe they will see what will come of the much-abused English harvest before concluding sales. The fruit gathering and shipping season makes busy days in the orchards. Many readers will be surprised to read of the progress attained in Eastern shipment from Sacramento, which is described in another column. The vineyard is sending forward its first fruits of the choicer varieties, and the wine presses and cellars are being armed for the contest with the sanguinary grape, and the vigneron is cheered by the continued reports from the East that pure juice is winning its way over foreign mixtures. Already we hear that the fall clip of wool has begun, and with this comes the tidings that the Eastern woolen mills are still impelled by the force of active demand in the cloth markets. At last the butter trade has awakened from its coma and promises well for the rest of the season. Hops promise to retrieve their fallen fortunes. In general it may be said that there is a fair outlook in most directions of farm effort, and a promise, not of flush times, but of decent prosperity, if the soil has a fair chance, among the other interests of men, to recompense the labor put upon it.

California is still making friends abroad, as indeed she deserves to. Each week there are reports of new comers, and the new strength and capital which are arriving are going to develop many of our open spaces. Each year our State is adding many to its thousands of happy and beautiful homes.

## The Day of Small Things.

We are indeed living in a day of small things. The world of philosophy is engaged in constantly sharpening its wits to discover the causes of the depression, the low values, and the small return for honorable efforts of nearly all kinds. And while philosophy is poring over this or that fact or deduction, industry is down on its hands and knees in dust and despondency striving to wrest a livelihood from the grasp of Hard Times. It would indeed be well to know just what cause, or group of causes, forced the world down upon the grindstone and has held it there so long; for to know the cause is sometimes almost equivalent to learning a remedy.

We do not propose, however, to add another to the hundred theories already spun to account for the existing state of affairs, but rather to name some attendant circumstances, and to make some suggestions which seem pertinent. It is a curious fact that the hard times have well nigh belted the planet. It may be seen in the unrest in Russia, in Prussia, and in other European nations, and its result is the outcropping of socialistic ideas—ideas which, like pestilential miasms, multiply and attack the body politic where signs of weakness are disclosed. It may be seen also in the depression of industrial pursuits in England, and attendant hardship, which is driving a tide of emigration of English workers toward the colonies or toward the United States. It is seen in this country in the obligations which have crept upon our farming lands, and in the microscopic methods which have installed themselves in manufactures and trade—methods in such marked contrast to those which prevailed a few years ago. So long as a contrary position cannot be demonstrated, it is just as well to believe that the present stringency in this country at least is merely the sign of a transition period from the glamour of a false and unending prosperity, to the more moderate but truer light of a permanent well-being. All transition periods are marked by confusion and disturbance of existing affairs, and industry is depressed because of the mal-adjustment of its constituent parts. In the past such conditions have been but temporary, and when matters have formed themselves in consonance with the keynotes of the new regime there has ensued a period of prosperity and progress. The transition has been grievous to bear, but the advance on the new plane has won men away from the memory of hardships. Such, it is to be hoped, will be the order which will come out of the present disorder.

In the agriculture of this State we have indeed come upon a day of exceeding small things in the matter of produce values. Heretofore there have been seasons of unprofitableness in this and that specialty, because of the limited amounts of material which our sparse population required, but never has there been so general a depression in all the lines of market values as during the last two years. It can hardly be doubted that this is the indication of a general change in the schedule of rewards for production. There will be in the future, as in the past, instances of unusual profit in certain specialties, and the law of flight from the less to the greater rewards will bring these again to the common level. These temporary inflations will not change the even tenor of cost and profit in production. And as there seems a new era coming in, it is of the greatest importance that a fair adjustment of influences affecting agricultural production should be speedily made.

There are several items which enter into the cost of agricultural production, as, in fact, into most industrial operations. One is the rent of money, another the rent of land, another the price of labor, and another the burden of taxation. In the adjustment of influences to the new schedule of market values for produce, it is essential that these should show a tendency toward adaptation, or any condition of agricultural production will fail of recompense to the producer. The importance of the interest rate, or the price demanded for the use of money, in farm operations cannot be over estimated. It is obvious that when the prices of produce are halved, the producer cannot stand an interest charge which could have been easily endured before. It is plain too, that the rent of money to farmers, has not shown any tendency to adjust itself to the new order of affairs. Rather does it seem that there is a disposition to advance rates because agricultural operations seem now more hazardous than when produce prices were booming. What could be more destructive to the progress of the agricultural interest than this disposition? It is not unlike expressing a belief that a building will burn up and then applying a match to it. But we need not enlarge upon the oppressive character of an excessive interest rate at this time. An esteemed contributor, Mr. Bristol, has entered upon this subject in another column, and let us hear his argument to the end before closing a review of this phase of the agricultural situation.

The second element of the cost of production is the price paid for hired labor. In our dairy department on another page may be found an article from a prominent Eastern writer in which is described an old method of apportioning wages according to the price received for the results of labor, which is especially appropriate to the needs of our producers at this time, not only in the dairy, but in all lines of

agricultural production. Of course the income derived from agricultural enterprises must be the measure of the worth of the labor employed therein. As income has notably declined, and as many enterprises do not yield the employer half as much for his time as his hired men receive for their time, there must be some adjustment of wages to the receipts gained from the results of labor. This is a point which need not be considered at length, for it can be best discussed by farmers themselves, and they will see that many of their undertakings must fail, even to sustain themselves if wages paid are out of proportion to the benefits derived therefrom.

The rent of land in this State is a matter which more readily adapts itself to the condition of production than any other factor affecting the welfare of the farmer. Most cases are conditional upon the amount the land yields, and are, therefore, self-adjustable to the character of "the times." Taxation is one of the burdens which has most grievously affected agriculture, and now in the day of small things, there should be a material lightening of the weight. It remains to be seen what affect the new Constitution will have upon this burden, and until this is shown to be favorable or otherwise, there is nothing to do but patiently to wait for it.

It is fitting now that agriculturists should carefully consider all the acts and tendencies which influence the cost of production. They cannot do better than discuss such themes at their meetings together, whether it be in chance conversations or in stated debates. It is well enough to trust that all things will eventually work together for good, but in so tangible a matter as production, there is nothing more instructive than to figure out the problem, and then act upon the results of the computation. Our columns are always open to the presentation of important facts and arguments in this connection.

## ENTOMOLOGICAL.

## The Corn Ear Caterpillar.

EDITORS PRESS:—Will you please inform me if there is any remedy for a worm which works into nearly every ear of sweet corn in my neighborhood near Newcastle, Placer county. It is generally about an inch and a half long and of a green or yellowish brown color, and eats the kernels. An early answer through the PRESS will oblige.—WM. ROGER SHERMAN, Sacramento, Cal.

This caterpillar is a grievous pest of the corn grower, although its work is generally confined to the upper part or tip of the ear, for it drops out of the ear and goes to the ground for transformation as soon as the kernels begin to harden on the ear. The caterpillar is the larva of a moth, *Heliothis armigera*. It has been known in this State for many years, in fact was among the first insects found to be injurious to crops. It is identical with the insect which does the same work to the corn in Illinois, and perhaps in other Western States. It is also the pest of the cotton growers of the Southern States, and known there as the "boll worm." More than this, it is known in Europe, and has been reported from Japan and Australia.

The moth of the "corn worm," as it is commonly called, lays her eggs upon the ear, and the worm, when hatched, begins eating the silk of the corn, works its way in at the top of the ear, and finally devours the soft green kernels. When fully grown the worm emerges from the ear, descends to the ground and forms a cocoon of earth interwoven with silk. In three or four weeks, according to Riley, the moth emerges from the chrysalis. In the Southern States, as for example in Georgia, three broods are reared each year, while in colder climates but two emerge. We are not aware that the habits of the insect in this State have, as yet, been laid down. At the East the last brood of moths emerges late in the fall, and the insect lives through the winter both in moth and chrysalis form. When going into the ground for transformation, the caterpillar makes, according to French of Illinois, a smooth hole down into the ground five or six inches, perpendicular at the top, but usually more or less slanting in its lower part, often at an angle of 45 degrees at the bottom. This hole is usually made where the ground is rather firm, and is about a third of an inch in diameter at the top and half an inch at the bottom. The hole is always found stopped at the top with about a quarter of an inch of dirt, and the chrysalis is found at the bottom, the head end toward the top of the hole. The holes may be found by removing about half an inch of the surface soil carefully with a spade.

It has been found by some recent experiments made by Prof. G. H. French, of Carbondale, Illinois, that while the chrysalis would endure hard freezing if left free in its hole as it placed itself, it was uniformly killed if the ground was stirred with a plow and it was left surrounded with moist soil. It is a useful practice then in climates where the ground freezes thoroughly to plow late in the fall after the worm has established itself for the winter, but this hint would be of little use in most parts of this State where no such hard freezing occurs. The only good which could result from pulverizing the soil before the wet season here, would be in the possibility of crushing some of the chrysalids and throwing others out of place so that they might be injured by the heavy winter rains. Before the publication of Prof. French's study of the effect of frost and cultivation on the insect in the chrysalis state, the advice of entomologists

was to trap the moths by means of plates, etc., covered with a mixture of vinegar and sugar and exposed at night near the plants, but it is difficult to see the practicability of this in field cultures. It is quite likely that numbers of the moths could be destroyed by bonfires in corn fields at the time that the silk appears on the corn, for the *Heliothis* is a genus of "owlet" or night-flying moths, and they are always attracted to destruction by a blaze. Something could also be done in a small way by hunting out the worms at the apex of the ears and that would save the corn and arrest reproduction. But the pest is a widespread one and hard to cope with. Our readers are doubtless familiar with its work and if they have succeeded in any effort to protect their corn from the attacks of the worm we should like to know it.

## Old Clothes and Coddling Moths.

EDITORS PRESS:—In your last issue I note an article "New Use for Old Clothes." By this I am reminded of what I should have said long since upon the appropriation of old clothes. In conversation with J. F. Curtis, of Ophir, a practical fruit raiser, I learned his method of preserving his fruit from the ravages of the worm. In the spring of 1853, I planted at Auburn, as an experiment, a limited assortment of fruit trees—mostly apple—paying therefor \$60 per dozen. They were cared for as best I knew how, with the rapid development indicating success. My interest kept pace, and we have it to say, for the last twenty-five years we have been favored with an annual crop of delicious fruit of the several varieties, with but very few exceptions. This rule applies not alone to the aggregate, but to each tree annually and each and all varieties—excepting the crop of the last and present year. Last year, for the first time, the worm made its appearance. Their havoc was complete in the destruction of at least nineteen-twentieths of my entire crop of apples and no variety entirely escaped. The present year their ravages are comparatively limited to, say, one-fourth of the crop of apples and pears. In common with others, we sought a remedy and to this end I interviewed Mr. Curtis, who, instead of using old clothes to furnish material for grape sugar for the "rascals," to sell for California honey, packs old clothes in the crotches and around the branches of his bearing fruit trees, and every third day thenceforth the worms that have congregated in said old clothes (and the worms are numerous) are destroyed and the old clothes, old sacks and rags, are at once replaced as a trap for the succeeding crop of worms. This plan may appear tedious to some and impracticable to others; but, from a personal test, I am satisfied that a strict observance of this plan, to-wit: packing in the crotches of your bearing fruit trees, cotton batting, old clothes and even old sacks, in due time and giving careful attention, will compass the destruction of the worms and there will be no cause of complaint of the destruction of fruit.—J. R. CRANDALL, Auburn, Cal.

## A Deluge of Chafers.

Our Los Angeles readers who were visited by the swarms of light brown beetles, specimens of which were sent us, will be interested to know that the old-time abundance of these pests in Europe, which we mentioned, is reproduced at the present day. The annual visitation in Schleswig-Holstein was more numerous than usual. All the school children of the districts attacked, and many of the adult population also sallied out to wage war against the invaders. Their operations were in most cases conducted by shaking down the insects from the trees on which they had settled, into sheets outstretched below, and then destroying them, either by throwing them into boiling water, or by passing heavy rollers over them spread out upon the ground. A small reward of one-half penny per pound was offered in most districts for the "catch," and some of the children must apparently have made considerable sums in this manner. For instance, on one farm near Lutjenberg no less than 130 tons of the insects were collected, all of which were paid for at the above mentioned rate.

## The Development of Sex in Bees.

EDITORS PRESS:—I have been informed through a scientific journal, name forgotten, that the male butterfly is an incomplete development, as is also the male bee; and that, from numerous experiments, it has been clearly proved that if underfed, the larva produces males; but if fully nourished females are produced. I would be thankful for such light as you may be able to throw upon the subject. I know that in certain animalculae, especially the *Paramecia*, the male and female organs exist in the same individual, one or the other being developed by surrounding circumstances. If the same principle exists in bees, the microscope will certainly detect it.—H., San Diego, July 26th, 1879.

In our issue of May 31st, 1879, we published an article on "The Queen Bee and the Fertilization of her Eggs," which fully answers the above, so far as the bee is concerned. Reasoning from analogy, it is extremely probable that close investigation will result in similar attributes in other insects.

## Diabroticas.

Our neighbor in Berkeley, Mr. J. H. Harris discovers that although the diabroticas have made sad havoc of his other rose buds, as soon as they began to disclose the least color they did not attack an *Hermosa* bush, which perfected its flowers unharmed in the midst of the general destruction. What is the experience of others on this point?

ON FILE.—"Sonoma Notes," B. W. C.; "Bee Topics," J. D. E.; "Plant for the Bees," C. H.



## QUERIES AND REPLIES.

### Dodder and Alfalfa.

EDITORS PRESS:—Last year I sent to San Francisco and bought some dodder seed which was pretty badly mixed with alfalfa, when it was really alfalfa seed that I had ordered. The consequence is I have six acres of alfalfa-dodder. The question is, how can I effectually get rid of the dodder. Some say that it cannot be killed by plowing. I would like to know the quickest way of thoroughly eradicating it. Also, I would like to know, if there is not a law to punish a man for offering such seed for sale; if not, our new Constitution is not perfect.—R. M. DUNGAN, Santa Ana, Los Angeles Co., Cal.

Our correspondent is right in the belief that the new Constitution or something else ought to protect a farmer from getting his fields charged with detestable stuff by means of foul seeds sold him. In the good time coming we may have some way of adjusting such abominable impositions. As it is now the seedsmen charge the seed growers with the wrong doing in that they harvest unclean fields. While blame rests there too, it does not free the seedsmen from evil, because he should know that the material he buys and sells is clean—at least from such vile pests as dodder. A seedsmen may be deceived in spite of his scrutiny in the variety of plant which may grow from his seeds, that is, he may be imposed upon by the beet seed grower, for instance, and sell for sugar beets, seeds that will bring a motley growth, but even here he should satisfy himself thoroughly that the grower would not be guilty of harvesting seed from mongrel roots. He may be imposed upon, however, in this respect as we have said, but the determination of whether any certain seed is clean and free from well-known pests is a much easier matter, for the magnifier will show the intruders, and a little patience in examination would soon convince a seedsmen whether the material offered to him by the grower should be received and distributed by him or not. The same safeguard is also within the reach of the seed buyer. If he furnishes himself with a good magnifying lens, and studies the appearance of the seeds of the different plants he finds in his fields, both of useful plants and weeds, he can soon learn to distinguish closely enough to make up his mind whether the seed sold him is safe to sow in his field or not. Then if he orders clean seed, and is willing to pay the price which clean seed is really worth, he can hold the seedsmen to supplying him that and no other. All this will of course require a little effort and application, but there is nothing about it which any farmer cannot easily master, and the time required to do it would be a small thing compared with the loss and vexation of having a foul field which it will be hard and expensive to clean. It is true there is no moral obligation on the farmer's part to do this. When he buys clean seed he should not be given anything else, but in these degenerate days he should assume the trouble of examination merely to protect himself from greater evils.

The traffic in wretched alfalfa seed is carried on in this city to an extent which demands the severest denunciation. We were shown lately a sample of a number of tons shipped to Australia on an order sent to an antique embolement of fraud who has figured in this city for a good many years. This seed was sold to an Australian dealer at a good round price and when he received it it was so manifestly unclean that his customers did not dare to sow it and samples were returned to this city and submitted to us for examination. It was a shameful lot of stuff, worse than valueless, and yet it was sold for more than first-class clean seed could have been purchased for at the time. The Australians were fortunate in refusing to curse their soil with it.

As to eradicating the dodder from our correspondent's field, we should certainly think that a good turning under would cover the dodder from chance of growth. We never heard that it would not do it before. As an extra precaution the field might be burnt over first. It should be mown and burned over as soon as the hay is dry. Then plowing well and resowing with clean seed would obliterate the unsightly marks of the dodder parasite. We know of no other treatment for a so badly infested field than a radical one of this kind. Small patches here and there may be destroyed by putting on straw and burning over the spots, but if our correspondent truly describes the situation as "dodder badly mixed with alfalfa," he cannot do better than to stamp out the pest and take a fresh start. If the ground is moist, burning over might be done without killing the roots; but if the stand is poor probably it would be well to re-sow.

### Seedling Peaches—Prunes.

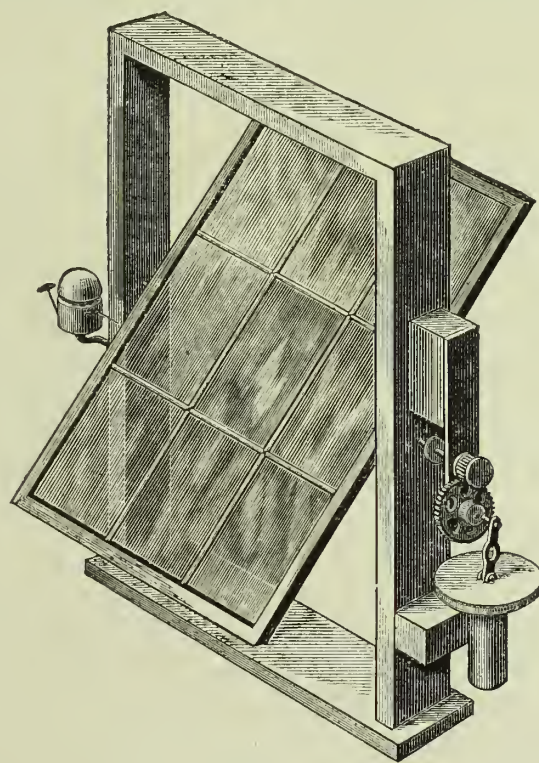
EDITORS PRESS:—I forward you to-day a box of sample seedling peaches grown on Magnolia Farm, Napa valley, the property of Heald & Woodbury, of San Francisco. Some, you will observe, resemble the Crawford's in general characteristics, but are more highly colored, and all of them were entirely free from curl leaf in the winter of 1877-8, when most budded varieties in the immediate neighborhood were badly diseased. No. 13 is noticeable from its extremely smooth skin—almost as much so as that of the nectarine. The one not marked is a cling-stone. Would like to hear your opinion of them.

The larger of the Petite de Agen prunes enclosed are from a grafted almond tree, the others from plum stock. Can you give any explanation as to the cause of their splitting open in this manner?—LEONARD COATES, Napa Valley.

These specimens afforded material for an interesting study. The most notable of the seedlings is No. 13, which is, as our correspondent says, noticeable because of its smooth skin. It has a very deep rich color of skin, but it has the

disadvantage of carrying the color into its flesh somewhat, producing a mottled appearance. Other points favorable to the fruit are its flavor, which is that of a cultivated rather than the wildness or twang so often found in seedlings. It is quite sweet and praiseworthy in flavor. The peach has also a very small pit, and as the peach is large the result is a thickness of flesh which is highly satisfactory. We should consider the seedling well worth propagating if the sample sent is an average one. The next best seedling is No. 11, a cream-colored fruit of excellent flavor and fair size. It looks as though it might have parentage in the famous Snow peach. Another seedling presents the yellow Crawford characteristics quite truly. Another is a cling which judged by the fruit alone is not equal to other clings now grown. Several other seedlings submitted are of much less value, having objectionable colors and wild flavor more or less developed. The freedom of these seedling trees from curl leaf is an interesting point which should be farther watched as the trees get older.

The Petite prunes were shockingly cracked. We believe this is owing to the meteorological conditions prevailing in regions adjacent to the ocean, as we are informed the trouble is not noticed farther in the interior or on the foothills. A European investigator has traced the cracking of many fruits to the work of a fungus, but we believe this cannot be charged to that cause. The growth of prunes on almond stocks is an interesting subject, as many have grafted prunes and plums on the almond trees which have been so disappointing in some regions. Except in size we do not discover any difference in the fruit



CROUCH'S AUTOMATIC VENTILATOR.

grown on almond and on plum stocks. We hope our readers who now have plums or prunes fruiting on almond stocks will notice carefully the fruit and its yield and the growth of the grafts, and compare them with the growth on plum stocks and send us the results for publication.

### Grape Scale Insect—New Species.

EDITORS PRESS:—It is with extreme regret that a prolonged absence in the South has prevented an earlier reply to your favor of the 10th ult. The insect on the grape-vine which you send is very interesting, being a scale insect closely allied to the well-known *Pulvinaria vitis*, but yet distinct therefrom. The specific characters can only be well established by a study of the newly-hatched young and the males. And as soon as I receive from you other specimens, which will enable me to study the adolescent characters, I will write you further about them; meanwhile the same remedy will apply to them as to other species of scale insect, and the endeavor should be to syringe the vine with some strong alkaline wash at the time when the eggs are hatching and the young spreading to new parts of the plant. The cottony material upon the leaves is too much pressed to be recognized, but belongs to some other species of scale insect of which I shall be glad to get further specimens.—C. V. RILEY, U. S. Entomological Commission, Washington, D. C.

The insects alluded to above were brought to us by E. P. Rowe, of Menlo Park, San Mateo county, and not recognizing the species we forwarded them to Prof. Riley for identification. Mr. Rowe told us that he had found these scale insects upon a single vine which was at a distance from other vines and we believe after taking off the specimens brought us he burned the vine to guard against the spread of the insect. If he finds other specimens we hope he will favor us with them that Prof. Riley may have material for a complete study of this new foe.

### Seedling Figs.

EDITORS PRESS:—We have several varieties of figs in this section, but I think there are none that are near in quality to those that are imported. I planted some seed of the largest of the imported figs and have about 100 plants. Do you think they will come the same?—JOSEPH SEXTON, Goleta, Santa Barbara Co.

Will some reader give experience or cite authority on this point?

A new race of men has been discovered in the northeastern part of Siberia.

### Ottoes from Citrus Fruits.

There are several subtle products derived from the fruits and flowers of the citrus family which have we believe received but little consideration in this State, but are still entitled to attention because of their place in the world's production and commerce. We refer to the ottoes derived from citrus flowers and fruits and perfumes prepared with their aid. These products are highly esteemed in other parts of the world, and supplying the demand for them returns fitting rewards to the producers. We shall therefore collect some facts about these fragrant industries and the manner of their pursuit, acknowledging our debt to foreign writers for the several statements made:

Of all scent-yielding plants none has a value at all equal to that of the orange. It is a mine of perfume in itself. The blossoms yield, according to their mode of treatment, two distinct odors, one having the true scent of the flower, the other a scent called Neroly. Orange peel, too, furnishes a delightful perfume, with which all of us are familiar; and lastly, the leaves give a scent inferior only to the true Neroly. Here then we have from one plant no fewer than four perfumes. When in full vigor each tree yields on an average 25 pounds of blossoms annually. Many plantations of orange trees at Nice are more than 100 years old. At Fontainebleau there may now be seen orange trees bearing flowers and fruit at the same time, that were planted 200 years ago. At Nice a

bowl, through which liquid from the hollow can be poured. In order to obtain the otto, the fruit is rolled by hand over and over the spikes, thus breaking the peel in such a manner that the otto spurts out into the 'Eucelle, and finds its way into the hollow handle, which, when full, is emptied into another vessel. An inferior quality of otto is procured by rasping and slicing the peel, and then pressing out the juice; and this, and the better process just described, are those by which the fruits of all the citron-worts are divested of their scent-yielding properties, operations which are put into practice to a great extent at Messina, in Sicily.

The *Citrus bergamia*, or bergamot lemon, is a plant of great value as a scent-yielder; its perfume is so much in demand that its annual production in Italy has never satisfied the market. The Messina dealers and their allies carefully adulterate the true bergamot otto with lemon otto, thus spoiling an article worth from 30 to 40 shillings per pound, in order to sell it at 10 shillings. One hundred fruit will yield about three ounces of otto. The name of this variety of citron-wort is derived from the city of Bergamo, in Lombardy, from whence, so far as we can ascertain, the otto was first sold. The otto of bergamot, of the finest quality, is obtained by means of the 'Eucelle, but about four-fifths of it in the market is a distilled product, or one expressed from the rasped rind of the fruit. About 40,000 pounds of otto of bergamot are annually imported into England.

Among one of the leeward Caribbees is Montserrat, a little island on which *Citrus limetta* grows most prolifically, and in almost an indigenous manner. Under the care of Mr. Joseph Sturge the Montserrat company, of which Mr. Sturge is director, annually produces no less than 1,000 pounds of the true otto of citron, all by means of the 'Eucelle process, and it is so pure that it is worth twice its present price in the market, but the products of Sicily, which are by no means good, compete with it to its disadvantage. Mr. Sturge states that "his orange orchards consist of about 500 acres, and that each acre contains about 200 trees. It takes seven years from the seed for them to come into full bearing; they flower more or less whenever they get heavy rain, and the fruit ripens in about four months after the flowers appear." He therefore gets fruit all the year round, but the chief harvest is from September to January.

The importation of from 85,000 to 90,000 pounds of otto lemon annually into England proves that Britannia has a great liking for this scent, which is extracted by rasping the fruit and afterwards expressing the pulp so produced of the *Citrus limonum*. The otto of lemon in the market is principally from Messina, where there are hundreds of acres of lemon groves; indeed, the extraction of the ottoes of lemon, orange and bergamot constitutes the chief industry of Sicily, particularly in the vicinity of Palermo. Here, instead of the 'Eucelle for breaking the peel, a drum spiked inside is employed, and in this 100 fruit or more are operated on at one time; no doubt, sooner or later, steam will be employed to rotate these drums, and thus we may expect the supply of these scents to be kept up equal to their demand; nevertheless, as the land of Italy is already occupied, there is ample room in European markets for similar ottoes, should they be produced in other parts of the world.

### An Ingenious Automatic Ventilator.

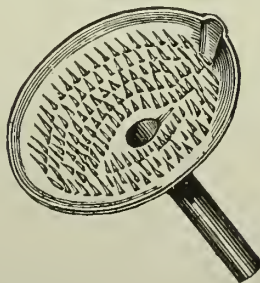
We illustrate herewith an ingeniously devised and curious automatic ventilator, recently patented through the MINING AND SCIENTIFIC PRESS Patent Agency by Frank J. Crouch, of Eugene City, Oregon. It is intended as an attachment to windows, transoms, etc., by means of which the opening or closing of the window or transom is automatically accomplished, in accordance with the temperature of the room.

The sash or transom is hinged or swiveled to the frame, so as to swing in a circle on a central axis, and thus be opened or closed. This shaft or axis is continued through the window frame on one side. On its outer end is a pinion, which unites with a small spur wheel, as shown.

On the lower part of the frame is secured a pipe-cylinder or chamber, on top of which is a thin metallic plate. On top of this plate is another of the same size and shape, the two plates being secured together at their edges, and the space between them being filled with sulphuric ether, turpentine, alcohol or similar sensitive substance. The tube or cylinder opens into the chamber formed by these two plates through the lower plate, and also contains the ether or other substance. To the top plate of the disk is secured an arm, the upper end of which is fastened to a crank on the spur wheel.

Now, when the liquid in the cylinder and between the plates or disks expands, the plates are expanded as they admit of a sensible spring apart at the centers. As they are expanded or forced apart by the expanding substance, the arm attached to the upper plate operates the crank and gear wheel, thus rotating the pinion on the shaft or transom carrying the sash or transom, and the sash or transom is thus swung open. As the liquid cools, the reverse is the case, and the sash is closed.

On one side of the window frame may be attached a gong, so arranged that in case of fire or when there is any unusual heat, the movement of the sash will ring the bell to attract attention.



The 'Eucelle for Otto Making.

soms to enflower one pound of grease, the operation being divided into about 30 repetitions of a small quantity of flowers over or in the same grease. By digesting this orange-flower grease in the proportion of six to eight pounds in one gallon of rectified alcohol, there is obtained the extract of orange flowers, a handkerchief perfume which is surpassed by no other scent; it is exquisite in itself, and, when blended with extracts from other flowers, it composes what is termed a "honquet."

The otto of the orange fruit is procured from the peel by what is termed the 'Eucelle process. The 'Eucelle, as shown in the engraving, is a tinued-copper bowl, furnished with concentric rows of short spikes or teeth, and a hollow handle with a gutter from it to the edge of the



## The Fruit Shipping Industry of the Sacramento Valley.

[CONTINUED FROM PAGE 99.]

ishable go forward for the far East by express trains, but nearly all the supply of all kinds for the Omaha region and all this side are shipped by freight, the time to Denver being seven days. The shipments are

Made by the Car Load,

And the extent of the business may be in some degree impressed upon the reader's mind by the fact that last week the fruit shipments alone amounted to about 260 tons, while the vegetable shipments reached 120 tons, or a total of 380 tons, which required 38 cars to transport the goods. One firm shipped 90 tons of vegetables alone, and another 140 tons of fruit. One house last week ordered, received and shipped from Vacaville nearly 2,000 crates of grapes alone.

The fruit season opens in May and extends into November—July and August are the heaviest months. The pear shipments are the latest which go on. The vegetable shipments continue all the year round, and include potatoes, onions, cabbages, tomatoes, cucumbers, peppers, squashes, melons of all kinds. The vegetable shipment trade is better this year than last, though the sales are not so great in amount, because of the lessened prices. The fruit business never has been so large as it is this season, and the promise is that this and the next three weeks the shipments will greatly exceed in tonnage the figures given above. The business is an exceedingly hazardous one. The fruit merchant takes more and greater risks than any other business man. Formerly the business was carried on largely on the consignment plan, but as that threw all the burden upon the Sacramento shippers—a burden which cannot be borne—they have brought about a change. Some firms now do no consignment business at all, while others confine it to points beyond Chicago. All this side is cash and order business. This makes a fairer balance of risk, and enables shippers to venture more freely. They would prefer to have the order system extend even to the far East, but as yet Eastern dealers have not mustered up the requisite backbone to undertake it and assume the risks, even with the surety of greater profits. As the demand at the East, for California fruit, is this year, however, greatly in excess of that of any former year, a hope is entertained that the dealers at the East will come closer to the order system, and acquire greater confidence in the stability of the business.

## PISCICULTURE.

### Notes on the Fishes of the Pacific Coast.—No. 3.

*Scorpius californiensis*, Steindachner.—This is another of those species which only occur in our markets on rare occasions. The individuals described by Dr. Steindachner, were collected at San Diego, and, as a very large proportion of the fish fauna of that locality is different from that of San Francisco, it was with a great deal of interest and a little surprise that I found, upon comparison of the single specimen of this little fish with Dr. Steindachner's description of *Scorpius californiensis*, that they agreed in every particular. The example mentioned, now in our museum, came from Tomales bay, in a box of Embiotocidae or viviparous perch, and the dealer who saved it for me stated that he sometimes received two or three in a similar way from the same locality. I have since procured a larger specimen.

*Scorpius californiensis* belongs to the family of *Squamipennes*, so named from the growth of scales upon the surfaces of the vertical fins. All *Squamipennes* are high, thin fishes, with ctenoid scales; and a single dorsal having the spinous portion well developed.

Only two species of the family have been described from this coast, and one of these, *Ephippus zonatus*, Girard, I have not yet seen.

The fish now in our collection is 7.6 inches in total length, and 2½ inches in greatest depth of body; but the species attains a length of 10 or 11 inches.

It may be recognized at once, by its bluish gray color; rather small ctenoid scales; small mouth with an even row of comparatively large teeth, backed by several rows of smaller teeth, and by the covering of small scales which invests all the soft rays of the dorsal and anal, the caudal, and much of the exterior of the pectoral and ventral fins.

*Porichthys porosissimus*, Silver-spangled toad-fish; *Porichthys notatus*, Girard.—The name here given to this fish embodies one of its most noticeable peculiarities, namely, the rows of pores upon the lower parts of the body, each shining like a silver spangle. It can scarcely be entitled a food fish, yet it is eaten in considerable numbers by the Chinese, and is occasionally brought to market. The ugly head, dark-colored scaleless body, and altogether bizarre appearance of this fish are probably the principal reason for its rejection by white people. Doubtless the Chinese are as good judges of fish as we are, but their ideas of beauty possibly differ.

In the month of June, or thereabouts, this fish comes to the shore, and fixes its residence under rocks, to the lower side of which it attaches its ova, which are as large as a pea. In

this position I once found numerous examples in Tomales bay, and was at first much surprised to find myself greeted, when I endeavored to pick them up, not only with a dig from the sharp spines upon the gill covers, but with a most emphatic grunt of dissatisfaction.

This fish must therefore be added to the number of those which produce sounds. It attains a length of about 16 inches.

*Ophidium Taylori*.—The first mention of this fish may be found in the Pac. Rail. Rep., vol. X., p. 133, where Girard gives a few of its specific characters, and states that it inhabits the sands of Monterey beach.

During the months of March and April a few individuals have on several occasions been brought to the markets of San Francisco, and inquiry elicited the information that they were found at Bolinas bay, to the north of San Francisco, and that they lived among the sands and rocks. Some of those obtained came from Monterey or its neighborhood.

*Ophidium Taylori* is a long, eel-like fish, with the dorsal and anal fins formed entirely of soft rays and continuous with the caudal; the pectoral fins placed in the lower half of the height of the body; the ventrals represented by two long bifid filaments placed far forwards on the under side of the bone of the tongue; the mouth rather small, and the teeth of small size upon the jaws, vomer and palatines. It is the only known representative on this coast of the Ophiidiidae, as restricted by Gill, a family characterized by gill-membranes continuous beneath the throat, continuous dorsal, anal and caudal fins, and an anguilliform, or eel-like body.

The other characters given above are common to all species of the genus *Ophidium*, but there are other peculiarities which distinguish this fish from other known species. These are supplied by the arrangement of the teeth, the proportions of various parts to each other, the coloration and the structure of the air-bladder. In color, it is light olivaceous above, fading out on the sides into the whitish of the under parts. Along the sides are several rows of roundish, dark spots, the two or three uppermost continued almost or quite the length of the body, but most of them dying out in the pectoral region. The head has similar spots.

The air-bladder, or swim-bladder, is a comparative large ovate organ, ending posteriorly in a narrower fleshy portion, pierced by a small aperture, and having in front two saucer-shaped bony plates attached to the second vertebra. In the center of the external convex face of each of these a muscle is inserted, probably for the purpose of drawing forward the front of the air-bladder. Although this fish is not sufficiently common to be of much value as an article of food, it is excellent eating. It has no popular name.

*Leurynnis paucidens*, nov. gen. and sp.—As I find no mention of this fish in the works of Gunther, Gill or Steindachner, I presume that it is new, although it is just possible that some naturalist with whose writings I am unacquainted may have described it. It belongs to the small family *Lycodidae*, and, in common with most of its relations, has an elongate eel-like body, small scales; continuous vertical fins (that is, the dorsal, anal and caudal united) composed of soft rays, and contracted branchial apertures, the gill-membrane not uniting under the throat, but attached to a broad intervening space or isthmus. The genus *Leurynnis* is further characterized by the absence of teeth upon the palatines or vomer; the presence of small ventrals placed in advance of the pectorals; and the insertion of the pectorals in the lower half of the height of the body. The head is large and both deeper and thicker than any part of the body; the jaws very long; the teeth small and slender, in a single row except in the front of the mandible, where there are three or four rows; and the color olivaceous, the scales lighter than the skin, and the vertical fins margined with black. During the months intervening between September and the middle of March this species certainly did not occur in our markets, but from the latter date to May it occurred tolerably often, but seldom in sufficient abundance to make it of any account as an article of food, a circumstance which is to be regretted, as it is of excellent flavor, superior, in my opinion at least, to many of the flat fishes. The largest specimen I have yet seen measured only 10½ inches in length, and I presume that it does not attain much larger dimensions. The *Lycodoid* fishes have considerable resemblance in general appearance to the Blennies, but may at once be distinguished from them by the absence of spines in the dorsal fin. This is the only species of the family found on our coast.

*Quassilabia (?) cypho*.—I give this name, provisionally, to a very singular member of the family *Catostomidae* or fresh-water Suckers. The only specimen I have seen was brought from the Colorado river, at the junction of the Gila, and was brought to the California Academy of Sciences some two years ago. Its chief external peculiarity, or at least that which is most likely to be noticed by an ordinary observer, is the singular hump upon the back, between the head and the dorsal fin. This hump is not a mere development of fat, as is the case with the less abruptly-rising humps of some kinds of fishes whose backs become more elevated with age, but is supported by a system of greatly-developed interspinous bones, the first of which is very large and strong, formed of a thick central pillar with a broad lamina in front and a broader behind. The under surface of the central pillar has a double articulating surface for attachment to the first vertebra. There are also other peculiarities in the structure of the ante-

rior portion of the vertebral column. Another external character of importance is the structure of the lips. In the family generally the mouth is upon the under surface of the head, and is furnished with thick papillose lips, one upper or anterior; the other lower, or posterior. In one species, the *Quassilabia lacera* of Jordan and Brayton, known also as the Hare-lip and Split-mouth Sucker, the lower lip is small, and divided into two quite distinct lobes, while the border of the under jaw is cased with a rather hard, horny plate. These characters are also possessed by the fish under review, which may perhaps be considered as the Western representation of the Hare-lip Sucker of the rivers of the Eastern States. It differs, however, from that species in the considerable development of the operculum or gill-cover, which in *Q. lacera* is very small, as well as in the skeletal peculiarities above mentioned, so that probably a new genus must be created for it. Shortly after this example was presented, I read before this academy a few notes upon it, but they have been mislaid, and I now bring this species again into notice, partly because I have written a full description of it for publication in the Eastern States, where scientific research is considered of more importance than it is here; but chiefly in order to have an opportunity to ask any individual who may pay a visit to its habitat to bring us, if possible, a few more specimens.

*Sphyrna malleus* (the Hammer-head Shark).—A large species of Hammer-head Shark is found along the coast of Lower California, and presents characters in many respects similar to the *Sphyrna* (*Zygæna*) *malleus* of Shaw, combined with others which approach *Sphyrna tudes*, Cuv. A specimen six feet one and five-eighths inches long is in this museum, to which it was presented recently by Messrs. Fisher and Chapman, while a much larger individual, apparently about 14 feet long, is in the Zoographical building at Woodward's gardens. The long hammer-like lobes into which the front part of the head is laterally prolonged are nearly one-third longer than their width at the extremity where the eye is situated; and the nostrils, which are in the front of the lobes, close to the eyes, have (in our specimen) a groove running from each of them along about half the distance to the center line of the head. The front margin of the head is sinuous, but not curved. In *Sphyrna malleus* the lobes of the head are normally shorter than in our fish, and the groove from the nostrils is longer, running along nearly the whole of the front part of the head. In *Sphyrna tudes* the front of the head is much curved, yet the ends of the lobes are distinct from the front; and the grooves from the nostrils run along more than the half of the front of the head. You will thus see that our hammer-head differs from either, yet I do not venture to call it a distinct species; on the contrary, I have reason to doubt whether one of the characters usually considered specific and constant, namely, the length of the groove from the nostrils, is to be depended upon. The large individual at Woodward's gardens has these grooves very short indeed, not extending one-fourth of the distance from the nostril to the center of the head. Now, as our specimen and Woodward's were caught near the same place (Mazatlan); as they are alike in the teeth, the fins, the outline of the head and of its lobes; yet differ in the nasal groove, I submit that the shortness of the grooves is the effect of age, and that this character is therefore not specific. The individual in Woodward's gardens is the largest hammer-head I have ever seen in a museum, and I much regret that I was not allowed the opportunity of taking correct measurements of it.

Note.—Full descriptions of *Ophidium Taylori*, *Leurynnis paucidens*, *Chitonotus megacephalus*, and the new *Catostomoid* will appear in Prof. Jordan's "Ichthyology of the United States."

A "Review of the Pleuronectidae of the Pacific Coast," containing full descriptions of all the species, new and old, known to occur on the Pacific coast of the United States, was forwarded to the Smithsonian Institution about two months ago for publication in the "Proceedings of the United States National Museum." The proof of this "Review" has already been revised.

[Concluded.]

HOW TO PRINT SEVERAL COPIES OF A LETTER. A new process, by M. Chardon, is as follows: Make a zinc tray about a quarter of an inch in depth, and pour into it a warm solution made as follows: Water, four ounces; sulphate of baryta, two and one-half ounces; sugar, one ounce; gelatine, one ounce; glycerine, six ounces. Write whatever is required to be printed upon a sheet of white paper, using instead of ordinary ink the auiline color known as "violet of methylaniline." As soon as the writing is pretty dry, lay it upon the gelatine surface and rub the back of the paper with the palm of the hand. The ink will be absorbed by the gelatinous product. All that is to be done in order to obtain a *fac simile* of the writing is to lay a sheet of paper upon the writing on the gelatine and rub the back with the hand. From 40 to 50 can thus be drawn off in a few minutes. We find that in warm weather, plates thus prepared remain too soft and adhesive to work satisfactorily. Better results are obtained when a larger proportion of barium sulphate—say three and one-half instead of two and one-half ounces—are used and the mixture is heated for an hour on the water-bath.—*Scientific American*.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

### CATTLE.

PETER Saxe & Son, 520 Bush St., S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire Swine. The above for sale.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

### SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

### POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry, Berkshire and Magie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Doves, etc. Eggs for hatching. Send for price list.

### SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine. Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Thoroughbred Berkshire and Poland-China Swine. Light Brahmas and Black Cochins for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

### BEES.

JOS. I. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## Thoroughbred Berkshire Swine.

A few very choice specimens of the

### CROWN PRINCE and COMET FAMILY,

Of various ages, for sale at Reasonable Prices by

A. L. SAYRE, Borden, Fresno County, Cal

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$2,500,000,

In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

### OFFICERS:

PRESIDENT.....G. W. COLBY.

MANAGER AND CASHIER,

ALBERT MONTEPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

## Grangers' Co-operative Business Association, of Sacramento Valley.

Location: K & 10th Sts., Sacramento, Cal

Dealers in GENERAL PRODUCE, RETAIL GROCERIES, and sale of FRUITS. Desire the co-operation and trade of farmers in general. Pay the highest market rates for all produce, and sell for the smallest profit. Our orders are cash on delivery. Goods shipped; marked C. O. D. W. H. HEVENER, Manager.

### GENERAL INSURANCE

— AND —

## Commission Agent.

FERDINAND K. RULE,

310 Pine Street, Room 31, San Francisco.

Special attention to Fire, Marine and Life Insurance business.

Insurance placed in none but first-class Companies.

50 CHROMO, Gold Border, etc., 10c., no 2 alike, or 20 Cupid Cards, 10c. J. B. HUSTED, Nassau, N. Y.



## Lands for Sale and to Let.

### LOMPOC Temperance Colony.

45,654 49-100 ACRES.

#### Cheap and Desirable Homes.

TERMS OF SALE.—25% cash, and the remainder in eight equal annual installments with interest at 10% per annum, or full payment and Deed immediately.

#### Rich Soil and Healthful Climate.

Located in the Western part of Santa Barbara County, California, embracing 10,000 acres of the Finest Bean Land in the State; as high as 3,700 lbs. of Beans to the acre have been raised the present year, while 3,000 lbs. to the acre is not an uncommon yield.

#### DAILY MAIL

And Telegraphic Communication with all parts of the State. The Telegraph Stage Co.'s Coaches now run daily, each way, directly through the town of

#### LOMPOC.

E. H. HEACOCK, President.

IRVING P. HENNING, Secretary.

November 6th, 1878.

### Farm For Sale.

Yields an Income of \$4,000 a Year.

Price, \$10,500.



My Farm and Poultry Business yield over \$4,000 a year. The place—116 acres—with orchard, vineyard and improvements, has cost me \$15,000. The good will of the business is worth fully \$6,000. I will sell the business and farm for \$10,500, half cash, or exchange for San Francisco property. It is a bargain such as is seldom offered.

M. EYRE, Napa, Cal.

Law Office in San Francisco, No. 636 Clay St., Room 25. I am in Napa each Saturday and Sunday; other days in San Francisco.

### FOR SALE.

700 Acres. The Finest Stock and Grain Farm in Northern California.

Price, \$25,000, including Farming implements. The whole under fence.

The Stock upon this farm, all thoroughbred and graded, embracing some of the finest in the State, will be sold at private sale. Among the stock is some that has been awarded different premiums at State and County Fairs.

This is one of the finest opportunities for a man of means in the State. For full particulars apply to

D. B. HAYS,

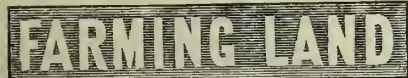
Real Estate Agent, Oroville, Cal.

### C. C. RODGERS, CALIFORNIA LAND AGENCY,

Office, 276 First St., San Jose, Cal.

GENERAL LAND, REAL ESTATE, U. S. PENSION AND BOUNTY AGENT.

Will buy and sell Land Warrants; Locate and Survey Public Government Land, Pre-emption Homesteads, Soldier's and Sailor's Homesteads, Timber and Wood Lands, Desert Lands, Etc.



For Sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.



Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

## BODIE!!

-- THE --



### New Route!

170 MILES SHORTEST,

And made in about One-half the Time!

-- BY THE --

### Pioneer Stage Line,

AS FOLLOWS:

LEAVE SAN FRANCISCO—Monday, Wednesday and Friday at 4 P. M. for Stockton; leave Stockton at 8 A. M. on Tuesday, Thursday and Saturday, connecting with stage at MILTON at 9:30 A. M., arriving at BODIE at 4 P. M. next day.

LEAVE BODIE—Sunday, Tuesday and Thursday at 6 A. M. and connecting with train at MILTON at 10:40 A. M. next day, arriving in SAN FRANCISCO at 5:15 P. M.

T. J. Matteson & Ed. Harrison, Agents,

— OFFICE WITH —

BILLINGS, HARBOURNE & CO.,

3 Montgomery St., S. F.

### AGENTS READ THIS

We will pay Agents a Salary of \$100 per month and expenses, or allow a large commission, to sell our new and wonderful inventions. We mean what we say. Same free. Address SHERMAN & CO., Marshall, Mich.

## Secure Patents and TRADEMARKS.



Through Scientific Press Patent Agency.

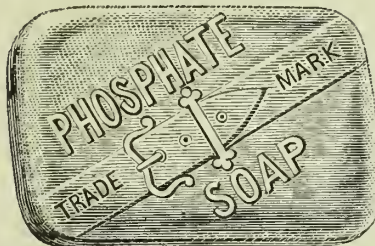
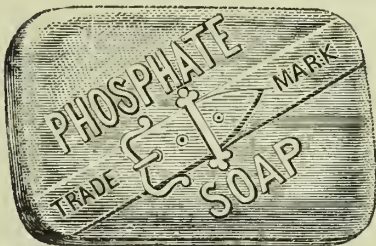
OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library containing official American and foreign reports, files of scientific and mechanical publications, etc. All worthy inventions patented through our Agency will have the benefit of an illustration or a description in the MINING AND SCIENTIFIC PRESS. We transact every branch of Patent business, and obtain Patents in all countries which grant protection to inventors. The large majority of U. S. and Foreign Patents issued to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most reliable advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free. DEWEY & CO., PATENT AGENTS. A. T. DEWEY. W. B. EWER. GEO. H. STRONG.

## THE BEST

## TOILET SOAP

Ever Made.

## PHOSPHATE SOAP



A superb article for the toilet, beneficial to the skin, giving it a soft, velvety appearance, and leaving a soothing, pleasant sensation after use, imparting a healthy natural and lasting beauty to the complexion. It eradicates the poisonous effects of cosmetics; prevents skin diseases by acting as a constant purifier and disinfectant; if used constantly will cure skin diseases of long standing; is superior to any other article for bathing infants; cleansing and healing for all eruptions on the scalp or face of children; good for the teeth; produces a soft, creamy lather, nicely adapted to shaving or shampooing, removes dandruff, and gives health to the scalp without injuring the hair.

Phosphate Soap is a scientific preparation manufactured from the best toilet soap with potent medicinal agents, which unite chemically with other ingredients. It is cheap, because it wears longer and combines more cleansing, healing and soothing qualities than any other article in the market.

Cheap toilet soaps, manufactured from rancid and refuse grease, injure the skin, and are really more expensive than PHOSPHATE SOAP, which retails for 25 cents per cake. One cake will last longer than three of cheap, inferior soaps.

Natural beauty surpasses anything which can be imparted by artificial means. PHOSPHATE SOAP gives health to the skin simply by removing impurities and eradicating the poisons which give rise to skin diseases.

Not only for daily use on the face and hands, but for bathing the entire body, there is nothing equal to PHOSPHATE SOAP. It is a thorough disinfectant and removes offensive odors of every kind.

Thousands of articles are palmed off on the public, which have no genuine merit, but PHOSPHATE SOAP is the result of modern discoveries of celebrated chemists.

PHOSPHATE SOAP costs no more than other good toilet soaps, while its medicinal qualities make it worth ten times its price to every man, woman and child.

For chapped hands, the constant use of PHOSPHATE SOAP will be recommended by all who give it one fair trial.

If you want a nice article of Toilet Soap and something that is beneficial to the skin, buy PHOSPHATE SOAP.

Sensible girls avoid cosmetics, but use PHOSPHATE SOAP for the toilet, because it is fragrant, pure and pleasant.

Ladies who wish to make the skin look beautiful and natural, should use PHOSPHATE SOAP.

It should be in every house. Sold by all dealers. One cake sent by mail on receipt of 30 cents in postage stamps. A neat box containing 3 cakes sent by mail, postpaid, on receipt of 80 cents. Manufactured by the

## STANDARD SOAP COMPANY,

204 Sacramento St., San Francisco.

### WELLS, RICHARDSON & CO'S

### PERFECTED

### BUTTER COLOR

Gives Butter the gilt-edge color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.

## Educational.

### Washington College.

The Fifteenth Semi-Annual Term of this Institution will commence on

Thursday, July 31st, 1879.

Catalogues can be had at Bancroft & Co.'s Bookstore, San Francisco, and at Hardy's Bookstore, Oakland.

For further information address

S. S. HARMON,

Washington, Alameda County, Cal.

### HEALD'S BUSINESS COLLEGE, 24 Post Street, Near Kearny, San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.



SEND FOR CIRCULAR.

## Seedsman.

### SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses, RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco



B. K. BLISS & SONS,

Importers, Growers and dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address

B. K. BLISS & SONS, 34 Barclay Street, N. Y.

### FENCING—CHAPPARAL SEED.

Parties wishing to experiment in the cultivation of Chapparal as an economical and valuable substitute for fencing, can obtain the seed in 50 Cts. and \$1 packages, at W. R. STRONG'S, Sacramento. Sent by mail.

### EXOTIC GARDENS.

F. A. MILLER & CO., Mission St., opposite Woodward's Gardens. Send for Catalogue and Price List.

### ST. DAVID'S.

A FIRST-CLASS LODGING HOUSE. CONTAINS 113 ROOMS.

715 Howard St., near Third, San Francisco.

This House is especially designed as a comfortable home for gentlemen and ladies visiting the city from the interior. No dark rooms. Gas and running water in each room. The floors are covered with body Brussels carpet, and all of the furniture is made of solid black walnut. Each bed has a spring mattress, with an additional hair top mattress, making them the most luxurious and healthy beds in the world. Ladies wishing to cook for themselves or families, are allowed the free use of a large public kitchen and dining room, with dibbles. Servants wash the dishes and keep up a constant fire from 6 A. M. to 7 P. M. Hot and cold baths, a large parlor and reading room, containing a Grand Piano—all free to guests. Price single rooms per night, 50 cts.; per week, from \$2.50 upwards.

R. HUGHES, Proprietor.

At Market Street Ferry, take Omnibus line of street cars to corner Third and Howard.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

50 Perfumed, gilt edge & chromo Cards, elegant case, name in gold, 10c. ATLANTIC CARD CO., E. Wallingford, Ct.

THE BEST IS ALWAYS THE CHEAPEST.



## San Diego Exhibit at Mechanics' Fair.

The exhibit of semi-tropical fruits and trees from San Diego county shows what the indomitable energy of man can accomplish in forcing unwilling nature to accede to his demands. In a country remarkable for its dryness, a few hard workers have demonstrated that even this dryness is productive of the best results in the way of semi-tropical fruit growing. J. M. Asher of Fruit Vale nursery, at San Diego, has taken the greatest interest in the development of the resources of that county, and to him are we indebted for the display at the *Journal of Commerce* stand on the right of the main entrance. Mr. Asher, from his own collection, sends St. Michael, Mediterranean Sweet, Bergamot, and Mandarin oranges, in blossom and fruit. The trees are vigorous and quite large, while the perfume of the blossoms is so delicious as to attract a large crowd of inquirers as to the cause.

The banana in blossom and with a large bunch of fully-formed fruit pendant thereon, excites considerable attention. A fine fan palm, a tea plant, guava, and cherimoyer, are also among Mr. A.'s exhibit.

From Mr. R. R. Morrison, specimen bunches of Chasselas, Muscat of Alexandria, Fihir Zagos, and Rose of Peru grapes are sent. These grapes are thoroughly ripe, and are, indeed, as fine specimens as can be seen or obtained in any part of the State. Mr. Morrison sends a specimen branch, with nearly ripe berries, of coffee, *Coffea Arabica*, from a large tree grown by him in the open air. Experts pronounce it a very fine specimen.

All of these trees and fruits are grown in the open air of San Diego, and need no other than ordinary care and cultivation, the climate being just right to perfect the fruit.

Geo. C. Swan, of Paradise valley, sends specimens of Mediterranean sweet oranges, Sicily seedling lemons, and his now famous "Olivia," all beautiful fruit, and deserving of the highest encomiums.

Frank M. Kimball sends bottles and branches of olives. A visitor at the stand last night said that he accidentally got some of these San Diego olives, and their flavor was so nutty and delicate that he prefers them to any imported, in fact, he considers the imported olives tasteless in comparison therewith.

Miss Anna E. Burbeck, of Spring Valley, San Diego county, sends three beautiful specimens of fern work—a lyre, a bird, and a mill made up entirely of the different specimens of ferns which are found nowhere else in the world than in San Diego county. It is scarcely credible that such work can be made of ferns, the different colors blending together so harmoniously that strangers are led to believe that they have been colored. We can personally assure every one that the ferns are all natural, for we have gathered the different kinds ourselves, and know that there is no deception about the exhibits.

We might go on for columns and describe the various productions of our most southerly county. It has been a comparatively unknown territory, except for speculative purposes. But now its true wealth is being developed, and its climatic conditions better understood and utilized in the production of fruits of exquisite appearance and flavor. Perfection is not attained in a day or year, and the experience of the success of the fruit culturist in San Diego county has been attained by hardships such as no pioneer backwoodsman ever experienced in the forest of the great west.

We shall ere long speak of other agricultural exhibits at the fair.

**THE HONEY SEASON IN ALGERIA.**—We learn that the season in Algeria, Africa, has been disastrous to bees, and in some respects the experience of our southern California friends has been duplicated. An Algerian bee-man writes to the *Beekeepers' Magazine* as follows: The season here has been the worst known for over 30 years; and more than 50% of the bees are dead all over Northern Africa. We have had since January nothing but a succession of high winds and gales (all south). We call the wind "si-rocco, or wind from the desert." It dries up every bit of honey that there may be in the flowers and scorches all the herbage. In January we had our hives, with 13 frames, crammed with bees, and they have been the same ever since, but not a drop of honey have they gathered; but, on the contrary we have had to feed every one, and even then they have died off badly. The Arabs are just the same; their bees are nearly all dead, they have no honey or swarms. Everyone says it has been the worst season in Algeria ever known.

**THE WOOLEN INTEREST.**—Walter Brown & Co., of Boston, wool agents, continue to take a hopeful view of the situation in the wool interest. In their last circular they say: "Woolen goods continue to move satisfactorily, and most of the machinery appears to be actively employed. Within the past week there has been more looking around by the representatives of some of the large corporations, who will probably be in the market for supplies very soon."

A SPECIAL from Calcutta says that cholera is still raging among the troops and natives in Candahar, and is spreading toward Serat.

## A Half Century of Railroads.

On the 27th of October next, it will be just 50 years since the first locomotive solved the problem of railroad transportation. Unbelievers were many, and one critic, a member of the English committee, inquired of Stephenson, the engineer, whether his machine, running at the rate of nine or twelve miles per hour, would not cause a terrible accident if it should meet an obstacle, a cow for instance. "Yes, to the cow," quietly replied Stephenson. The application of steam to highways was the dawn of a new era in freedom of communication and transportation. Since the introduction of steam as a motor, wonderful improvements have been made, and if it was difficult for contemporaneous witnesses to grasp the immensity of the discovery, it is no less difficult for us now, after 50 years of use, to fully measure all of the direct and indirect consequences that flow from this marvelous means of communication.

George Stephenson declared his discovery to an assemblage of English engineers on the 27th of October, 1825, and on the 17th of September, 1830, the first English railroad was opened between Liverpool and Manchester. Belgium speedily followed the example of England, and in 1837, France inaugurated the Paris and Saint Germain railroad. In 1835, five years after the first railroad, 1,320 miles of road were in operation in the world. At the present time, or at least at the commencement of the year 1878, for our general statistics stop at that year, Europe possessed 94,128 miles of railroad while the United States had about 80,000 miles, and all other parts of the world about 22,000 miles.

These figures are taken from a valuable German work which appeared in the *Gazette d'Augsbourg*. The author states that the capital employed in the building of the railroads of the world amounts to \$15,000,000,000, (60 milliards de marks.) An enormous capital for a single industry not yet much older than the average life of man. Here, continues the author, is a fact in political economy never seen since the world began. It has exercised a predominating influence over all human relations, sensible not only in the material domain, but in the intellectual and moral condition of civilized people. Journalism has notably become subject to this influence, since political wants and views, as well as social contiguity change in proportion as we have become cosmopolitan, or have increased our triumphs over the forces of nature in becoming independent of time and space.

Railroads have entirely changed the conditions of productions. They, with steamships, have enabled thinly settled localities of the world, to produce immense crops upon virgin soil, and compete with and triumph over the denser population but worn out soil of older Europe. If 50 years of steam communication have produced such an astonishing result, what may we not expect at the end of a second half-century?

**SPEED OF RAILWAY TRAVELING.**—The various German governments and others, who are interested in the problems connected with railway development which are pressing for solution in Germany, have been collecting information on all points bearing on the subject. Among other things, a paper has been published showing the different rates of velocity at which railway trains travel in different countries. According to this table, the swiftest runs are in England, between London and Dover, London and York, London and Hastings, where the average reaches 80 kilometers (50 miles) an hour. In Belgium some trains travel as fast as 67 kilometers (nearly 42 miles). The express trains from Paris to Bordeaux, Orleans line, averages 63 kilometers (39½ miles); the same speed is attained by the express trains between Berlin and Cologne. Between Bologna and Brindisi the average maximum is 50 kilometers (nearly 31½ miles). The average Austrian express speed is from 40 to 48 kilometers (25 to 30 miles). On the Moscow and St. Petersburg line one travels at the rate of 43 kilometers (nearly 27 miles) per hour; the same speed is observed in Switzerland between Geneva and Lausanne, and between Zurich and Roman-shorn. But on the other Swiss lines one must be content with a slower pace. Thus, from Zurich to Basel the highest speed is 33 kilometers, and between Basel and Bern 34—nay, between Solerne and Burgdorf the moderate gait of 25 kilometers, or a little more than 15½ miles an hour, is observed. There are in Switzerland no purely "through" trains which do not stop at intervening stations.

**COMPOSITION OF EXPLOSIVES.**—A German chemical journal gives the following analysis of explosives used as substitutes for gunpowder: *Dioresine*: Nitrate of potash, 50%; nitrate of soda, 25%; sulphur, 12%; sawdust from hard wood, 13%. *Azotine*: Chile saltpeter, 69.05%; carbon, 15.23%; sulphur, 11.43%; petroleum, 4.29%. *Petralite*: Nitrate of potash, 64%; impregnated wood or charcoal, 30%; antimony crudum, 6%. *Johnite*: Saltpeter, 75%; sulphur, 10%; lignite, 10%; picrate of soda, 3%; chlorate of potash, 2%. *Carboazotine*: Nitrate of potash, 61.04%; sulphate of iron, 0.73%; soot, 24.65%; sulphur, 13.68%.

## PATENTS AND INVENTIONS.

## List of U. S. Patents Issued to Pacific Coast Inventors.

(FROM OFFICIAL REPORTS TO DEWEY & CO.'S MINING AND SCIENTIFIC PRESS PATENT AGENCY.)

FOR THE WEEK ENDING AUGUST 5TH, 1879.

218,211—SAFETY ATTACHMENT FOR CHAINS—R. Y. Anderson, Santa Clara, Cal.  
218,164—CATARRH APPARATUS—Geo. W. Corey, Cheyenne, Wyoming Ter.  
218,173—HARROW—S. Harris, S. F.  
8,830—CARPET SEWING MACHINE—J. Hesse, S. F. (re-issue).  
218,127—GRUBBING MACHINE—S. G. McCrinn, Corvallis, Ogn.  
218,251—POTATO CUTTER AND DROPPER—T. Labree, Castroville, Cal.

**THE HORTICULTURAL SOCIETY.**—The movement to establish a State Horticultural Society is progressing and signatures to a call for a preliminary meeting are being obtained. In another column may be found a forcible article from Mr. Shinn detailing some features of the work which could be done by a vigorous and rightly organized society. It has not yet been determined at what date the first meeting should be called, but public announcement will be made in season. A copy of the call for a meeting has been left at this office and any of our readers who desire to promote the organization proposed are invited to send in their names.

**INCUBATION.**—As may be seen by the announcement in our advertising columns, the Eclipse incubator will be on exhibition at the Mechanics' fair in this city, at the State fair at Sacramento, and at the Santa Clara Valley fair at San Jose. The incubator will be in actual operation from day to day, and all interested may examine and inquire about its practical working.

**CALIFORNIA HONEY IN ENGLAND.**—We notice by a letter in the *Beekeepers' Magazine* that a part of the honey for which the Royal Agricultural Society's first prize was awarded to the exhibitors (H. K. & F. B. Thurler, of New York) was from the apiary of J. S. Harbison, of San Diego.

**STRAWBERRIES.**—We have received a copy of Ellwanger & Barry's (Rochester, N. Y.) special strawberry catalogue, which should be consulted by all in quest of new varieties.

THE Pacific Coast has such a varied climate it would be hopeless to expect any one to write a horticultural and floral handbook that would be exactly suitable for each particular locality. Mr. Shinn has come as nearly accomplishing this, however, as is possible within the limits of such a small volume. He has a remarkably graceful and pleasant way of presenting what, in the hands of another, would be only a dry statement of facts. There is a delicious vein of humor permeating the pages of his little volume. It crops out in the most unexpected places and in the most unexpected manner. There are few books of a practical nature which we have read with as much pleasure as this little handbook. To the amateur in horticulture, floriculture and kindred diversions it will be of especial interest and service. Mr. Shinn, who is a practical gardener, has written of what he knows, and consequently writes with authority. He tells you how to lay out an orchard or a flower garden, how and when to sow your seeds and plant your shrubs and trees and insure success. His book contains 15 essays on rural life and occupations, and a table of desirable plants for the garden, the field, the forest and the orchard. It is a book that we can heartily recommend to all persons engaged or interested in rural pursuits.—*Bulletin*.

The "PACIFIC RURAL HANDBOOK," written by Chas. H. Shinn for the publishers of the PACIFIC RURAL PRESS, will be sent, post-paid, in substantial cloth binding for \$1; in full leather, \$1.50; in cloth, interleaved with fine ruled paper for memoranda, \$1.50. Address

DEWEY & CO., PUBLISHERS,  
No. 202 Sansome Street, San Francisco.

## Books on Agriculture, Etc.

The following among other books will be sent post-paid on receipt of publishers' prices, annexed:—Tobacco, its culture, manufacture and use, 500 pages, \$3.50;—The Patrons of Husbandry, 500 pages, \$3.75;—The Women of the Bible, 77 engravings, \$4;—Wells' Every Man His Own Lawyer, 612 pages, \$2.75;—American Husbandry, 2 vols., \$1.50;—Gray's Agricultural Essays, \$1;—Langstroth's Honey Bee, \$1.50;—Rauds's Sheep Husbandry, \$1.50;—Agricultural Engineering, \$1.50;—New Bee-Keepers' Text Book, \$1;—Pacific Rural Handbook, \$1;—Ropp's Easy Calculator, \$1;—U. S. Land Law, 50 Cts.;—Woodward's Graperies, Etc., \$1;—Sugar from Melons, 25 Cts.;—Strawberry Culture, 50 Cts.;—Layres' Beehive Letters, \$1;—Hill's Map of California and Nevada, to subscribers, \$1;—Back Volumes PACIFIC RURAL PRESS (bound) \$5; unbound, \$3;—Picturesque Arizona, \$2. Address DEWEY & CO., Publishers, 202 Sansome St., S. F.

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

**HOW TO STOP THIS PAPER.**—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

**SAMPLE COPIES.**—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate the copy sent.

**EXTRA COPIES** can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.

For information in music matters send a postal to Kohler & Chase.

SENT to the Great Music House of Kohler & Chase for anything in the music line. 137 and 139 Post street, S. F.

## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, August 13th, 1879.

There is nothing very new this week, except fluctuations in special lines of Produce. The Grain trade has been generally of little account, because of a difference in views of buyers and sellers. In Wheat a slight decline has been forced, and the market is now weak. It will be seen below that while the cable weakens a little, because of large amounts now overhanging the market, there is still a fine outlook for American Wheat both in England and on the continent, because of the bad or indifferent condition of the home-grown Grain and the absolute need of large importations during the next 12 months.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday....	8s	6d	9s	8d	9s	6d	9s	10d
Friday.....	8s	6d	9s	8d	9s	6d	9s	10d
Saturday....	8s	6d	9s	7d	9s	6d	9s	10d
Sunday.....	8s	6d	9s	7d	9s	6d	9s	10d
Tuesday....	8s	6d	9s	6d	9s	5d	9s	10d
Wednesday..	8s	6d	9s	6d	9s	5d	9s	10d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1877.....	12s	—	12s	4d	12s	3d	13s	—
1878.....	10s	2d	10s	6d	10s	5d	10s	9d
1879.....	8s	6d	9s	6d	9s	5d	9s	10d

## Freights and Charters.

Things are very quiet just now. The ship *S. S. Thomas*, 1,553 tons, has been chartered for Wheat to Cork at £2 5s — prior to arrival. The chartered Wheat fleet in port at the close of last week numbered 27 vessels, of a registered tonnage of 37,106, with a carrying capacity of 55,000 short tons, or 1,100,000 cts. Disengaged tonnage in port, 31,000; on the way, 162,000 tons.

## Eastern Grain Markets.

NEW YORK, August 11.—The week opens with the quiet market that has prevailed for some weeks past, and there are no indications of improvement. The general markets show very little improvement. Flour is dull; 56½c lower on Winter Wheat, 4½c lower, dull; the export demand is light. Pork is in good export demand, at \$8 90c. Lard is dull, lower.

CHICAGO, August 9.—The grain markets have been closely watched this week, and some speculative fluctuations occurred, but the tendency of prices has been steadily downward on Wheat and firmer for other cereals, on account of cooler, dry weather, which is very favorable to harvesting the Wheat crop, but less so for Corn. Sales of September Wheat, \$3.83½@3.87, closing at \$3.85, bid. Sales of September Corn, 33½@34½, closing at 34½, bid. Sales of September Oats, 22½@24½, closing at 23½. Cash Rye, 49½@50½, closing inside. The market for Barley was entirely nominal. The closing cash prices were: Wheat, 84½c; Corn, 33½@33¾c; Oats, 23½c.

NEW YORK, August 12.—The Merchandise markets generally are quiet. Flour is easier, unsettled. Wheat is ½c higher, under light supplies. Pork is 10½c higher. Lard is dull, 10c higher.

## Chicago Provision Market.

CHICAGO, August 9.—Provisions were dull, weak and lower, with a partial reaction at the close. September Pork sold at \$8.10@8.35; September Lard, \$5.32@5.62½. These are the lowest prices ever reached in this market on Lard, and it is stated that a strong bull clique have grasped the Hog crop and will attempt to raise the prices of Provisions. Closing cash prices are: Pork, \$8.20; Lard, \$5.40.

## Eastern Wool Markets.

BOSTON, August 9.—Wool is in good demand, but prices rule low, and remain without improvement. There is a much better feeling, and the lowest point has probably been reached. The sales of the week comprise 1,830,000 lbs, and would have been larger if holders were disposed to meet the market at the lowest current rates, which, in many instances, were refused for round lots. There is some speculative enquiry, and dealers have purchased considerable California Wool here and in San Francisco. Fine fleeces are the lowest and most difficult grade to place of any on the market. There is an increased demand for combing and decline selections. Sales of California comprise 316,500 lbs of Spring at 22@30c.

NEW YORK, August 12.—Wool is quiet, very firm. The general outlook on the goods trade is considered very fair, and in many cases the wants of manufacturers are thought to be more pressing.

PHILADELPHIA, August 12.—Wool is in improved demand; prices firmer. Colorado fine and medium, 22@25c; Colorado coarse, for carpets, 17@18c; extra and merino pulled, 35@37c; No. 1 super pulled, 32@35c; Texas fine and medium, 18@28c.

## The Foreign Review.

LONDON, August 12.—The *Mark Lane Express* says: There have been some intervals of sunshine during the past week, which have been beneficial to the growing crops and hay-making. Cold nights, however, militated much against the ripening of cereals, and it is only in the south that Wheat is changing color. Even under the most favorable conditions it is improbable that any home-grown Wheat will be seen in Mark Lane before the first week in September. In 1878 the first sample appeared in Mark Lane on the 11th of August. In short, the improvement of the agricultural situation is very slight, and the harvest cannot be otherwise than deficient. Very little English Wheat was offered during the week either at Mark Lane or at country exchanges. Business has been, to a great extent, of a holiday character, but in the most of the foreign Wheat, such as Australian and New Zealand, have also been in good request. Wheat off coast is quiet, and has declined about 6d per quarter. Malze very strong, at fully a shilling advance. Forward Wheat was firmly held by first-hand sellers, and but little business was done. A few resales of Red Winter cargoes, for August and September shipment, were effected at 43s 6s per quarter. Barley advanced 6d to a shilling. Sales of English Wheat last week amounted to 15,857 quarters, at 49s 8d per quarter, against 34,400 quarters, at 48s 1d per quarter the same week last year. Imports into the



United Kingdom, for the week ending August 2d, were 945,273 cwt. of Wheat, and 211,223 cwt. of Flour. Another week of fine weather has wrought considerable improvement in the harvest prospects of France. The harvest has terminated in the south, but even in the most favored localities the yield of Wheat does not exceed an average crop. In some of the southwestern departments the yield is decidedly deficient. In the center, if fine weather continues, there is every probability, not indeed of a bountiful harvest, but of a yield certainly surpassing that of 1878.

#### Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon to-day as compared with the receipts of previous weeks:

ARTICLES.	WEEK. July 23.	WEEK. July 30.	WEEK. Aug. 6.	WEEK. Aug. 13.
Flour, quartersacks..	28,033	38,910	35,135	15,343
Wheat, centals.....	139,770	28,680	207,095	234,114
Barley, centals.....	22,043	49,666	34,496	62,942
Beans, sacks.....	1,814	1,239	631	601
Corn, centals.....	1,729	2,032	2,357	1,304
Oats, centals.....	1,729	4,441	3,604	7,393
Potatoes, sacks.....	1,248	16,330	18,341	12,465
Onions, sacks.....	14,251	703	1,993	1,885
Wool, bales.....	3,140	2,218	1,032	1,223
Hops, bales.....	75	96	112	190
Hay, bales.....	1,798	1,753	1,707	1,585

**BAGS**—The combination price of 11@11c for Grain Bags is still maintained, and the trade is devoid of news.

**BARLEY**—The Barley trade is slow, and the transactions of little significance. We note the following sales: 1,150 sks choice Chevalier, to arrive, at \$1.75; 1,000 do bright Coast Feed at 75c; 2,500 do good old Coast Feed at 72c; and 172 do poor do at 70c per cwt.

**BEANS**—The list of low prices is still retained, and the trade is slow even at these figures.

**CORN**—Corn prices are unchanged from last week. We note a sale of 300 sks Large Yellow at 82c per cwt.

**DAIRY PRODUCE**—Fresh roll Butter has taken a sharp and gratifying jump upward, owing to the very small amounts now coming in. Choice fresh roll is now quotable at 20@25c per lb, and fancy brands reach 27c. Cheese is unchanged.

**EGGS**—Fresh California Eggs have advanced to 28@30c per dozen, and but few are arriving. Some Eastern Eggs by express sold at 25c per dozen.

**FEED**—There is no change either in Hay or Ground Feeds. Hay sales are few.

**FRESH MEAT**—Fresh Meats of all kinds abundant and low. Hogs are weaker from large arrivals.

**FRUIT**—Fruit supplies are still large. Grapes are coming more freely, and have halved their value during the week. Some green Muscats are selling very low. Peaches have averaged better than last week. Raspberries and Strawberries have generally realized a slight advance.

**HOPS**—The outlook is still good for price. A dispatch from New York dated August 12th says: "Hops are firmly held at full prices, and demand active." Emmet Wells, in his New York circular of August 1st, says:

The speculative fever has in a measure subsided, and the market has assumed a somewhat quieter tone. The feeling as to values, however, continues very strong, many of our largest holders being unwilling to part with their best New York State Hops below 20c. Dealers are trying to contract the new crop at 15c to 20c, but they do not seem to meet with much success; well-posted growers have come to the conclusion that Hops will open at tolerably high figures, and this class will be likely to hold on at least until their crop is harvested and ready for market.

**OATS**—Sales have been made at last week's prices. Receipts have increased somewhat, but the market is steady. We note sales of 250 sks choice Oregon Feed at \$1.50; 1,000 do good do at \$1.45; and 623 do poor Feed at \$1.10.

**ONIONS**—Onions are in full supply and a point lower. The trade is rather slow.

**POTATOES**—A reported "Farmers' Union" of the river producers is credited with raising the price of the best Potatoes to 50c per cwt. We are not fully informed of the exact features of this movement or who is enlisted in it, but there is certainly a little something being done toward improving prices. It is said that the Potatoes are graded by this "Union" into firsts, at 50c; seconds, at 45c; and thirds, at 40c; all below third grade go to the distilleries at 15c per sack, the distillery returning the sacks and paying freight. This is reported to be the work of organization among the river growers; we are not aware whether Potatoes from other growers are thus treated or not. Prices are a little better this week, as has been explained.

**PROVISIONS**—The market for Meat Products is weak at quotations, except in regard to Eastern and California Sugar Cured Hams, which are in strong demand. The packers say there is, however, little or no margin in packing.

**POULTRY AND GAME**—Hens have advanced about 50c per dozen; other Poultry is unchanged.

**VEGETABLES**—String Beans have sold about 1c higher. Melons are in great abundance and sell slow. New Garlic has become quite scarce. Tomatoes have dropped nearly to their old summer level. Full price list of Vegetables will be found in another column.

**WHEAT**—Our quotations are dropped a point to reflect the rates, at which most sales are now made. The most and the best of the Wheat is held above the market. We note sales: 160 tons good shipping, \$1.65; 1,400 sks mixed, \$1.55; 300 do off grade, \$1.50; 150 do do, \$1.20, and 300 do do, \$1.15 per cwt.

**WOOL**—Prices are, for the most part, nominal, although some sales are being made within the ranges given for the different kinds. One house has sold 200,000 lbs, during the week, at prices quoted in our table.

#### RETAIL GROCERIES, ETC.

WEDNESDAY M., August 13, 1879.

Butter, California	25 @ 35	Rice.....	8 @ 12
Choice, lb.....	18 @ 25	Yeast Pwdr. doz..	1.50 @ 2.00
Cheese.....	25 @ 30	Can'd Oysters doz	2.00 @ 3.50
Eastern.....	25 @ 30	Syrup, S F Gold'n	75 @ 1.02
Lard, Cal.....	18 @ 25	Dried Apples, lb..	10 @ 14
Eastern.....	20 @ 25	Ger. Prunes.....	12 @ 10
Flour, ex fam, bbl	10 @ 9.00	Flgs. Cal.....	9 @ 10
Corn Meal, lb.....	21 @ 3	Peaches.....	11 @ 15
Sugar, wh. crshd	12 @ 13	Oils, Kerosene.....	50 @ 60
Light Brown.....	8 @ 9	Wines, Old Port..	3.50 @ 6.00
Green.....	23 @ 35	French Claret.....	1.00 @ 2.50
Tea, Fine Black..	50 @ 1.00	Cal. doz bot.....	3.00 @ 5.00
Eastern Japan..	55 @ 1.00	Whisky, O. K., gal.	3.00 @ 6.00
Candies, Adm'to..	15 @ 25	French Brandy.....	4.00 @ 8.00
Soap, Cal.....	7 @ 10		

#### DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., August 13, 1879.

<b>BEANS &amp; PEAS.</b>		Soft sh'l.....	16 @ 18
sayo, cwt.....	1.10 @ 1.15	Brazil.....	12 @ 13
Butter.....	1.75 @ 2.00	Pecans.....	12 @ 14
Castor.....	3.00 @ 3.50	Peanuts.....	4 @ 6
Red.....	2.00 @ 2.50	Filberts.....	15 @ 16
Pink.....	2.00 @ 2.50		
Sm'l White.....	2.15 @ 2.37	<b>ONIONS.</b>	
Lima.....	6.00 @ 6.75	Union City, cwt..	— @ —
Field Peas.....	1.25 @ 1.50	San Leandro.....	— @ —
		Stockton.....	— @ —
<b>BROOM CORN.</b>		Sacramento River.	— @ —
Southern.....	2 @ 2 1/2	Salt Lake.....	— @ —
Northern.....	3 @ 4	Oregon.....	— @ —
<b>CHICORY.</b>		New Onions.....	40 @ 55
German.....	6 @ 7	Red, sk.....	— @ 40
<b>DAIRY PRODUCE, ETC.</b>		White, cwt.....	— @ 55
<b>BUTTER.</b>		<b>POTATOES.</b>	
Cal. Fresh Roll, lb	20 @ 25	Petaluma, cwt.....	— @ —
Fancy Brands.....	20 @ 25	Humboldt.....	— @ —
Pickle Roll.....	20 @ 25	Clayton Cove.....	— @ —
Firkin, new.....	17 @ 20	Early Rose.....	40 @ 50
Western.....	12 @ 15	Half M'n Bay, new	30 @ 50
New York.....	— @ —	Kidney.....	— @ —
<b>CHEESE.</b>		Sweet.....	— @ 1 1/2
Cheese, Cal., old, lb	7 @ 9	<b>POULTRY &amp; GAME.</b>	
do, new.....	7 @ 10	Hens, doz.....	5.50 @ 7.00
N. Y. State.....	— @ —	Roosters.....	4.00 @ 6.00
<b>EGGS.</b>		Eggs.....	2.50 @ 3.50
Cal. fresh, doz.....	27 @ 30	Cocks, tame, doz.	4.00 @ 5.00
Ducks.....	27 @ 30	Geese, pair.....	1.75 @ 2.25
Oregon.....	— @ —	Wild Gray, doz..	— @ —
Eastern, by ex. prs.	20 @ 25	White do.....	— @ —
Pickled here.....	— @ —	Turkeys.....	18 @ 22
Utah.....	— @ 25	do, Dressed.....	— @ 1.50
<b>FEED.</b>		do, Common.....	— @ 1.50
Brn, ton.....	14.00 @ 15.00	do, Extra.....	50 @ 75
Corn Meal.....	20.00 @ 21.00	Quail, doz.....	— @ —
Hay.....	6.00 @ 11.50	Rabbits.....	— @ 50
Middlings.....	— @ 18.00	Hare.....	1.25 @ 1.50
Oil Cake Meal.....	32.00 @ —	Veal.....	8 @ 12 1/2
Straw, bale.....	40 @ 50	<b>PROVISIONS.</b>	
<b>FLAX.</b>		Cal. Bacon, Hvy, lb	8 1/2 @ 9 1/2
Extra, City Mills.....	5.25 @ 6.25	do, Medium.....	8 1/2 @ 9
do, Country Mills.....	4.75 @ 5.25	Light.....	9 @ 10
do, Oregon.....	4.50 @ 5.00	Lard.....	8 1/2 @ 9
do, Walla Walla.....	4.75 @ 5.25	Cal. Smoked Beef	8 @ 9
Superfine.....	3.25 @ 3.50	Shoulders, Cover'd	6 1/2 @ 7
Extra Superfine.....	3.50 @ 4.25	Hams, Cal.....	9 1/2 @ 10 1/2
<b>FRESH MEAT.</b>		Dupe's.....	13 @ 14
Beef, 1st quality, lb	5 @ 5 1/2	None Such.....	13 @ 14
Second.....	3 1/2 @ 4	Eop's.....	13 @ 14
Third.....	2 1/2 @ 3	Whitaker.....	12 1/2 @ 13 1/2
Mutton.....	2 1/2 @ 3 1/2	Royal.....	12 1/2 @ 14
Spring Lamb.....	4 @ 5	Reliable.....	— @ —
Pork, undressed.....	3 1/2 @ 3 3/4	Clough's.....	13 @ 14
Dressed.....	4 1/2 @ 5	<b>SEEDS.</b>	
Veal.....	6 @ 6 1/2	Alfalfa.....	5 @ 12
Milk Calves.....	6 1/2 @ 6	Barley.....	4 @ 5
do, choice.....	7 @ 7 1/2	Clover.....	15 @ 16
<b>GRAIN, ETC.</b>		White.....	50 @ 55
Barley, feed, cwt.....	70 @ 85	Cotton.....	6 @ 10
Brewing.....	90 @ 110	Flaxseed.....	2 1/2 @ 3
Chevalier.....	1.50 @ 1.75	Hemp.....	8 @ —
Buckwheat.....	1.25 @ 1.50	Italian Rye Grass	35 @ —
Corn, White.....	75 @ 80	Perennial.....	30 @ —
Yellow.....	75 @ 80	Millet.....	10 @ 12
Small Round.....	85 @ 90	Mustard, White.....	5 @ 12
Oats.....	100 @ 110	Brown.....	1 1/2 @ 8
Milling.....	1.45 @ 1.55	Rape.....	3 @ 8
Rye.....	80 @ 85	Ky Blue Grass.....	17 @ 20
Wheat, No. 1.....	— @ 70	2d quality.....	16 @ 18
do, No. 2.....	62 1/2 @ 65	Sweet V Grass.....	10 @ —
do, No. 3.....	40 @ 45	Orchard.....	2 @ 25
Choice Milling.....	— @ 72 1/2	Red Top.....	13 @ 15
<b>HIDES.</b>		Hungarian.....	8 @ 10
Hides, dry.....	15 @ 16 1/2	Lawn.....	30 @ 50
Wet salted.....	7 1/2 @ 9	Mesquit.....	— @ 20
<b>HONEY, ETC.</b>		Timothy.....	7 @ 8
Beeswax, lb.....	20 @ 25	<b>TALLOW.</b>	
Honey in comb.....	10 @ 12 1/2	Crude.....	5 @ 5 1/2
do, No. 2.....	— @ 10	Refined.....	7 1/2 @ 8
Dark.....	5 @ 6	<b>WOOL, ETC.</b>	
Strained.....	7 @ 8	<b>SPRING.</b>	
<b>HOPS.</b>		San Joaquin and S. Coast.	
Oregon.....	— @ —	Burru.....	12 @ 13 1/2
California, old.....	4 @ 10	Free (chute).....	14 @ 16
Wash. Ter.....	4 @ 8	Free (dusty).....	15 @ 21
Old Hops.....	— @ —	<b>FRUIT.</b>	
<b>NUTS—Jobbing.</b>		Almonds.....	22 @ 26
Walnuts, Cal.....	8 @ 9	Burru.....	15 @ 20
do, Chile.....	6 1/2 @ 8	Oregon, Eastern.....	16 @ 20
Almonds, hd sh'l lb	7 @ 8	do, Valley.....	18 @ 26

#### FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., August 13, 1879.

<b>FRUIT MARKET.</b>		Dates.....	9 @ 10
Apples, box.....	35 @ 1.00	Figs, Black.....	3 @ 4
Apricots, box.....	2.00 @ 4.00	White.....	6 @ 8
Bananas, bunch.....	2.00 @ 4.00	Peaches.....	7 @ 8
Blackberries, ch't	1.75 @ 3.00	do, pared.....	13 @ 20
Cherries, ch't.....	— @ —	Pears.....	8 @ 10
Citrons, Cal., 100.....	— @ —	Plums.....	3 @ —
Cocoanuts, 100.....	— @ 8.00	Pitted.....	12 1/2 @ 14
Crab Apples.....	50 @ 75	Prunes.....	8 @ 9
Currants, chest.....	— @ —	Raisins, Cal, bx 1	50 @ 1.75
Figs, box.....	— @ 75	do, Halves.....	2.00 @ 2.25
Gooseberries.....	— @ 75	do, Quarters.....	2.25 @ 2.50
Grapes, bx.....	25 @ 75	Malaga.....	2.75 @ 3.00
Muscats.....	25 @ 1.00	Zante Currants.....	8 @ 10
Malvoisie.....	50 @ 75	<b>VEGETABLES.</b>	
Rose of Peru.....	50 @ 1.00	Asparagus, box.....	— @ —
Limes, Mex.....	8.00 @ 12.00	Beets, cwt.....	50 @ —
do, Cal, box.....	4.00 @ 5.00	Beans, String.....	1 1/2 @ 2 1/2
Lemons, Cal M. 10	10 @ 15	Cabbages, 100 lbs	40 @ 50
Sicily, box.....	8.00 @ 12.00	Cantaloupes, 100	30 @ 40
Australian.....	2.50 @ 3.00	Carrots, cwt.....	30 @ 40
Nectarines, bk.....	50 @ 75	Chauliflower, doz	30 @ 40
Oranges, Cal M. 15	10 @ 20	Chile Peppers, bx	25 @ 75
do, small.....	6.00 @ 9.00	Cucumbers, bx.....	25 @ 50
do, Tahiti.....	— @ —	Egg Plants, bx.....	— @ 1.50
Peaches, bk.....	25 @ 50	Garlic, New, lb.....	1 1/2 @ 3
Pears, bx.....	25 @ 50	Green Corn.....	15 @ 25
Bartlett.....	75 @ 1.00	Green Peas, lb.....	1 1/2 @ 2
Pineapples, doz.....	4.00 @ 6.00	Lettuce, doz.....	10 @ —
Plums, box.....	30 @ 75	Parasnis, lb.....	1 1/2 @ 1 1/2
Prunes, bk.....	75 @ 1.65	Rhubarb.....	— @ 10
Quinces.....	— @ —	Horseshoe.....	— @ —
Raspberries, ch't	8.00 @ 10.00	Squash, Marrow	— @ —
Strawberries, ch't	4.00 @ 7.00	do, Fat, lb.....	8 @ 10
<b>DRIED FRUIT.</b>		Summer, box.....	40 @ 50
Apples, sliced, lb	4 @ 6	Turnips, cwt.....	25 @ 35
do, quartered.....	2 @ 3	White.....	— @ 50
Apricots.....	15 @ 25	Watkins, 100 lb	50 @ 15.00
Blackberries.....	12 @ 15		
Clifton.....	23 @ 24 1/2		

#### BAGS AND BAGGING.

[JOBBER PRICES.]

WEDNESDAY M., August 13, 1879.

Eng Standard Wheat.....	— @ 11	Elghths.....	3 1/2 @ 4
California Manufacture.		Hessian, 60 inch.....	— @ 14
Hand Sewed, 22x36, 11	— @ 11 1/2	45 inch.....	9 @ 10
24x36.....	— @ 12	40 inch.....	8 1/2 @ 9
22x40.....	— @ 12 1/2	Wool Sacks.....	— @ —
22x40.....	— @ 13	Hand Sewed, 3 1/2 lb.	44 @ 45
Machine Sd, 22x36.....	— @ 11	4 lb do.....	47 @ 48
Flour Sacks, halves.....	8 @ 10	Machine Sewed.....	45 @ —
Quarters.....	5 @ 6 1/2	Standard Gunnies.....	13 @ 14
		Bean Bags.....	7 @ 7 1/2

#### Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, August 13, 3 P. M.

SILVER, 25.		EXCHANGE ON NEW YORK, 20, on London bankers, Mexic	49 1/2 @ 50
GOLD BARS, 800 @ 910.		Commercial, 50; Paris, five francs; dollar; Mexican	90 1/2 @ 91
LOWEST CONSO, 97 1/2-16; Bonds (4 1/2), 105 1/2.		QUICKSILVER in S. F., by the disk, 1 lb, 33 1/2.	

#### GENERAL MERCHANDISE.

[WHOLESALE.]

WEDNESDAY M., August 13, 1879.

Crystal Wax.....	17 @ —	Pacific Glue Co's.....	1.00 @ 90
Eagle.....	12 @ —	Neatsfoot, No 1, lb.....	35 @ —
Patent Sperm.....	30 @ —	Castor, No 1.....	30 @ —
<b>CANNED GOODS.</b>			
Assorted Pie Fruits,		do, No 2.....	30 @ —
2 lb cans.....	2.25 @ —	Baker's A A.....	1.25 @ 1.30
Table do.....	3.50 @ —	Oliver, Plagniol.....	5.25 @ 5.75
Jams and Jellies.....	3.75 @ —	Possel.....	4.75 @ 5.25
Pickles, hf gal.....	3.25 @ —	Palm, lb.....	9 @ —
Sardines, qr box.....	1.67 @ 1.90	Lined, Raw, bbl.....	78 @ —
Hf Boxes.....	2.50 @ 2.75	Bolled.....	80 @ —
Merry, Faul & Co's.		Cocoanut.....	55 @ —
Preserved Beef.....	3.75 @ 4.00	China nut, ca.....	— @ 65
2 lb doz.....	3.75 @ —	Sperm.....	1.40 @ —
do Beef, 4 lb doz.....	6.50 @ —	Coast Whales.....	— @ 32 1/2
Preserved Mutton.....	3.75 @ —	Polar.....	— @ 35
Beef Tongue.....	6.50 @ —	Lard.....	— @ 70
Preserved Ham.....	— @ —	Oleophine.....	22 @ 22 1/2
2 lb doz.....	6.50 @ —	Novoca's Brilt.....	17 1/2 @ 18 1/2
Deviled Ham, 1 lb.		Photolite.....	— @ —
do.....	5.50 @ —	Nonpareil.....	31 @ 32
do Ham, 4 lb doz.....	3.00 @ —	Eureka.....	18 @ —
Boneless Pig Feet.....	— @ —	Burek kerosene.....	20 @ 35
2 lb.....	3.75 @ —	Doway Kor.....	35 @ —
Spiced Filets.....	— @ —	Elaine.....	37 1/2 @ —
2 lb.....	4.25 @ —	<b>PAINTS.</b>	
Head Cheese.....	— @ —	Pure White Lead.....	1 @ @ 8
3 lb.....	4.25 @ —	Whiting.....	8 @ —
<b>COAL-Jobbing.</b>			
Australian, ton.....	6.00 @ 6.50	Putty.....	4 @ 5
Costa Bay.....	— @ 5.50	Chalk.....	— @ —
Bellingham Bay.....	— @ —	White.....	2 1/2 @ —
Seattle.....	5.50 @ 6.00	Onesie.....	3 1/2 @ —
Cumberland.....	12.00 @ 15.00	Venetian Red.....	3 1/2 @ —
Mid Diablo.....	4.75 @ 6.00	Averill Mixed	
Lehigh.....	11.50 @ 12.50	Paint, gal.....	— @ —
Liverpool.....	6.00 @ 6.50	White & Blue.....	2.00 @ 2.40
Wm Hartley.....	— @ 8.00	Green & tint.....	— @ —
Scotland.....	— @ 8.00	Cal Yellow.....	3.00 @ 3.50
Scranton.....	— @ —	Light Red.....	3.00 @ 3.50
Vancouver Id.....	6.00 @ —	Metallic Roof.....	1.30 @ 1.60
Charcoal, sack.....	75 @ —	<b>RICE.</b>	
Coke, bush.....	60 @ —	China, Mixed, lb.....	4 1/2 @ 5
<b>COFFEE.</b>			
Sandwich Id, lb.....	— @ —	Hawaiian.....	6 @ —
Costa Rica.....	16 @ 16 1/2	<b>SALT.</b>	
Guatemala.....	16 @ 16 1/2	Cal. Bay, ton.....	15.00 @ 22.50
Java.....	25 @ 26	Common.....	10.00 @ 12.00
Manila.....	17 @ —	Carmen Id.....	12.00 @ 14.00
Ground, in cs.....	25 @ —	Liverpool fine.....	19.00 @ —
<b>FISH.</b>			
Sac'd Dry Cod.....	— @ 4	<b>SOAP.</b>	
do in cases.....	5 @ 6	Castle, lb.....	8 @ 15
Eastern Cod.....	7 @ 7 1/4	Common brands.....	4 1/2 @ 5
Salmon, bbls.....	8.00 @ 9.00	Faucy brands.....	7 @ 8
Hf bbls.....	5.00 @ 5.50	<b>SPICES.</b>	
1 lb cbring, lb.....	10 @ 12 1/2	Cloves, lb.....	— @ 47 1/2
Pk'd Cod, bbls.....	22.00 @ —	Cassia.....	19 @ 20
Hf bbls.....	11.00 @ —	Nutmegs.....	85 @ 87
Mackerel, No. 1.....	— @ —	Pepper Grain.....	— @ 12
Hf Bbls.....	9.50 @ 10.00	Pimento.....	19 @ 20
In Kits.....	1.85 @ 2.10	Mustard, Cal.,	
Ex Mess.....	3.25 @ 3.50	1 lb glass.....	— @ 25
Pk'd Herring, lb.....	3 @ 3.50	<b>SUGAR, ETC.</b>	
Boston Lard Hf 70 @ —		Cal. Cube, lb.....	— @ 10
<b>MEAT, ETC.</b>			
Plaster, Golden		Powdered.....	— @ 10
Gate Mills.....	3.00 @ 3.25	Crushed.....	— @ 10
Land Plaster, tn.....	10.00 @ 12.50	Granulated.....	— @ 10
Lime, Sta Cruz,		Golden C.....	— @ 8
bbl.....	1.25 @ 1.50	Cal. Syrup, kgs.....	70 @ —
Cement, Koson		Hawaiian Molasses	26 @ 30
dale.....	2.00 @ 2.25	<b>TEA.</b>	
Portland.....	4.00 @ 4.50	Young Hyson.....	— @ 51
<b>NAILS.</b>			
Ass'd sizes, keg.....	7.00 @ 2.75	Moynce, etc.....	— @ 42
<b>LEATHER.</b>			
(WHOLESALE.)			
WEDNESDAY, M., August 13, 1879.			
Sole Leather, heavy, lb.....	22 @ 2	Country pck'd Gun-	
Light.....	20 @ 2	powder & Im-	
Jodot, 8 Kil, doz.....	68.00 @ 65.00	perial.....	30 @ 42
11 to 13 Kil.....	65.00 @ 76.00	Hyson.....	30 @ 35
14 to 19 Kil.....	60.00 @ 79.00	Foochow O.....	35 @ —
Second Choice, 11 to 16 Kil.....	55.00 @ 77.00	Japan, 1st quality	40 @ 25
Costa Rica, 12 to 16 Kil.....	60.00 @ 67.00	2d quality.....	20 @ —
Females, 12 to 13 Kil.....	63.00 @ 67.00		
14 to 16 Kil.....	71.00 @ 76.00		
Simon Ulmo, Females, 12 to 13 Kil.....	58.00 @ 62.00		
14 to 15 Kil.....	66.00 @ 70.00		
16 to 17 Kil.....	72.00 @ 74.00		
Simon, 18 Kil.....	61.00 @ 63.00		
20 Kil.....	65.00 @ 67.00		
Robert, 17 and 18 Kil.....	60.00 @ 67.00		
Kips, French, lb.....	1.00 @ 1.30		
Cal.....	40.00 @ 60.00		
French Sheep, all colors.....	8.00 @ 15.00		
Eastern Calf for Backs, lb.....	1.00 @ 1.20		
Sheep Roans for Topping, all colors, doz.....	9.00 @ 13.00		
For Luggage.....	5.50 @ 61.50		
not Lugs, French Calf, pair.....	1.50 @ 4.00		
BGood French Calf.....	4.00 @ 4.75		
Best Jodot Calf.....	5.00 @ 5.50		
Leather, Harness, lb.....	15 @ 30		
Fair Bridle, doz.....	48.10 @ 72.00		
Skirting, lb.....	33 @ 35		
Buff, doz.....	30 @ 35		
Wax Ride.....	35 @ 40		



## Agricultural Articles.

## The Famous "Enterprise,"

PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crankshaft with double bearings for the crank to work in, all turned and run in babbitted boxes. Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

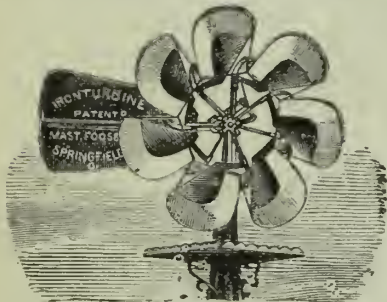


**HORTON & KENNEDY,**

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

## Iron Turbine Wind Engine



## AND BUCKEYE FORCE PUMP.

This machine made of iron, wheel, vanes, etc., made of No. 24 sheet iron, hound and braced with best quality of wrought bar iron, gives more power than any other wheel of same diameter. No wood to swell, shrink, rattle or be destroyed by the wind. The most durable and the best Windmill ever invented. For particulars, price lists, etc., address

D. E. GOLDSMITH, State Agent,  
419 Sansome street, San Francisco.

## MATTESON &amp; WILLIAMSON'S

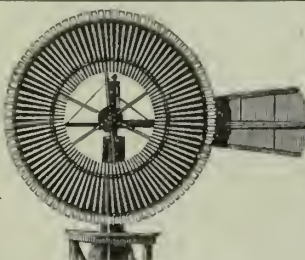


Took the Premium over all at the great plowing Match in Stockton, in 1870. This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,  
STOCKTON, CAL.

**\$50.**

The New  
Worthing-  
ton  
Windmill



Manufactured  
by

W. D. PARSON,

1364 San Pablo Avenue, Oakland, Cal.  
Also, maker of the "Colorado Wind Engine," Wind Grist Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern of Deep Well and Artesian Lift Pump Cylinders. Circulars free.

**Anderson's Springs,**  
LAKE COUNTY, CAL.

Nineteen miles from Calistoga, five miles from Middletown, and ten miles from the Great Geysers; between which and Anderson's Springs there is a good stage road.

## HOT SULPHUR WATER

For Rheumatism, Paralysis, etc.: Cold Sulphur for Dyspepsia, Diseases of the Stomach and Bowels. Scenery unsurpassed. Climate mild and equitable. Consumptives generally improve in health, and asthmatics are invariably relieved.

TROUT FISHING ON THE GROUNDS.

Deer Hunting in the Immediate Vicinity.  
27 Accommodations and Cookery good. Board from \$10 to \$12 by the week.

ANDERSON & PATRIQUIN, Prop's.

## Winchester Repeating Rifle,

MODEL 1873.



One-third size by Dr. E. H. Pardee.

The Strength of All its Parts,

The Simplicity of Its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carabines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder.

**JOHN SKINKER, No. 115 Pine Street, San Francisco,**

SOLE AGENT FOR THE PACIFIC COAST.

[NEW ADVERTISEMENT.]

"The Principles of the Republican Party are not for a Day, but for All Time."

**Regular Republican**  
**STATE TICKET.**

Election, Wednesday, September 3, 1879.

FOR GOVERNOR:

GEORGE C. PERKINS.....San Francisco.

FOR LIEUTENANT GOVERNOR:

GEN. JOHN MANSFIELD.....Los Angeles.

FOR SECRETARY OF STATE:

DANIEL M. BURNS.....Yolo.

FOR CONTROLLER:

DANIEL M. KENFIELD.....Tuolumne.

FOR TREASURER:

JOHN WEIL.....Sierra.

FOR ATTORNEY GENERAL:

AUGUSTUS L. HART.....Colusa.

FOR SURVEYOR GENERAL:

JOHN W. SHANKLIN.....Alameda.

FOR CLERK OF SUPREME COURT:

FRANK W. GROSS.....San Francisco

FOR SUPT PUBLIC INSTRUCTION:

FREDERICK M. CAMPBELL.....Alameda

FOR CHIEF JUSTICE:

AUGUSTUS L. RHODES.....Santa Clara.

FOR ASSOCIATE JUSTICES:

A. P. CATLIN.....Sacramento.

ISAAC S. BELCHER.....Yuba.

JARRETT T. RICHARDS.....Santa Barbara.

JAMES E. HALE.....Placer.

MILTON H. MYRICK.....San Francisco.

E. D. WHEELER.....San Francisco.

STATE BOARD EQUALIZATION—(1st District):

JAMES L. KING.....San Francisco.

RAILROAD COMMISSIONER—(2nd District):

TIMOTHY G. PHELPS.....San Mateo

FOR MEMBER OF CONGRESS—(1st District):

HORACE DAVIS.....San Francisco.

By order of the Republican State Central Committee.

M. D. BORUCK, Secretary.

W. W. MORROW, Chairman.

**MONEY TO LOAN**

AT LOWEST RATES

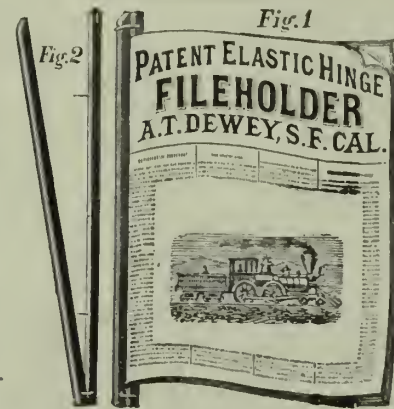
On Country Real Estate and Grain in Warehouse.

McAFEE BROTHERS,

202 Sansome Street, San Francisco.

Patents

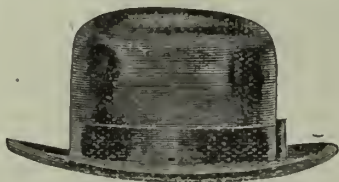
OBTAINED IN U. S. AND FOREIGN COUNTRIES; trademarks, labels and copyrights registered through DEWEY & CO.'S MINING AND SCIENTIFIC PRESS Patent Agency, San Francisco. Send for free circular



Single samples will be mailed from this office for 50 cents, postpaid. Wholesale and retail agents wanted.

THE BEST FILEHOLDER.—After having used Dewey's patent elastic hinge fileholder for over a year past, the *News* cheerfully indorses it as the best newspaper fileholder in existence, possessing important advantages over any and all others in use. The holders are neat, light and convenient, and the newspapers are placed in them with the utmost facility and least possible time and exertion. They are the simplest, handiest and cheapest of all. Anybody keeping files of papers in reading rooms, offices or at home, should send at once to the proprietor, A. T. Dewey, San Francisco, and get the only proper fileholder. Samples by mail fifty cents.—*Gold Hill News*.

**HERRMANN'S HATS**  
ARE THE BEST!



Try one and you will Wear no other.

Spring and Summer Styles,

— AT —  
336 Kearny St., bet. Bush and Pine,

— AND —  
910 Market St., above Stockton.

Send for Illustrated Spring Style Catalogue.

The New Beekeepers' Text Book.

By N. H. and H. A. KING. The latest work on the Apia, embodying accounts of all the newest methods and appliances. Fully illustrated. Sent by mail, postpaid, for \$1. DEWEY & CO., 202 Sansome Street, S. F.

Well-Auger. Ours is guaranteed to be the best in the world. Catalogue free.

W. W. GILES, 149 Clark St., Chicago, Ill.  
P. Saxe, 620 Bush street, General Agent for Pacific Coast.

## Stock Notices.



**SPANISH MERINO SHEEP.**

Choice stock of thoroughbred Bucks and Ewes, guaranteed free from disease. Purchasers are invited to examine. About 10 minutes' walk from the Railroad terminus, adjoining State University.

E. W. WOOLSEY,  
Berkeley, Alameda County, Cal.

**BERKSHIRE A SPECIALTY.**



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,  
18th and A Streets, Sacramento City, Cal.

**ANGORAS AT THE FAIRS.**

The undersigned would announce to those interested in ANGORA GOATS, and the public generally, that he will have a lot of

**Choice Angora Bucks**

On Exhibition at the State and District Fairs

This fall, namely: At the State Fair at Sacramento, the Golden Gate Fair at Oakland, the Nevada State Fair at Reno, and the Oregon State Fair at Salem.

These Bucks will be sold at fair rates.

JOHN S. HARRIS,

Hollister, San Benito Co., Cal.

**Thoroughbred Spanish Merino Sheep**  
FOR SALE

Wool Growers and Sheep Breeders desirous of improvement are invited to examine the *Banner* and *Premium* flock of the State. All 1st Premiums taken at State Fair in 1878, with strong competition. No sheep superior in the world. 100 head yearling and 20 head 2-year old Rams for sale, large sized carcasses free from wrinkles. Heavy shearers, long staple of white glossy wool. A few young Ewes also for sale. *24* All Sheep warranted free from Disease. Send for circular and price list or come and see us at once. Laurel Ranch, Hayward, Alameda County, Cal. One mile from depot on C. P. R. R. J. H. STROBRIDGE.

**JOHN ROGERS & SONS,**  
**GENERAL STOCK AND SALE YARD,**  
Corner Market and 9th Sts., San Francisco,

HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN. Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

**PLEASANT SUMMER READING.**

**THE NEW PENELOPE**

— AND —

**Stories of California Life.**

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. For sale by

**A. L. BANCROFT & CO.**

PRICE, \$2 00.



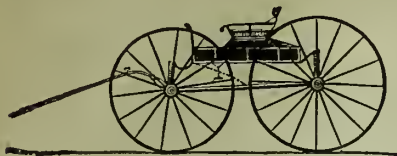
**LITTLE'S CHEMICAL FLUID.**

The New Non-Poisonous Sheep Dip and Disinfectant. Price, \$2 per gallon. For directions and testimonials, apply to FALKNER, BELL & CO., Sole Agents, 430 California Street, S. F.

**Agricultural Books.**

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.



**H. J. HASKELL,**

MANUFACTURER OF

**CARRIAGES,  
BUGGIES,**

— AND —

**SPRING WAGONS,**

At the Lowest Rates.

Corner of Alameda and White Streets,

SAN JOSE, CAL.

JUST PUBLISHED.

**The Voice of Worship,**

PRICE FOR CHOIRS, \$9.00

\$1.00. FOR CONVENTIONS, PER DOZ.  
FOR SINGING SCHOOLS.**THE VOICE OF WORSHIP**, by L. O. EMERSON, is, like other Church Music books by the same author, pre-eminent for graceful and beautiful music, and for the fine skill and judgment displayed in selection and arrangement.*The First Hundred Pages.*

include the SINGING SCHOOL COURSE, in which are found many fine harmonized songs or glees for practice and enjoyment.

*The Second Hundred Pages*

are filled with the best of Hymn Tunes, Sentences, &amp;c., a large, new and fresh collection.

*The Three Hundred Pages*contain a capital set of ANTHEMS.  
Specimen copies mailed, post-free for \$1.00

EMERSON'S VOCAL METHOD (just out) has a novel arrangement of syllables, and other improvements which are sensible and useful. Please examine. Price \$1.50.

OLIVER DITSON &amp; CO., BOSTON.

C. H. Ditson &amp; Co., 843 Broadway, N. Y.

**IMPORTANT!**

We wish to open correspondence immediately with one or more enterprising parties in each township upon the Coast to

**Establish an Agency**

Of our valuable publications, among which are the "Pictorial History of the World," Stanley's "Through the Dark Continent," "Chase's Improved Recipes," the Farmer's Account Book, and many others. Ministers, teachers, farmers and others will find this profitable. Ladies especially are successful. Address for full particulars,

A. L. BANCROFT &amp; CO.,

No. 721 Market Street, San Francisco, Cal.

J. P. JONES.

J. THOMPSON.

**JONES & THOMPSON,**

Wholesale and Retail Dealers in

**Hay, Grain and Feed.**

Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,

1635 Mission St., San Francisco.

**A Card to Grangers and Farmers.**

HAY, GRAIN, HORSES and CATTLE.

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nos. 11 and 13 Bluxome St., San Francisco.

**ROOMS TO RENT.**

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

**Dewey & Co.** { 202 Sansome St. } Patent Ag'ts.**Week's Grape, Fruit and Flower Picker.**

SIZE NO. 1.



Valentine's Patent, Aug. 1, 1865.

any kind, it is an invaluable assistant. Sent by mail on receipt of \$1.25.

**FLOWER PICKER.**

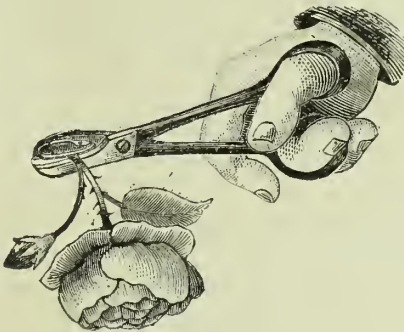
THE NO. 2, OR SMALLEST SIZE,

Is Particularly Adapted for

**FLOWERS,**

And will be found an invaluable assistant in the Garden or Hot-house.

THEY ARE MADE OF THE BEST MATERIAL, and finished in a workmanlike manner. Sent by mail on receipt of \$1.00.



FOR SALE BY

**Dunham, Carrigan & Co.,**

SAN FRANCISCO.

*In consequence of spurious imitations of***LEA AND PERRINS' SAUCE,***which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature thus,**Lea & Perrins**which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.**Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Cross and Blackwell, London &c., &c.; and by Grocers and Oilmen throughout the World.*

To be obtained of CROSS &amp; CO., San Francisco.

— OFFICE OF THE —

**BLACK POINT PACKING AND SLAUGHTER HOUSE.**

MERRY, FAULL &amp; CO., Proprietors.

**TO OWNERS OF LIVE STOCK!**

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

**SQUARE DEAL and FULL MARKET PRICES**

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices.

Please address our

Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.

**MISSION ROCK DOCK AND GRAIN WAREHOUSES.**

SAN FRANCISCO, CAL.

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

GRAIN consigned to us by water insured in open policy at Special Rates. Wheat shipped by railroads via Stockton, care of the CALIFORNIA STEAM NAVIGATION CO. will be received by them at Stockton and delivered at Mission Rock Warehouse at same rate of freight as to Oakland Wharf. Freight paid, Fire Insurance and Loans effected and proceeds forwarded free of commission. Money advanced at bottom rates, interest payable at end of loan. Fire Insurance 1% per annum. Short Rates of Storage—First month, 30 cents per ton, or 40 cents per ton if delivered. Each month thereafter 20 cents per ton. Weighing in, free. Weighing out, 10 cents per ton.

**CHAS. H. SINCLAIR, Superintendent,**

Or to the California Dry Dock Co., Office, No. 318 California Street, San Francisco.

60 Chromo, perfumed, Snowflake &amp; Lace cards, name on all 10c. Game Authors, 15c. Lyman &amp; Co., Clintonville, Ct. 50 Perfumed, Snowflake, Chromo, Motto Cards, name in gold and jet 10c. G. A. SPRING, E. Wallingford, Ct.



Pyrethrum Cineriæ Folium—A California Production.

THE MOST WONDERFUL DISCOVERY OF THE NINETEENTH CENTURY.

This wonderful Insect Powder will exterminate Flies, Weevils, Caterpillars, Mosquitoes, Midges, Crickets, Cockroaches, Spiders, Tarantulas, Scorpions, Ants, Hawk-bugs, Phylloxera, Plant Lice, Moths, Beetles, Grasshoppers, Locusts, Bed-bugs, Fleas, and every species of Insects. Remember that none is genuine unless my Trade-Mark is attached to every package.

\$100 WILL BE PAID IF IT FAILS TO KILL ANY INSECT.

Endorsed by Prof. E. W. Hilgard, of the University of California, and by Prof. C. V. Riley, Chief Entomological Commissioner at Washington, D. C., and pronounced superior to any imported article, and perfectly harmless to man and beast.

G. N. MILCO,

Patentee and Sole Manufacturer, Stockton, Cal.

CHARLES C. LANGLEY &amp; CO., Wholesale Druggists, Sole Agents, S. F.

**ARITHMETIC MADE EASY**

BY ROPPS

**Easy Calculator.**

This valuable work is used by thousands of farmers, mechanics and business men, and is highly recommended for its practical utility and convenience.

It embodies an entirely new system of calculation, by which a vast amount of figures and mental labor—required by the ordinary methods—and fractions with their complexities, are absolutely avoided.

It is so simple and easily comprehended that even the most illiterate is enabled, in a few minutes, to reckon with absolute accuracy and speed; while its original and rapid methods, benefit and delight the most scholarly.

It shows at a glance the accurate value of wheat, corn, rye, oats, barley, cattle, hogs, hay, coal, lumber and merchandise, from one pound to a car load, and for any price the market is likely to reach.

It gives the interest, simple and compound, on any sum, or any time, at six, seven, eight, and ten per cent.; the exact measurement of boards, scantlings, timbers, saw logs, cisterns, tanks, wells, granaries, bins, wagon beds, corn cribs, etc., the wages at various rates, for hours, days, weeks and months; besides numerous other important methods, rules and tables.

It is printed on fine tinted paper, is well and elegantly found in pocket-book shape, and accompanied by a silicate slate, pocket for papers, and memorandum, which can be replenished in the two latter styles.

It answers the purpose of a pocket book and diary, and costs no more, although it was gotten up at great expense and labor, and is unquestionably one of the most useful publications ever issued from the press.

Price, bound in Fine English Cloth, \$1.00.

Sent direct from the Eastern publisher, postpaid, on receipt of price, by P. O. order, registered letter or receipted by express. Address

DEWEY &amp; CO., San Francisco.

**THE WILSON ADJUSTABLE CHAIR,**  
With 30 Changes of Position.

Patented in the United States and Foreign Countries. BEST CHAIR IN THE WORLD.

Parlor,	Combining
LIBRARY,	Beauty,
Invalid Chair	Lightness,
Rocker,	Strength,
BED or	Simplicity
LOUNGE.	and
	Comfort.

Same Chair in Cane Seating, very desirable for summer. Manufactured of the best of wrought iron and rivets. Castors made purposely for the Chair. Everything to an exact science. **IT WILL LAST A LIFE-TIME.**

Has been awarded Medals, Prizes and Diplomas for its superiority and merit wherever it has been exhibited. Orders by mail promptly attended to. Goods shipped to any address, C. O. D. Send for Illustrated Circular.

Address the WILSON ADJUSTABLE CHAIR MFG CO., 535 Washington St., Boston

M. COOKE.

R. J. COOKE

**PIONEER BOX FACTORY,**

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order, AND IN SHOOKS.

Communications Promptly Attended to.

COOKE &amp; SONS, Successors to COOKE &amp; GREGORY.

**SEND FOR THE**

\$1.50

**Homœopathic Medicine Case.**

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address

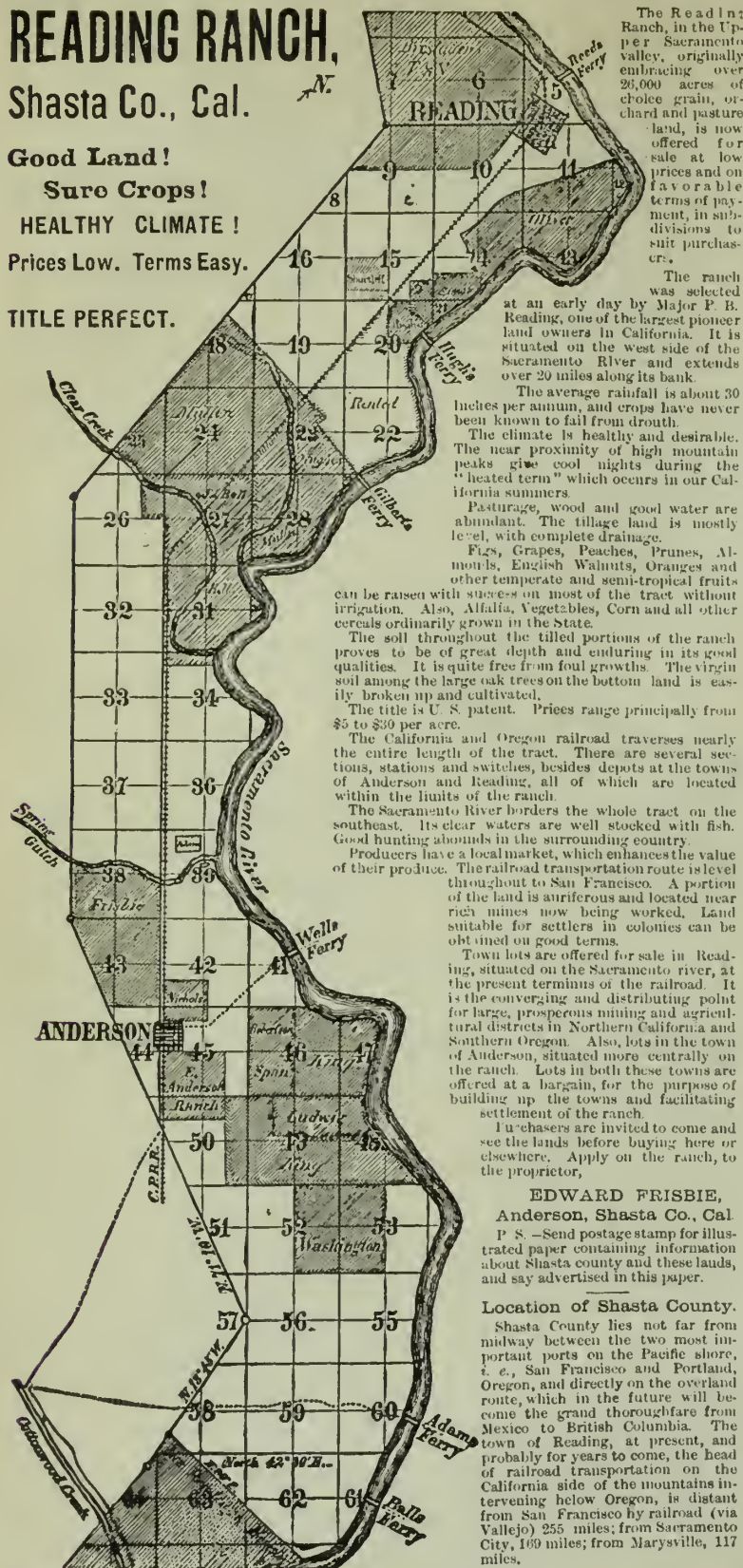
BOERICKE &amp; TAFEL,

Homœopathic Pharmacy, San Francisco.



## READING RANCH, Shasta Co., Cal.

Good Land!  
Sure Crops!  
HEALTHY CLIMATE!  
Prices Low. Terms Easy.  
TITLE PERFECT.



The Reading Ranch, in the Upper Sacramento valley, originally embracing over 26,000 acres of choice grain, orchard and pasture land, is now offered for sale at low prices and on favorable terms of payment, in subdivisions to suit purchasers.

The ranch was selected at an early day by Major P. B. Reading, one of the largest pioneer land owners in California. It is situated on the west side of the Sacramento River and extends over 20 miles along its bank.

The average rainfall is about 30 inches per annum, and crops have never been known to fail from drought.

The climate is healthy and desirable. The near proximity of high mountain peaks give cool nights during the "heated term" which occurs in our California summers.

Pasture, wood and good water are abundant. The tillage land is mostly level, with complete drainage.

Figs, Grapes, Peaches, Prunes, Almonds, English Walnuts, Oranges and other temperate and semi-tropical fruits can be raised with success on most of the tract without irrigation. Also, Alfalfa, Vegetables, Corn and all other cereals ordinarily grown in the State.

The soil throughout the titled portions of the ranch proves to be of great depth and enduring in its good qualities. It is quite free from foul growths. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

The title is U. S. patent. Prices range principally from \$5 to \$30 per acre.

The California and Oregon railroad traverses nearly the entire length of the tract. There are several sections, stations and switches, besides depots at the towns of Anderson and Reading, all of which are located within the limits of the ranch.

The Sacramento River borders the whole tract on the southeast. Its clear waters are well stocked with fish. Good hunting abounds in the surrounding country.

Producers have a local market, which enhances the value of their produce. The railroad transportation route is level throughout to San Francisco. A portion of the land is auriferous and located near rich mines now being worked. Land suitable for settlers in colonies can be obtained on good terms.

Town lots are offered for sale in Reading, situated on the Sacramento river, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

Purchasers are invited to come and see the lands before buying here or elsewhere. Apply on the ranch, to the proprietor.

EDWARD FRISBIE,  
Anderson, Shasta Co., Cal.  
P. S.—Send postage stamp for illustrated paper containing information about Shasta county and these lands, and say advertised in this paper.

Location of Shasta County.  
Shasta County lies not far from midway between the two most important ports on the Pacific shore, i. e., San Francisco and Portland, Oregon, and directly on the overland route, which in the future will become the grand thoroughfare from Mexico to British Columbia. The town of Reading, at present, and probably for years to come, the head of railroad transportation on the California side of the mountains intervening below Oregon, is distant from San Francisco by railroad (via Vallejo) 255 miles; from Sacramento City, 169 miles; from Marysville, 117 miles.

Persons thinking of buying or renting land will not likely regret a camping or excursion trip to this upper Sacramento country.

### LAND FOR SALE OR RENT IN SUB-DIVISIONS.

Contents of Pamphlet on Public Lands of California, U. S. Land Laws, Map of California and Nevada, Etc.

Map of California and Nevada; The Public Lands; The Land Districts; Table of Rainfall in California; Counties and Their Products; Statistics of the State at Large.

Instructions of the U. S. Land Commissioners.—Different Classes of Public Lands; How Lands may be Acquired; Fees of Land Office at Location; Agricultural College Scrip; Pre-emptions; Extending the Homestead Privilege; But One Homestead Allowed; Proof of Actual Settlement Necessary; Adjoining Farm Homesteads; Lands for Soldiers and Sailors; Lands for Indians; Fees of Land Office and Commissions; Laws to Promote Timber Culture; Concerning Appeals; Returns of the Register and Receiver; Concerning Mining Claims; Second Pre-emption Benefit.

Abstract from the U. S. Statutes.—The Law Concerning Pre-emption; Concerning Homesteads; Amendment Act Concerning Timber; Miscellaneous Provisions; Additional Surveys; Land for Pre-emption; List of California Post Offices. Price, post paid, 50 cts.

Published and sold by DEWEY & CO., S. F.

### THOROUGHbred JACK FOR SALE.



For sale, the fine thoroughbred Maltese Jack, "HENRY CLAY," six years old, fifteen hands high, weight about 1,000 pounds. For stock purposes, "HENRY CLAY" is one of the finest animals in California. For particulars, pedigree, etc., address

J. C. HEDDIN,  
Bernardo P. O., San Diego Co., Cal.

This paper is printed with ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 120 Sutter St., S. F.

## Baling Fencing Telegraph Telephone Galvanized

## WIRE

### Barbed Fence Wire.

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the  
Trademark.



### A. S. HALLIDIE

Wire Mills.

Office, No. 6 California St.  
SAN FRANCISCO.

### WIRE ROPE and CORDAGE

Of every kind on hand or Made to Order.

60 Elegant Perfumed Cards, Chromo, Motto, Lily, Etc., 15c. Gift with each pack. H. M. SMITH, Cliftonville, Ct.



## Celebrated Detrick "E W" 22x36 Grain Bag.

CALCUTTA, DUNDEE and PACIFIC JUTE HAND-SEWED BAGS always on hand. OUR No. 1, No. 2 and No. 3 SECOND-HAND GRAIN BAGS selected and graded with care.

**TWINES.** 3, 4 and 5-ply for Grain Bags, 6 and 8-ply for Potato Gunnies, 3-ply EXTRA FINE for Flour Bags, made expressly for our trade and QUALITY GUARANTEED.

FLOUR BAGS Printed to Order WITHOUT EXTRA CHARGE. POTATO GUNNIES, Wool, Bean, Ore and Salt and Seamless Cotton Bags.

## Tents, Awnings and Hydraulic Hose.

ORDERS PROMPTLY FILLED AT LOWEST MARKET RATES.

119, 121 and 123 Clay St., and 118 and 120 Commercial St., San Francisco.

## Nathaniel Curry & Bro.,

113 Sansome Street, San Francisco,



Sole Agents for the  
**Sharps Rifle Co., of Bridgeport, Co.**

FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO.

Also Agents for W. W. GREENER'S Celebrated Wedgefast, Chokebore, Breech-loading DOUBLE GUNS, and all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America. AMMUNITION of all kinds in quantities to suit.



## Howe's U. S. Standard Scales.

SCALES REPAIRED

In City or Country by a Practical Scale Maker with United States Standard Weight.

Platform, Drop Lever, Grain, Hay, Warehouse and Counter Scales, Even Balances and Butcher Scales, White's Money Drawers, Store, Wagon and Box Trucks

DAVID N. HAWLEY, Agt., 201 and 203 Market Street,  
(Cor. Main) SAN FRANCISCO.

## MONEY in CHICKENS



If You Want to Make Money

By raising any number of Chickens at any season of the year without setting hens, look for the

## ECLIPSE INCUBATOR

(E. A. SAMUEL'S Patent)

Which will be on exhibition at the MECHANICS' FAIR, in this city, STATE FAIR, at Sacramento, SANTA CLARA VALLEY FAIR, at San Jose.

The Incubator will be shown in operation, and its method of working fully explained.

H. W. CALDWELL,  
Manufacturer, Waltham, Mass.

G. G. WICKSON, 349 Market Street, S. F.  
Agent for the Pacific Coast.

## R. J. TRUMBULL & CO.,

SUCCESSORS TO

R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS and BULBS, FRUITS and ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, STRINGS, GARDEN HARDWARE

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

\* "Guide to the Vegetable and Flower Garden" will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL & CO.,  
419 and 421 Sansome Street, S. F.

## CHEAPER YET!

## Tension Sewing Machines!

A large number of nearly new genuine SINGER, WHEELER & WILSON, HOWE, WOOD, WILSON, GROVER & BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

NO TENSION MACHINE.

Wilcox & Gibbs' S. M. Co.,

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.





Volume XVIII.]

SAN FRANCISCO, SATURDAY, AUGUST 23, 1879.

Number 8.

### Landscape Gardening.—No. 4.

Written for the RURAL PRESS by J. B. ARMSTRONG.

Having built the mansion, and the roads and bridges, the owner looks over his grounds with a view to further beautify them by planting. He will consider, for illustration, that his demesne consists of an undulating surface, with groups of forest trees scattered over it in irregular clusters. The prospect from the dwelling, in every direction, is to be studied respecting the vistas opened up; whether it be desirable that some should be planted out, or new ones made. He will find it convenient to recur to his experiences in the location of roads, by making a new map, upon which he will mark with a pencil the approximate situation of the trees. By pacing the distances, he will be able to do this near enough for practical purposes. Having made his working map, which should include the dwelling, the roads and bridges, and outlines of the contour of the ground, if he can venture so far in portraying it, he will have a map to study which will as much enlist his attention, until the completion of the work, as the map of all Europe would puzzle Bismarck when about to reconstruct it. If he does his work as well it will be more enduring, and, for our part, we cannot see but that as much skill is required in its way.

"For Peace hath her victories."

The points of view being determined, and marked on the map with dotted lines radiating from them towards the vistas to be left open, is a step gained. Then follow the grouping of trees; the planting to connect masses; the creation of groups, and the removal of single trees, or portions of clumps, which intercept a view. Fig. 10 is advised by Downing, as one of the approved plans to plant trees on level sites, where the graceful and beautiful are desired. The effects are seen in the perspective view (Fig. 11), where the full-grown trees, in all the majesty of rounded outlines and grand masses of foliage, harmonize with scenes of highly-cultivated beauty.

Fig. 12 is the ground plan, accepted by landscape gardeners for one manner of planting, to create the picturesque. Fig. 13 is the result, as seen in the full growth. But there are, of course, numerous other ways of producing these effects, varying with the nature of the grounds and natural objects.

Large trees should not be planted near the carriage way. As a rule keep them remote for the frame of the picture. Clusters of forest trees of the same form look monotonous and stiff. Break up the outlines by introducing a few of different shapes and foliage. But there ought not to be violent contrasts in colors. Fig. 11 is an example. The group of elms is improved by the glimpse of a pine beyond. Rows of Lombardy poplars are not beautiful; but a few may be judiciously intermingled with round-headed trees to give more spirit to the scene.

Nothing can be more attractive, in its way, than a grapevine clambering through a tree top. The family of climbers is large, and the Virginia creeper must not be overlooked. Its leaves turn yellow in their season, and contrast beautifully with other foliage. There are some fine evergreen shrubs, hardy on this coast, and, as far north as Philadelphia, which may be

planted sparingly, with good effect, in connecting groups of trees, and along paths. Such are the Laurustinus, Portugal laurels, and Hollies. The Golden Chain laburnum, with its magnificent yellow flowers in the spring, ought to find a place with the Monterey cypress, acacia, Norway, fir, etc. Mosses of pines are more at home among rocks and along hillsides. Their best effects are seen when planted in mountain gorges, and among wild and picturesque scenery.

Not to be too minute in directions for making details harmonize, the writer can only say, that the undertaking to plant a place is as full of suggestions as there are possibilities to be worked out. Every rock and tree, and each near or distant view, is the fruitful text for a chapter. So much must be left for the good taste of the owner to elaborate, that he can be trusted to do it justice. Any intelligent nurseryman is a better judge of the trees and plants—of their fitness for the locality than the writer. The RURAL PRESS circulates through

and that increasing growth will change their features so much that foresight must be exercised to provide for abundant space. We would have groups of stately oaks and pines fringed with the varied outlines and colors of other trees, making harmony and beauty of that which might otherwise be stiff and formal.

The utmost neatness must prevail in the care of grounds. We do not mean that shrubs and trees are to be trimmed, leaving the stems bare; for nothing is more unnatural than the clipped monstrosities often seen about country places. Unless applied to a hedge or screen, the knife should never touch a tree. There are few more beautiful objects than a fir or cypress growing with long, dense branches resting almost on the ground. Many persons lacking good taste trim them up, possibly because they obstruct a view. It is time, then, to remove them.

There is, also, a barbarous custom of cutting out the top of noble forest trees, especially if they stand in the vicinity of the dwelling. The

ured pictures below. And we heard the murmur of a stream plashing, and saw glimpses of reflected beams shot from some of the broadest pools.

Having toiled to the last summit overlooking the plain, a lake of amber light, it seemed, stretched to the limits of the western horizon. Far below, fields and orchards lay revealed in the distant haze; their harsh features softened and glorified by the Beneficent Father, like He draws the veil of His charity over the imperfections of all His creatures.

### Separating Cream by Machinery.

For the last two years or more European inventors have been engaged in efforts to separate the cream from milk by mechanical means, instead of waiting for the butter globules to rise or the heavier menstrium to sink by the law of gravitation as has been the practice heretofore. The method has been to whirl the cream from

the skim milk by centrifugal motion, and we have laid away quite elaborate reports of the experiments made. We have not alluded to the subject before because the full practicability of the machine is not yet demonstrated. Such favorable results have, however, been attained that the system is worth a notice. A friend of the RURAL, Mr. George Hobler, of Hanford, Tulare county, sends us a clipping from the London *Weekly Times* in which an account is given of the success of the creaming machine at the late fair of the Royal Agricultural Society of Great Britain. At this fair there was an establishment known as the International Dairy, in which the machine was located. We quote from the *Times* the following paragraph:

In the course of the afternoon Lord Elcho and several members of the Council attended at the International Dairy to see at work the centrifugal machine for separating cream from milk. Thirty gallons of milk were run through the machine in 52 minutes last Wednesday in the presence of the judges, and the cream was put into a Holstein churn immediately. In less than an hour ten pounds three ounces of first rate butter was secured, and when cleared of water by the kneading machine, was awarded the first prize of £50. On Monday, on the repetition of the experiment, the judges decided to award to this machine, now the property of Mr. Hore, of Bishopsgate, agent for Mr. Ahlborn, of Hildesheim, a silver medal, the highest mark of distinction at the show. There is no doubt that this apparatus will revolutionize the cheese and butter trade, and render unnecessary all the recent inventions, more or less on the Swartz system, for creaming milk, since if cream can be separated from milk by running it through a machine like this, and butter produced in two hours from the milking of the cows, there is hardly a farmer who will not provide himself with such a boon when he can have it for £28, and when, owing to the complete way in which the cream is separated from the skim milk, the latter is found on analysis to retain no more than one-quarter per cent. of fatty substance.

If all these points can be established in the general use of the machine there can be no doubt of its value. It will do away with all the labor of setting and skimming and obviate the effects of heat in warm regions. The machine is certainly worth attention and investigation, but it will not do to pin faith to it until it is approved by wider practice and experience.

THE Alaska fisheries are inexhaustible, and a catch of from 4,000 to 7,000 salmon with one haul of the seine is of common occurrence. Two wealthy San Francisco firms started canneries in Alaska, and last year sent down between 7,000, and 8,000 cases, each containing four dozen one-pound cans.

TERRIBLE storm on the Atlantic coast.



Fig. 10. Ground Plan of Graceful Groups.



Fig. 12. Ground Plan for Picturesque.



Fig. 11. Perspective View of Same.



Fig. 13. Perspective View of Same.

a region of nearly perpetual summer, along a thousand miles of this coast, whose plants, that are hardy in the open air, are only known in the conservatory of colder latitudes, where, also, it is a visitor in many households.

We advise those who think of making improvements to purchase some standard work on this subject. Downing's is perhaps the most complete on landscape gardening. There is another publication called "Rural Affairs," sold by Luther Tucker & Son, Albany, N. Y. Price, \$1.50 per vol. It treats on all subjects pertaining to country life. There are very full chapters on landscape gardening, underdraining, building, planting, and a vast number of other subjects, all illustrated with good engravings, some of which the author has used to illustrate these papers.

A study of Nature will show the innumerable beauties of grouping. The closer we imitate her the nearer we approach perfection. Opportunities are at hand with examples which one who copies may always hope to equal, but may never surpass. So much is left to the imagination of the designer that he must see, as it were, the growth of his trees after a lapse of 10, 20, or 50 years, and wait for posterity to admire his work. He must consider that deciduous trees, at certain seasons, need intermingled evergreens to preserve masses of form and color;

writer has no words strong enough to reprove it, and would as soon shear the mane and tail of his favorite horse. The owner of the humblest cottage, who can boast of a group of trees, may be prouder of them than if he dwelt in a wooden palace, gaudy with new paint, and surrounded by unattractive fields as bare of trees as a brickyard.

One lovely night since beginning these papers, the writer descended the Coast range, and witnessed the transformation of commonplace, rugged scenery by the mellow light of the full moon, shining down on hill and valley. It was as if all things visible were re-created, with softer outlines and deeper shadows, to veil the wrinkles on the face of Nature. Every bend in the road revealed new beauties, as it wound through grand gorges and lonely mountain forests. Here, darkness walled in a deep canyon where the tops of pines rose into the light like the points of silver spears. There, a sweep of hillside, dim colored and strewn with rocks by day, rolled a smooth shaven lawn down to the roadside, with a vista ahead where our way passed under the arched limbs of live oaks, and the light opened up beyond them. There were somber forests clothing mountain steeples, where gray rocks touched by the pale light leaned from cliffs, looking like grotesque forms keeping watch and ward over the treas-



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

### Across the Sierras by a New Route.

EDITORS PRESS:—Since the discovery of the valuable mineral ledges of Lake district, Mono county, on the headwaters of Owens river, the question of the shortest practicable route to same from any railroad station has been one of the highest importance to all interested in the new mines. Learning in Fresno Flats of the new route by road and trail from that point to Mammoth City for pack animals, as well as the saddle train of John S. French, former engineer in constructing the Madera flume, your correspondent concluded to ride over, examine and report upon the route, its difficulties, altitudes, etc., the new mining districts on the upper San Joaquin, in Fresno county, but a few miles northwest of Mammoth City, and cross into Mono county for a few days to see the great Mammoth mine, of which so much is being said, as well as neighboring claims near Mammoth and Pine City. For this, Mr. French and his partner, Mr. Wellman, kindly offered me every facility.

#### To Measure Altitudes,

Mr. John Haley, Superintendent of Enterprise mine, did me the great favor to lend his aneroid barometer, a very accurate instrument of the kind, made by James How, 2 Foster Lane London. In his office at the mine it indicated regularly an altitude of 2,900 feet. Being well aware of the temporary effect of fluctuations in the state of the atmosphere on such instruments, I determined to carry a thermometer also, that the temperature of air might be recorded at time of observing altitudes. The accompanying table will give results in brief.

I hope these results will prove of some interest to your readers, though they must, of course, be looked upon merely as approximations, so far as distances and altitudes are concerned. Though but brief time could be taken for each observation, as the distance of some 60 miles had to be made in about 27 hours, yet there were several circumstances favorable to and confirmatory of their general accuracy. Hence, I venture to present them with some confidence that more elaborate observations and corrections by others in future will, in the main, confirm the heights here given.

#### These Favorable Circumstances

Are: 1. The good repute of the instrument used and its good condition at starting; 2. The fact that July 1st quite a severe thunderstorm purified the air, so that from the 4th to the 15th, the time during which the observations given in table and many others were made, the air was in a calm and uniform condition well suited to the use of the aneroid; 3. Comparisons at Mammoth with an American aneroid of Mr. S. C. Farnham, Superintendent of the Don Quixote and Monte Christo mines, gave about the same altitude, 9,500 feet, for Mill City, where the Mammoth mill is located; 4. Mr. Haley's aneroid made the altitude of the mouth of shaft of the Head Light claim—the southeastern extension of the Mammoth mine—11,000 feet, which Mr. Lilien, United States Deputy Surveyor, informed me corresponds well with other measurements of neighboring heights. The distances along the trail are made out from estimates by those best acquainted with the route and from personal observations based on time and speed of transit.

Table of Altitudes, Distances, Temperature and Time.

Total Distance, (Miles)	Distance Apart, (Miles)	STATIONS.	Altitude, (feet.)	Temp. (Fahr.)	Hour.
2	2	Fresno Flats.....	3,150	88°	2:30 P. M.
7	5	Salt Springs.....	3,250	90°	3 " "
16	9	Saw Mill.....	3,350	81°	4:30 " "
18	2	Lookout Point.....	7,200	58°	6:30 " "
18	2	Beasore Hill.....	8,350	50°	7:20 " "
19	1	Beasore Meadows.....	7,600	50°	8:10 " "
26	7	Chiquita Joaquin Ford.....	7,875	46°	6:50 A. M.
36	10	Granite Creek Ford.....	7,700	61°	9 " "
39	3	Top of W. N. Fork Hill.....	8,500	63°	10 " "
40	1	Bridge over North Fork.....	6,900	56°	10:30 " "
42	3	Enslin's Sheep Camp.....	8,600	70°	12:45 P. M.
48	6	Top of King Creek Hill.....	10,000	64°	2:30 " "
49	1	Ford of King Creek.....	8,500	63°	3 " "
53	4	Bridge over main San Joaquin.....	8,800	60°	4 " "
54	1	Potts Meadows.....	8,500	56°	4:20 " "
58	4	Pumice Stone Gap.....	10,350	53°	5:30 " "
59	1	Pine City.....	9,550	58°	Noon.
60	1	Mammoth City.....	9,700	52°	7 A. M.

#### The Saddle Train

Leaves Fresno Flats every Tuesday and Friday between 2 and 3 P. M., on arrival of the bi-weekly stage from Berenda station, arriving at Mammoth City between 5 and 6 P. M. next day. The same days a corresponding train leaves Mammoth at 5 A. M., reaching Fresno Flats about 10 A. M. Wednesdays and Saturdays. Both trains meet at a comfortable camp provided by Mr. French—otherwise dubbed the French hotel—the only night out in Beasore meadows, named after J. P. Beasore, a pioneer of these Fresno county Sierras. The general course of the route is slightly north of east. At the regular hour, July 4th, Mr. French started with three traveling companions, one of them, Mr. Whittaker, of New York, a shareholder in

the Mammoth, whose congeniality and experience as a traveler added much to your correspondent's enjoyment of the trip.

At the Madera flume company's mill the aneroid enabled me to detect an error in the altitude of the site as reported to me and given in your columns in a previous letter. As shown in accompanying table it is

5,350 Feet Above Sea Level,

Or over a mile, instead of 4,800, as before given me. Hence it is about 5,000 feet above Madera, and the fall in the flume, the first five miles from the mill, is over 2,000 feet. Other information since confirms this correction.

The trail is entered five or six miles beyond the mill at an elevation of 6,300 feet, and continues for, at least, 45 miles to Pine City. For this whole distance only three cabins are seen, and not even a single Indian rancheria. On the whole trip we saw no Indian, except at the two ends of the route. There is a cabin occupied by wood choppers three miles beyond the mill, one at Beasore meadows, used in summer by Hildreth's vaqueros looking after about 500 head of cattle he keeps there, and an unfinished one in Pott's meadow, five miles west of Pine City. Few lonelier routes of travel can be found in California.

#### Lookout Point

Commands a fine view of the San Joaquin plains on a clear day. Fresno dome towers up to a height of about 10,000 feet very near this part of the trail.

When we left Beasore meadows at 5 A. M., July 5th, the thermometer in the open air at 32°, and frost was forming. Temperature of spring water was 42°. At many points along the last day's ride, of 49 miles, the scenery is very varied and truly grand. The best views are from the ridge west of Granite creek, the top of West North Fork hill, the ascent to Pumice Stone gap, and from the notch of the gap in every direction. I shall attempt here no description of the really

#### Magnificent Panorama

Of canyons and domes, and snow-covered peaks and ridges, that is constantly unrolling itself before the eye of the delighted traveler. It must be seen to be fully appreciated. Tourists and students of nature will do well to try the route. From the table you will see that the descent in a mile, or less, before reaching the single-log bridge across the true North Fork of the San Joaquin, is 1,600 feet; the rise thence to top of King Creek hill is 3,100 feet; then in a mile to ford of King creek, you descend 1,500 feet; and from the single-log bridge across the main San Joaquin to the highest point in the gap before you descend to Mammoth City is over 2,000 feet. These facts speak for themselves, as regards the wild and rough nature of the route. Yet it is entirely safe, and enjoyed with a zest by one who is well and can stand a little "roughing it." You observe that after reaching the greatest altitude on the route, 10,350 feet, the descent to Pine and Mammoth City is not great, the former being 9,550 feet, and the latter 9,700 feet—about their average heights. The best of pine, fir and tamarack timber is found at altitudes from 9,000 to 10,000 feet. Hence the great timber belt through here is about 40 miles wide.

#### A Road by This Route

Is much discussed, and is necessarily of greatest importance to Minaret, North Fork, Lake and adjacent mining districts. The first 20 miles to the neighborhood of Granite creek could be made with comparatively light work and cost, say, perhaps, \$25,000. Ten miles of road along Summit ridge, from North Fork district to Mammoth City, can be done, the miners say, with little labor and expense. This leaves about 20 miles of road where much heavy grading will be required, and where scarcely less than \$75,000 or \$100,000 in work and money will be needed. To Madera, Berenda, or Borden, on the S. P. R. R., such road would be about 100 miles, and would greatly diminish time and cost of freight from San Francisco. At present freight from San Francisco is usually sent to Mohave, Kern county, and thence hauled in wagons through Owens River valley by the Cerro Gordo Freighting Company, at \$5 per 100. Let the numerous fine mines now developing in that region prove as good as they promise, such road becomes a necessity and will be made.

J. W. A. W.

Fresno Co., July 20th.

### A Fruit-Bearing Japanese Persimmon.

EDITORS PRESS:—"Have you ever seen any of the Japanese persimmons in bearing yet?" is a question often asked, and now I hasten to answer it, for the first time affirmatively. Yes; last Saturday, Mr. E. H. Smythe, at the Santa Rosa nursery, showed me this rare curiosity. It is one of the genuine imported kaki trees, now with abundance of small fruit. The tree, not a small switch-like shrub, but with stout, strong limbs and top much like a thrifty two-year-old apple tree. The wonder is not that it should bear the fruit, but that the fruit grows right from the new growth of wood, and none to be found on other parts of the tree, where the apple and other trees do their bearing. This fruit is yet small and must ripen late in the autumn. It is hoped that many others may be able to report similar success. Mr. Smythe has a very neat and interesting tree farm of nine acres, and only requires a little time to show what intelligence with industry can do on a small piece of land. B. W. C.

Santa Rosa, August 11th, 1879.

### Sonoma County Mechanical Notes.

EDITORS PRESS:—Sonoma county takes some pride and satisfaction in ranking among the first in its size and acreage of good farming, fruit and vineyard lands, with a liberal allowance of hills suited only for grazing. Like Napa county, she claims to be one that never fails of a grain crop. The harvesting, now in full blast, promises a good average crop, although some of the late sowing on the adobe has proved very light. There are many self-raking harvesters used here, and the binding done largely by Chinese contractors. There are a few self-binding machines in use, giving so far excellent satisfaction, and were it not for their cost, they would soon become of general use.

For years there has been a gradual increase of weeds and various foul seeds that are harvested with the grain. This year cheat and wild oats in many parts prevail, so much as to make wheat, as it comes from the threshing-machine separator, unfit for the market. But Sonoma county has a full supply of skilled mechanics ready to remedy any difficulty by contriving some suitable

#### Mechanical Inventions.

A thorough grain separator was needed and several have been invented, with various degrees of success. Not to detract from the merit of any other competing separators, I would say that the "Automatic Separator," by J. H. Lyon, blacksmith of Santa Rosa, is now making very successful experimental work, to carefully note any changes that could be advantageously made before completing his model for patent office. The separator is run by a small engine. The sacks of grain are emptied into the hopper, fanned and screened, and returned clean merchantable or choice wheat in one sack, and a heterogeneous mass of mixed seeds in another sack. The machine has a capacity of 40 tons per day, and is in good demand, charging only \$1 per ton. The importance of this operation is easily estimated by a comparison of the prices of the different grades of wheat. The broken and dwarfed wheat, cheat and oats, when ground together, is liked well as a horse feed. The separator is a large, neat machine, mounted on wheels, and is almost instantly ready to travel when the hopper is emptied of grain.

John Henry also has three large seed separators, or grain purifiers, running—one at Santa Rosa, Healdsburg and Petaluma, doing satisfactory work.

But to ensure an ample supply of grain next year, many other mechanics are working on plows and cultivators. Holly & Magoon, of Stony Point, and Holly, of Lakeville, are anticipating the fall demand for their various patent iron cultivators, and are manufacturing them lively.

The full crop of fruit and dull market to receive it stimulates the Petaluma foundry to give its timely assistance in a commodious home

#### Fruit Drier,

Made of any desired capacity. Sonoma City is not lacking in inventive genius, and would not pardon the offense should I neglect to mention Robt. B. Lyon's cork-cutting machine. Though not larger than an apple parer, it is capable of cutting almost an infinite number of corks, and of any size, length, and bevel or taper. Made especially for cutting the patent softened wood stoppers, and will be used by that company in San Francisco. Lyon's genius is working mostly on plows and farming machinery. His unpatented tire cooler is an excellent mechanism. It lowers the wheel, as it is fastened on the frame to receive the tire, so that the whole tire is instantly submerged, thus preventing injury to the wood and giving equal shrinkage on the tire, while the wheel is held true in its place. His narrow brick enclosure for heating his tires economically and safely would be worth the imitation of others, who regard their neighbors' safety.

#### End Shake.

Geo. Shuler, blacksmith at Windsor, Sonoma county, has added another valuable and successful improvement to the fanning mill shoe, or end shake, of the grain separator. His simple device gives a peculiar undulatory motion that can be regulated as desired and is noiseless. It claims the advantage of not clogging up, and will pass nearly double the amount of grain through the separator that can be passed through with the best old-style shoe. It has been tested on different threshers and is gaining a big record. Mr. Shuler has applied for a patent through Dewey & Co. B. W. C.

"MANY MICKLES MAKE A MUCKLE."—According to the calculation of Mr. G. T. C. Bartley, an ounce of bread wasted daily in each household in England and Wales is equal to 25,000,000 quarter loaves, the produce of 30,000 acres of wheat, and enough to feed annually 100,000 people. An ounce of meat wasted is equal to 300,000 sheep.

KEROSENE FOR SOFTENING LEATHER.—It is said that kerosene will soften boots or shoes which have been hardened by water, and render them as pliable as when new; but we fear that it will injure the leather. Castor-oil, long ago commended in the *Journal*, is doubtless better. —Boston Journal of Chemistry.

## FLORICULTURE.

### The Conservatory at Golden Gate Park.

The report of the Golden Gate Park Commissioners, which has lately been filed with the city Supervisors, contains interesting descriptions of the splendid conservatories and greenhouses lately constructed, and which are believed to be among the best of their kind in the United States. The report says: The most important improvement during the year was the construction of the conservatories, a portion of the engraved glass and framework of which was presented to the park by 26 gentlemen of this city. This structure is favorably located on a commanding site between the main drive and the North Bridge road. The building is about 250 feet in length, Oriental in style, graceful in outlines and highly ornamental. The main entrance or reception room is 26 feet square, and opens into a rotunda or palm house, a circular room about 50 feet in diameter, and about the same number of feet in height. An octagonal space in the center is prepared for palms, ferns, cycas, pandanus and other varieties of rare and tropical plants. A terra cotta fountain in constant play relieves the dryness of the atmosphere.

On the right side of the rotunda is the Orchid room, 35x50 feet. Owing to the brief space intervening since the completion of the building, as well as a lack of funds, this department is not thoroughly stocked, but through the liberality of Louis B. Parrott, a fair beginning has been made, comprising some handsome orchids from Central America.

The Orchid room on the extreme right of the building is set apart for the cultivation of larger and rarer aquatic plants. Some fine specimens of the *Victoria Regia* (the seeds were a gift from H. B. M. Consul, Wm. Lane Booker,) several *Nelumbiums* and other members of the aquatic family, are approaching maturity.

On the left of the main building is a wing similar in size and shape to the Orchid house. This is designed for flowering and ornamental foliage plants. The Green house, adjoining which corresponds in general features with the aquatic department, is intended for the growth of hard-wooded plants, such as japonicas, azaleas, etc. In the rear part of the building are two propagating pits, 50 feet long and 12 feet wide, a growing house, 75 feet long and 25 feet wide, and a potting room, 30x30 feet. A heating apparatus connected with all the chambers is beneath the potting room. A system of ventilation enables the keeper to preserve an equitable temperature at all times.

The conservatories cover an area of 15,000 feet. Thirty-five tons of glass and over three tons of putty were used in construction, and it is one of the largest and most admirably-appointed structures of its kind in the United States. The donations of plants and shrubs have been liberal, but the building is so extensive that some time must elapse before it can be fully stocked, and the Commissioners must in a great measure rely upon the liberality of our citizens, who, no doubt, will respond freely when the fact is made known that there is no special provision for the expense of stocking these conservatories.

### The Passion Flowers.

We have already several species of *Passiflora* growing in this State, in and out of the greenhouses. We find in the London *Farmer*, the following notes on the genus, but we have species not therein enumerated, and there are species described by this writer which we have never seen in this State. Therefore we quote:

The Passion flower will always remain a popular plant. Its flowers are original, interesting and pleasing, and its fruits singular. Our earlier history regarding its growth in Britain, shows that "Mistress Tugby" has it "in good plenty growing" at Westminster, and this early in the seventeenth century.

Gerarde informs us that the Spaniards call it "Granadilla," and that it is the same which the Virginians know as "Maracoe." He says also that the "Spanish Friars" for some "imaginary" resemblances in the flower, first called it *Flos Passionis*, or the Passion flower. At an early date the name *Clematis trifoliata*, had also been given to it. In regard to the seeds, the same author adds that the Indians open the fruit as they do eggs, "and the liquor is sucked off with great delight." Since that day the plant has received very extended cultivation, and numerous extremely elegant species have been added to the list, amongst which is the large-fruited species named *Passiflora macrocarpa*, the fruit of which is said to average from six to seven pounds weight each. Then we have *P. Buonapartei*, and its fitting rival *P. alata*, the very pretty *P. kermesina*, with its rich crimson flowers, so seldom seen; *P. quadrangularis*, which, along with the edulis, fruits freely and of edible import; *P. princeps*, the free-bloomer; *P. bellii*, so fitting for a greenhouse; with *P. carulea*, etc.—the latter being the hardy out-of-doors example, of which *P. carulea Newmanii* is so excellent an improvement.

Though it is not generally known, there is a so-called white-flower variety, the *Passiflora alba*, which grows wild in the Brazils, and which probably it would be well to import if it is not at this time in the country. We remind travelers and botanists that it is one well worthy of attainment and culture. It has resemblance to all others, as will be seen in color, as noted.



## THE FIELD.

## The Sugar Industry.

EDITORS PRESS:—But few countries can be pointed out which are sugar countries *par excellence*. One of these very few is undoubtedly California, and though it has to be admitted the efforts made in the direction of the sugar industry during the last 10 years have led to but very indifferent practical results, it would have been surprising had it been otherwise. All the difficulties so far encountered have originated through the parties who engaged, or tried to engage, in the sugar industry; no difficulties whatever have been met with in climate, soil or other local obstacles. When I call California a sugar country *par excellence* I refer especially to the advantage, met with nowhere else to derive this commodity from more than one source.

The main and almost exclusive sources from which sugar is manufactured the world over is the sugar beet and the sugar cane. Last year for the first time both of these plants shared the honors evenly. Until then the cane had predominated, though the sugar beet has steadily gained ever since beet sugar made its appearance on the world's market.

The beet-sugar works in California during the last 10 years have had uphill business. One-half of the teams engaged in this industry being generally hitched behind the wagon and pulling in the wrong direction, has caused this slow progress, if progress at all. California can produce as good sugar beets as any country in the world, which the following analysis will show:

Beet planted April 10th; pulled August 11th; time of growth, 4 months; weight of beet, 2½ pounds; specific gravity of juice in the beet, 14.5° Brix; sugar in the same, 13.4%; other solid matter in juice otherwise than sugar, 1.10%; quotient of purity, 92.4%, which is purer than most of the ordinary sugar we receive from the Sandwich Islands.

But it is not the sugar beet I intend to speak of in this communication; it is the sugar cane, as important a plant for California as any, of which I wish to speak.

## The Sugar Cane.

The impression generally prevails that the sugar cane being, strictly speaking, a tropical plant will only grow in a tropical climate, but a semi-tropical climate is in reality fully as well adapted for the growth of sugar cane. And as the payment for our sugars draws away from the United States annually every dollar's worth of precious metal which all our mines produce, it is of the utmost importance to the American nation to create a home supply from whatever source this can be done. No country resembles California as much in soil and climate as a large part of Peru west of the Cordilleras, or the Pacific slope. Large tracts of sugar cane can be seen growing alongside of onion and potato fields and of strawberry patches. It is a peculiar sight to the foreigner in Peru to see peavines entwine the sugar cane, to see apple trees grow alongside of oranges, or to see a cabbage field have a fence of bananas. But by far the largest agricultural product in Peru is the sugar cane. Twelve years ago sugar was imported in Peru even from California, but for the last five years a regular line of steamers plies up and down the coast collecting the sugar and delivering the same to another line which makes the trips between Callao and Liverpool. In the Valley of the Chicama alone are 39 sugar plantations, worth from \$60,000,000 to \$70,000,000. The quantity of sugar cane raised in Peru is limited almost exclusively by the quantity of water at disposal for irrigation. As there are so many points of similarity between

## Peru and California,

It may not be without interest to give a short description of the sugar industry in Peru. The temperature at noon in summer seldom reaches as high as 90°, in winter of course less, though it never freezes. The rain line begins at Tumbes about six degrees south of the equator, from where almost the whole length of Peru for nearly 15 degrees latitude it never rains, neither in summer nor winter. The sugar cane grows as well high up in the mountains as close on the seashore.

The cultivation of the sugar cane is about as follows: The flat land between the mountains or canyons is grubbed in order to get rid of brush and scrub trees which abound in this bottom land, the mountains and hills being perfectly barren and most dreary to behold. When the worst has been cleared away, steam plows generally make their appearance and plow crosswise deeper every time, alternated with the harrows, which enables the collection of all the roots into piles in order to be burned. When the soil has been in this way perfectly pulverized to the depth of 30 inches, ditches are placed around the fields for irrigation. This done the fields are furrowed deeply about three feet apart, the furrows being at least one foot deep. In these furrows short ends of seed cane are placed (old sugar planters taking generally the top part of the cane which goes to the mill for planting) and without being covered, water is put on the fields. In about 10 days the joints of the cane begin to sprout and so do the weeds, when the water is withdrawn. A couple of weeks after this cultivation begins,

the soil is by degrees plowed on to the cane sprouts exactly as corn is plowed or cultivated, and if the soil is rich enough the young cane is high enough after three months to take care of itself with the exception of irrigation.

After 18 months' growth the sugar cane is ready to be cut, though most cane which comes to the sugar-mills in Peru is two years old. I have worked cane almost three years old, but only in exceptional cases. The sugar cane when two years old, and in its prime is 14 to 15 feet high, often running flat on the ground for six feet, bent down by its own weight, and then it starts up again for seven to eight feet. It is a great advantage that sugar cane raised by irrigation need not be cut at any exact time, which has proved the salvation of more than one planter, who could not get his mill ready in time.

The specific gravity of juice of cane so raised is 9 to 11 degrees Beaume, and will yield about 1½ pounds of sugar to the gallon, while the quantity of juice obtained per ton of cane is about 1,100 pounds, or about 240 pounds of sugar per ton of good cane.

When the cane is cut two joints from the ground, the tops are cut also and left on the field. As soon as these leaves and tops are dry they are burned on the field, the rubbish cleared off, water let on, and as soon as the stubble sprouts cultivation begins again. The number of crops which can be taken from one planting varies with every country, in fact, every plantation, how many they would be in California is impossible to tell; in Louisiana they are not over three, while in Cuba they are from 8 to 12.

Both the sugar cane and sugar beet have their relative advantages and disadvantages. Sugar cane can be raised on a small scale and turned into sugar with profit, which beets cannot. Sugar cane can be manufactured into sugar even on a large scale with very inferior, and less machinery than sugar beets, while on the other hand the preparation of fields of sugar cane requires considerable longer time than sugar beet fields. One thing though is indisputable, there is plenty of land in California which will produce as good sugar cane, and as abundant as either Peru or the Sandwich Islands, and if some of our enterprising men would bear the old proverb in mind: "Never search in the distance for what can be had as well near by," and if these men invested their millions in California instead of building up a foreign country with them, they would give employment to thousands of our idle men, both farmers and mechanics, they would make as much money as they can elsewhere, and we would hear considerable less of hard times. A Pennsylvania country paper says: If half the money spent by the Government to help the cod-fish fishery was invested to start the sugar industry, it would soon be in a flourishing condition. But what could our aristocracy do without cod-fish? ERNEST TH. GENNETT. Alvarado, Cal.

## THE GARDEN.

## Substitutes for Glass Frames.

The *Irish Farmers' Gazette* prints the following: "If gardeners and others will give a trial to the following plan, they will find it less than one-fourth the expense of glass frames, and much more useful: Take white calico of a close texture, stretch it, and nail it on frames of any size you wish; mix two ounces of lime water, four ounces of linseed oil, one ounce of white of eggs separately, two ounces of yolk of eggs; mix the lime and oil with a very gentle heat; beat the eggs separately and mix with the former. Spread the mixture with a paintbrush on the cloth, allowing each coat to dry before applying another, until they become waterproof. The following are some of the advantages these shades possess over glass: 1. The cost being hardly one-fourth. 2. Repairs are cheaply and easily made. 3. They are light; they do not require watering, no matter how intense the heat of the sun, the plants are never struck down, faded, or checked in growth; neither do they grow up long, sickly and weakly, as they do under glass, and still there is abundance of light. The heat entirely arises from below, and is equable and temperate, which is a great object. The vapor arises from the manure and earth, and is condensed by the cool air passing under the surface of the shade, and hangs in drops upon the inside, therefore the plants do not require so frequent watering. If the frames or stretchers are made large they should be intersected with crossbars about one foot square to support the cloth. These frames are also well adapted for bringing forward flowers in season. For forcing melons, tomatoes, vegetables, etc., this prepared cloth is especially adapted, as it can be attached to boxes of any size, and cut to fit them. Little, though square, boxes of the proper size and height, covered with this prepared cloth, can be placed over the beds in which roots and seeds are planted, and the plants allowed to stand without transplanting until all danger of frost is over, when the boxes may be taken off, and placed carefully away for another season."

AN EDIBLE LEAVED PLANT.—At a recent meeting of the Queensland Acclimatization Society, the chairman read the following extract, relating to a new economic plant, which he had

translated from *La Belgique Horticole*: "There grows in the province of Rio Doce, Brazil, a Bromeliad which furnishes an abundance of excellent fecula. This food substance accumulates in the leaves, and it is only necessary to bruise them to obtain it in abundance. The plant, which is provided with a stem, attains large dimensions, and the leaves are very thorny. This plant saved the lives of thousands of Indians during the famine which literally desolated certain provinces of Brazil. We have not seen the flowers, but, judging from the seeds, the plant may belong to the species *Puya* or, perhaps, *Encholirion*. We have received seeds, and provisionally designate the plant by the name of *Puya edulis*. The chairman stated that steps had already been taken to secure this plant for Queensland, and although it might be a work of time, he had no doubt of eventual success."

FRUITS AND FLOWERS.—How peculiar and beautiful must be the English system of growths in garden walls! We read in a London exchange, the *Farmer*, of the following arrangements: The first was very good, both in effect and crops. Morello cherries and Belle Angevine pears were planted alternately in the bays of the wall, and at each pier a single cane of Sweetwater grape was trained to the top of the wall and along a wire from pier to pier. If anything the site was rather too hot for cherries, but good early crops were had. Another good arrangement was Calville Blanche apple in the bays, and Perpetual and China roses alternately on the piers. On a warm wall in the same place was a fine peach, fan-trained, the whole of the space not occupied by the peach being covered with Marechal Niel and Gloire de Dijon roses, the border being covered with Chervil at the time we saw it, forming a very pretty contrast. In one place we saw gooseberries and apricots on the wall to a certain height, and over these a tangled mass of Marechal Niel rose, passion flower and wistaria were trained along a wire trellis, and while protecting each other, they also afforded shelter to the trees beneath them.

## THE APIARY.

## Ventura County Beekeepers' Association.

EDITORS PRESS:—The last meeting of our association was called to order by Vice-President Kenney. The Secretary being absent, R. Touchton was elected to serve *pro tem*. The election of officers being in order, the association proceeded with the following result: President, Cyrus Kenney; Vice-President, J. Keene; Secretary, R. Touchton; Corresponding Secretary, J. G. Corey. Messrs. Wilkins, Grimes and Strathearn were elected as a "business committee" to work in the interests of the beekeepers and the association.

Reports of committees being next in order, Mr. Touchton was called to report on "foul brood," but being unable to report anything new since last meeting, he requested all beekeepers present who had the disease in their apiary to report the same to the association. Mr. Grimes reported 25% of his apiary infected. He said the disease was in the apiary when he bought it, but did not discover it until afterwards. He said the disease originated from honey fed during the dry season. He is using rigid means to exterminate it. His mode of operation was similar to that of Corey and Touchton, so successfully practiced last year, which is called the "starvation" plan. The bees are shook into empty hives and allowed to remain from 24 to 48 hours without food, then they are put into clean hives and given healthy combs and honey. The old hives are washed with a strong solution of lye and the old combs melted into wax or burned up.

Mr. Strathearn reported 10% of his apiary infected; he bought bees from the same apiary that Mr. Grimes got his from. His mode of treatment was the same, except he was washing the old combs with lye. He said it was an experiment, and would report the result to the next meeting. Mr. Touchton thought it best to melt the combs into wax and have it worked into comb foundation. The heat necessary to melt the combs would kill all germs of the disease and render the wax perfectly healthy. Other committees being absent, Mr. Keene moved that they be retained to report at the next meeting, carried.

Miscellaneous subjects were next taken up and discussed. Comb foundation was highly recommended by Messrs. Gallup, Keene and others. Mr. Kenney thought it a great help to the cure of foul brood where healthy combs were not at hand, saving the bees much valuable time and honey.

Marketing honey was a subject full of interest to all, and was freely discussed. Many theories were advanced for the protection of the honey trade. Mr. Higgins said that the fruit of Geo. G. Briggs, of Solano county, was sold in San Francisco without sampling, the brand being a sufficient guarantee of its quality. and thought that honey should be graded and branded in a similar way so that the purchaser could tell by the brand what he was buying without sampling. Mr. Konney thought it too complicated for

every beekeeper to sample and brand his own honey. He suggested that the beekeepers of Ventura county have an agent in San Francisco to do the grading and attend to the sale of the honey.

Mr. Strathearn said that California needed a bee journal to enlighten the people on the subject of bees and to aid them in the sale of their honey. Mr. Paccard thought the PACIFIC RURAL PRESS a good medium through which the beekeepers could exchange ideas and bring their honey favorably before the public. He said our honey was always quoted as *strained* honey, which conveyed an erroneous idea, *extracted*, being a more appropriate name, he suggested that honey dealers be induced to use it in their quotations instead of *strained*.

The convention concurred in the opinion that there would be a loss of about one-fourth of all the bees in the county unless fed. Those contemplating feeding were warned against feeding honey not *positively* known to be healthy, unless it first be *boiled* and *skimmed* to kill all the germs of foul brood that it might contain.

R. Touchton was reappointed as a committee on foul brood to visit all the apiaries in the county and report the extent of the disease at the next convention, after which the convention adjourned to meet at Santa Paula, November 1st.

R. TOUCHTON, Secretary *pro tem*.

Santa Paula, Cal.

## Plant for the Bees.

EDITORS PRESS:—The inquiries made of late in regard to the best plants to cultivate for bee pasture, indicate that, sooner or later, there is to be a revolution in the business of beekeeping in California, to a certain extent analogous to that which has taken place in cattle raising within the last 25 years.

A few years ago it was found that the indigenous plants of our southern counties furnished fine bee pasture. The unoccupied area seemed so vast that the danger of overstocking it was not at first apparent. Now, however, our apiarists are well aware of the fact that a given amount of pasture cannot suffice for more than a given number of bees, even under favorable circumstances. When this pasture has been curtailed in its produce by drouth, close cropping by cattle or sheep, or run over by fire, the result is, of course, the cutting off of profits, if not the destruction of the bees.

Thus a considerable portion of the State is, at present, overstocked, for such seasons as we must often expect to have. This may or may not result in a reduction for a time in the number of bees kept, but it is not likely that the business, as a whole, has by any means reached its maximum. As population increases the danger of field fires, of wide extent, decreases, and thus one cause for loss is removed. When true home building begins honey-bearing, ornamental flowers, field crops and trees are rapidly multiplied so that the bee pasture, which can be relied upon, may be greatly increased. A little thought and persistent effort will enable almost every cultivator of the soil to find plants adapted to his locality which will pay him in other ways, and, at the same time, produce honey.

## Honey-Bearing Trees.

Certain trees are of especial value in this line. The locust, famed for timber, and whose smooth leaves specially fit it for shade and ornament along our dusty roadsides, is one of the best honey producers. The maples are also favorites of the bees, and profuse in bloom. The various kinds of willows could be used to advantage in stopping the washing away of soil, for basket work, fire wood, some kinds for timber, and all for furnishing honey and pollen. Our most common fruit trees, which are of the rose family, apples, pears, plums, cherries, etc., can also exchange good offices with the bees, as the carrying of pollen from flower to flower by the busy workers helps to ensure their fertility.

## Mignonette.

While in Cajon valley, San Diego county, in the very dry winter of 1876-7, I noticed a little clump of mignonette in the hard, foot-worn soil between the porch and the gate. It had apparently been sown by accident, received no cultivation and no water, and was frequently trodden upon. In spite of hardships, it persistently kept its color, and sent up spikes of blossoms, which were daily visited by the bees. I was reminded of a story of a philanthropist in Europe who lived in a barren and poverty-stricken region, and who wished to do something for the relief of the inhabitants. He therefore made a practice of carrying with him the seed of mignonette, and other honey-bearing flowers, and sowed them along the roadsides and waste places. At the same time he advocated bee-keeping. The result was what he hoped for, a general improvement in the financial condition of the country.

While writing this I have stopped to take a turn through a garden containing a considerable variety of flowers, to see what the bees were working at. Everything seemed neglected, except the mignonette. On this the bees were very busy.

This then appears to be one of the best of bee plants, battling successfully with drouth and neglect, but grateful for moisture and cultivation, and rich in fine honey.

## Buckwheat.

One of the plants almost always associated

[CONTINUED ON PAGE 122.]



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### The Grange in New Hampshire.

One hundred and twenty pages in the last report of the New Hampshire Board of Agriculture, that for 1878, are devoted to reports from the subordinate Granges of the Order, and to essays and papers read at their meetings. In August last the State Grange held a three days' convention at Weirs, which was very largely attended, not only by members of the Order, but by farmers generally, at which time the Secretary of the State Board, Mr. J. O. Adams, invited the officers of each Grange in the State to present a condensed report of its doings with some essays, for publication in the annual volume. It is from the material thus furnished that this concluding portion of Mr. Adams' readable report has been prepared.

There are in the State 93 subordinate Granges, and one State Grange, the Master of the last named being D. T. Chase, of Claremont, and the Secretary C. C. Shaw, of Milford. Quite full reports of discussions at 31 meetings are given, in some cases with the essays read, and with a more or less full synopsis of the remarks of the several speakers. In some instances the reports have been furnished by lady members, and in others lady members took part in the discussions; notably on subjects in which they might be presumed to take a greater interest, as in those pertaining to the dairy, farm work, etc. Among the subjects of essays and discussions were the following: "Farm Machinery and Implements," by three Granges; "Drainage," "Water for Farm Buildings," "Renovation of Pastures," by Granges; "Domestic Animals," "Sheep Husbandry," "Devon Cattle," "The Morgan Horse," "Feeding Animals," "The Dairy," three essays; "Indian Corn," discussions at four Granges; "Grass Manures," two discussions; "Maple Sugar," "Does Farming Pay?" "Apples," "The Weather," "Education as Related to Farming," "Fruit Culture." These are given as indicating to some degree the range of thought among the members of this Order in New Hampshire, and as affording some suggestions for subjects for other Granges and clubs to discuss the coming season. Much more can be said upon each one of these topics than has been said by the New Hampshire Patrons, and upon most of them farmers everywhere have experience and opinions that would be useful to others.—*American Cultivator*.

### Grange Re-unions.

Dr. John Strentzel, W. M. of Alhambra Grange, has issued the following circular: You are aware, through the agency of the *California Patron*, of the proposed convention of Grangers, from the counties of Sacramento, San Joaquin, Alameda, Solano, Santa Clara, Napa and Contra Costa, to be held in Martinez, on the 22d and 23d of August, to deliberate upon means conducive to "the good of the Order." The proposition was duly considered and approved by the Alhambra Grange at their regular meeting on July 19th. The Alhambra Grange offers all the required aid for making the sojourn of the delegates pleasant and harmonious, and have appointed Bros. Tom Griffin, James Kelley and Henry Raap to act as a Reception Committee, and all the sisters to grace the harvest feast. In communicating the resolution of the Alhambra Grange, I cannot omit to call your attention to the facilities offered by railroad and waterways, making Martinez a most acceptable point by converging travel routes, besides being a central location for the establishment of grain depots for the bay and river counties, for which both shores of the Carquinez straits are by nature constituted and best adapted for the trade, thus establishing a market for their produce nearer home, with superior advantage for transacting said business. All Patrons of Husbandry are most heartily invited to attend.

### Stockton Grange.

Brother Grattan, Master of Stockton Grange, dropped in on us yesterday and said the Grangers of San Joaquin county, not to be out-done by Grangers in other sections, had concluded to have a grand re-union of Grangers, and the indispensable concomitant of all Grange sociables, a harvest feast, to take place at Stockton on Friday and Saturday, the 12th and 13th days of September, 1879. They extend a cordial invitation and a hearty welcome to all Grangers who may attend. We hope these re-unions may become more frequent, and let every Granger make it a point to attend. It will be in order now for other Grange centers to call meetings, not to listen to set speeches, but rather to draw from the storehouse of knowledge that every brother and sister of the Order possesses. The best meetings we have ever had in the State, was that portion of our annual sessions which were devoted to "an old-fashioned love-feast," when every member was called upon to contribute a short speech on any subject he chose to speak upon, for the entertainment of all. Speak up, Sacramento, Sutter, Colusa, Yolo, Solano, Sonoma, Santa Clara counties, and let us know when you, too, will have your re-union.—*Patron*

WHAT IS THE GRANGE DOING?—It is seriously inquired by some doubtful Patrons of the Order, "Is it really doing any good?" We challenge them to investigate closely the condition of any neighborhood where a live Grange has been in operation for five years. They will find more thrift, enterprise and public spirit than when the Order was first introduced there. The men and women have been relieved of much of their awkward embarrassments in society and in business. They learn how to communicate their thoughts orally and in writing, and are frequently astonished at their ability to discuss questions or write essays. Their minds are awakened for more information—they felt themselves aspiring after improvements in farming, in stock—and a higher standard of intelligence for themselves and their children. In such neighborhoods thrift has its usual signs. The houses are painted. Groves and shade trees spring up. Ornamental shrubs and flowers adorn their lawns. Their sons and daughters learn that there is a higher destiny which they can occupy by only deserving it. Their stock is always the best and brings the highest price. Their goods go to market in better condition. The neighboring tradesmen soon learn that the farmers of that neighborhood pay strict regard to their financial obligations, and, as a consequence, their credit is good and they can get accommodation at the lowest rates. These, and hundreds of other signs, are plainly hung out where a live and energetic Grange has existed for five years. And for the truth of this we challenge the closest investigation.—*Iowa Grange Visitor*.

BUSINESS ASSOCIATION.—Persons, whose stock in the Grangers' Business Association was sold on August 14th, 1879, for delinquent assessment, can redeem the same at any time prior to October 15th, 1879. By order of the Board of Directors. Amos Adams, Secretary.

### The Causes of Hard Times.—No. 2.

EDITORS PRESS:—In article No. 1 it was asserted that farming in California will not pay over 6% per annum on investments. It does not average that. Yet the agriculturists of the State have been paying from 10% to 36%. I made a calculation—based on the supposition that the average farmer has for the last ten years been paying 1½% interest on a debt of \$1,500. This excessive rate has obliged him to pay on that \$1,500 debt, in the course of ten years, \$4,560 interest, or \$3,375 more than if the rate had been 6%. And a neighborhood of 100 farmers would have paid to the usurers—in excessive interest no less than \$337,500, and a county with 1,000 farmers—no less than \$3,375,000! Can any country stand such a strain as that? Is it any wonder that the bankers and money loaners stand firm in this crisis, and the farmers are all breaking down? It is a miracle that we have stood up so long.

These figures are so startling that some may question the average debt being so large as \$1,500 to the farmer, or the average interest as high as 1½% a month. To accommodate such doubters let me make another supposition. I will assume that the farmers have averaged a debt of \$1,000, and the rate of interest they they have paid has been but 1% a month. In this case each farmer will have paid in the course of 10 years, in interest on that \$1,000, \$2,156. But had the rate been 6% he would have paid \$792. The excessive interest paid on that \$1,000 would be \$1,364, and a neighborhood of 100 farmers would have paid out in 10 years excessive interest to the amount of \$136,400! and a county of 1,000 farmers, \$1,366,000, and the 60,000 farmers of the whole State, \$81,840,000. Such a sum as this restored to the farmers of the State would wipe out their debts, improve their houses and furnish employment to 20,000 idle and almost desperate men.

Let the farmers take bome these facts, and consider what vast evil the demon of excessive interest has wrought, and what else it is likely to do in the near future if not arrested.

In the Eastern States the majority of loans to farmers are at 6%. In some States it is 7%; in others as high as 10%. Where the latter has been the rate, these thousands of farmers have been broken up and sold out by the Sheriff; because no farmer can stand that rate. This is well known to all shrewd capitalists. But as a rule, they care as little about driving a man from his home, as a plowman does for breaking up a mouse-nest!

Nor is this the only way in which excessive interest oppresses the farmer. The merchant to carry on his business is obliged to pay this exorbitant interest on the capital he borrows, and on the goods purchased after 60 or 90 days. How can he do this? Only by marking up his goods and selling at a price so high that he can pay this interest. The farmer has in the end to pay the merchant's interest too. If the merchant had but 6% to pay on his capital borrowed, and on goods bought on time, he could sell his goods at a much lower figure.

Then there is the seller of agricultural implements, wagons, plows, headers, mowers, threshing machines, etc. All these must also be marked up so that the seller can meet the demands of the excessive interest he has to pay;

and his interest, too, the purchaser (the farmer) in the end has to pay.

Then comes the lumber-man with his materials for barns, houses, fences, granaries, and what not. These things the farmer must have. But the lumber dealer borrows half the money necessary to carry on his business—borrows at 1½% a month. So be, too, marks up his goods, and the farmer has to pay a rate which will enable him to meet that excessive interest.

I forbear further detail in illustration of the enormous burden laid upon the California farmers, through the diabolical rates of interest, which custom and law have allowed capitalists to ask. Suffice it to say, the vast sums the farmers have paid during the last decade, in excess of 6% has well nigh broken them up wholly, and transferred all their earnings to the coffers of the usurers, and the deeds of their lands also.

As I write, a San Francisco paper announces a combination of capitalists in San Francisco, to make a corner in bags or grain sacks. That the ring have got control of 15,000,000 sacks, and at once raised the price from 8 to 11 cents, and contemplate raising them to 15 cents! Let us suppose the farmers will need 20,000,000 sacks for their wheat, barley, flax, beans, corn, etc., and that this ring compels them to pay the difference between 8 and 11 cents; three cents per sack. In that case the ring will wring out of our broken-down farmers no less than \$600,000, and the 80,000 farmers in the State will pay that accursed ring \$7.50 per man! This game they have played nearly every year for the last 10. Can't we under the new Constitution break up such combinations? These combinations of capital against the laboring classes, are heartless, cruel, and at war with the prosperity and tranquility of the State, and if not arrested may yet provoke civil war, and wreck the State.

Therefore, State law should suppress them, and punish those who engage in them the same as gambling and other crimes against society.

Was there ever a State so cursed by banditti of selfishness and cruel capitalists, as California? Refusing to pay taxes. Swindling the Government that protects them. Forging land-grant papers! Exacting horrid rates of interest! Concocting rings to rob industry of its last penny! Well did Virgil cry: "O sacra fane auri!" Oh, accused thirst for gold!

S. BRISTOL.  
San Buenaventura, Cal.

### Farmer's Speeches are not "Squawks."

EDITORS PRESS:—At the close of a well-devised and creditably executed programme of the Literary Society of Florence at its last regular meeting, there was an informal discussion of the subject of attending the meeting of the Horticultural Society held in the pavilion in the city of Los Angeles, and of participating in the discussion of such questions as from time to time are set down for argument there. There seemed to be no difference of opinion on the general proposition that farmers ought to attend those meetings, and, with an exception or two, all seemed to approve of a participation in the discussion by farmers. The special importance of the subject entered for discussion at the next meeting, at 11 A. M. of the second Saturday of August, was considered and admitted, and is as follows: The relative merits of small and large farming. The only criticism applicable to the subject as a question for the next meeting, or any one meeting, is its great scope and importance when coupled with the restriction to a single discussion. It was thought that principles are involved in the question that, if brought out, would edify everyone, and would, when presented, go directly to the highest place in the estimation of everyone as the conditions of real progress. It was thought that nowhere, as in California, are the relative merits of small and large farming so worthy of a rigorous scrutiny. It was thought that, while farmers are primarily interested in the exposition of the miniature universe of wholesome and much needed truth that lies more than half concealed in this complex subject of double aspect, the entire commonwealth of California is deeply interested both in its rural and urban constituent parts. One speaker, once a farmer but now a mechanic, said let us go up to the pavilion on the second Saturday of August and have a farmers' love feast. And it might be added a feast of facts, all radiant with argument and all converging on conclusion.

One of the numerous ladies attending the literary exercises inquired if ladies attended the discussions at the pavilion. A regretful no, was the answer. But it was suggested that every farmer come bringing his wife, his daughter, his son, his facts, experiences, arguments, conclusions and his lunch.

One farmer of Florence said: "Well, suppose a farmer does attend and speak; his speech will be nothing but a 'farmer's squawk.'" Now I would not have farmers to think that I am in any vein of mere levity as I proceed to discuss this squawk theory. Though the very point of my pencil smiles every time it spells out squawk, yet, as for me, I come down to my work of investigating the squawk business in that mood of earnestness demanded by the subject. My Florence farmer neighbor expressed a belief too prevalent among farmers. It is too much their belief that about all they were made for is to

deal out muscular force, granting the monopoly of thought to the trained intellectual gymnast. And, yet in the unlettered ages of Woden, King Ethelred, Egbert and Ragner, when generals, statesmen and plebians, as a rule, could not even write their names, and the judiciary was almost as illiterate, in those unlettered ages the foundation of the social system was laid with its corner stones of jurisprudence, which are to-day the corner stones of the identical social edifice in the upper and more highly finished stories of which we of the 19th century proudly dwell. The learned court of law of today is obliged to try most of the issues of facts with the assistance of comparatively unlettered juries; the farmer being the favorite constituent of the jury now as in the ten centuries next before the present. And the chancellor of our own age of intellectual culture, and especially if he be truly conscientious, will, for his own enlightenment and for the ease of his own conscience, even in cases within his own discretion, sometimes direct an issue of fact to be tried with the assistance of a comparatively unlearned jury.

The farmers of California and generally of the United States are more learned than the remote founders of our political, judicial, military and religious institutions. For every farmer of California who cannot write his name there were ten of the ruling classes in King Edwin's time, or even that of Alfred the Great, who were compelled to make the sign of the cross, or to affix a seal simply because they could not write their names. Even Caldwell, the Saxon King, confessed that he could not write his name by making a cross at the end of one of his charters. So now, brother farmer, every time you write your name, and with it a seal, you make a technical deed prove your act; prove that you can write and by the seal add a memorial of the illiteracy of the Normans, Saxons, Angles and the Jews of the times of Jeremiah, who invented the seal because even their land-holders and governing classes could not write their names.

Being an old cornfield sachein myself, I feel a personal interest in upholding the brain-end of the farmer. I shall, therefore, not close my letter without adding some facts more recent than the days of Isaiah, Peter and Bracton. I will add some facts from which the opinions of others than myself on the squawk theory may be inferred. I shall cite very high authority and very broad facts against the theory of so-called farmer's squawks. The facts are these: One of the many ladies present at the Florence discussion said, within the hearing of some of the audience, that she had seen an account of the Riverside meeting held and the speeches there made by farmers, that had been copied into a Chicago paper, and that an Eastern lady then visiting Florence, cut out the account and took it East as a memorial of one of the most interesting discussions that ever transpired in southern California. Another added that farmers met at Riverside, made speeches, and were mutually edified; that some of the most widely-circulated papers of the largest Eastern cities had copied the Riverside farmers' speeches in addition with favorable comments thereon; that one of the leading journals of New York copied portions of the speeches in support of certain positions assumed by that journal. Now, whereas these cosmopolitan newspapers circulate all around the world and almost from pole to pole, and whereas agriculture, that underlies all the municipalities that belt the globe, is a subject about which mankind read everywhere, therefore it is plain that the sun never sets, summer never ceases and winter forever reigns on the territory over which the Riverside farmers' speeches have traveled and over which they have been read. Now, as the opinion that farmers' speeches are nothing but squawks is about as long as longitude and as endless as the equator, I have purposely made the disproof of the opinion as long and as endless as the opinion itself.

JOHN H. SHIELDS.

Florence, Cal.; Aug., 1879.

JAPAN PLUMS.—John Kelsey, of Berkeley, whom we credited with fruiting the Japan plum two years ago, has this year secured quite a crop of the above variety, and from the samples he kindly brought us the other day, it is plain that the plum is very desirable. It is a large, showy fruit, delicately colored with red, verging in places into yellowish green. It is highly flavored and full of juice, and the pit being uncommonly small for a large plum, the flesh is very thick and is quite firm. It seems to have peculiar adaptations for a market plum, and Mr. Kelsey informs us that it takes well among plum buyers. The fruit seems a very promising one for more general growing.

COWS FOR THE SANDWICH ISLANDS.—We hear of a sale of high grade Durham cows from the herd of Robert Ashburner, of Baden farm, for the Sandwich Islands. There are 12 cows in the band, all with calf by thoroughbred bulls. Mr. Ashburner sends also two young thoroughbred bulls, and one thoroughbred heifer calf of the celebrated Young Mary family. The Sandwich Islanders are doing well to introduce fine stock, and California is the proper place to buy it.

The people of the United States pay over \$700,000,000 a year for spirituous and fermented liquors, and only \$95,500,000 for education, and \$48,000,000 for religion.

At Memphis 66% of the new cases of yellow fever are colored.



## AGRICULTURAL NOTES.

## CALIFORNIA.

## LOS ANGELES.

**ODESSA WHEAT.**—*Anaheim Gazette*: Mr. Lynch has just threshed a crop of Odessa wheat grown on the Newport mesa. There were about 15 acres in the piece, and the average was about 33½ bushels per acre.

**APPLE.**—*Downey Outlook*, Aug. 16: A 14-ounce apple, plucked from a three-year-old tree, has been on exhibition at Bailey's drug store this week. The tree is growing in the thrifty orchard of Thomas Gooch, on the Ranchito.

**CORN DESTROYED.**—Mr. Thomas Gooch thinks that there will not be more than half a crop of corn in the territory between the rivers in the vicinity of Ranchito. An unknown bug (some say it is a chinch or a scale bug) is attacking the ear, causing it in a few days to present the appearance of having been scalded. Up to the time this bug made its appearance the corn prospect in that rich district was as good as one could wish.

**POMONA HORTICULTURAL SOCIETY.**—*Express*, Aug. 16: An informal meeting of the citizens and fruit growers of this place was held at the school house at 4 P. M., on Saturday the 9th instant. A permanent organization to be known as the Pomona Horticultural Society was effected with the following officers: President, Rev. C. F. Loop; Vice-President, Thomas Mercer; Secretary, Chas. Coleman, Jr. There was a very fine display of fruits raised in this section, among which might be named: Peaches: Early Crawford, Reavis's Favorite, Hale's Early, Old Mixon Free, George the Fourth, Snow, Morris White, Golden Rarieripe, Early Bernard, Mission Dolores, Smack's Cling and five varieties of choice seedlings. Pears: Bartlett, Louise Bonne de Jersey and White Doyenne. Plums: Damson, Vejar and Shropshire Damson. Grapes: Rose of Peru, Black Hamburg, White Muscat, Mission and Zante Currant. Apples: Red June, Maiden's Blush, Yellow Bellflower, etc. The several varieties now in season were carefully compared and tested by those present, and a general interchange of ideas occupied the passing moments very profitably to the members. Some peaches of the Old Mixon Free variety weighed 8½ ounces. Specimens of the Red Roman nectarine measured 3 inches by 2½ inches in diameter. The flavor of the fruit generally was good, and the display very creditable to a place so recently elevated from a sheep range to the more exalted pomological pursuits. At a late hour the Society adjourned to meet again on the first Saturday in September, at one o'clock P. M. All interested in horticulture, pomology, etc., are cordially invited.—CHAS. COLEMAN, JR., Sec.

**POTATO BLIGHT.**—*Ukiah Press*, Aug. 15: Messrs. Cain & Davis, from Manchester, report that as fast as the late planted potatoes come to a certain stage of growth, they are struck by blight and die. This occurs when the tubers are half grown. If dug before rain comes, they keep well, but lack in flavor; if rained on they rot in a night.

**IMPROVING SHEEP.**—August Grothe passed through town this week, in company with a neighbor, driving 20 head of fine hucks, for their own use. They also brought up two fine ones for Judge McGarvey. They were both French and Spanish merinos, pure bred, long, fine staple, of good size, and will prove a valuable acquisition to our wool market.

**HAY CROP.**—From Roberts & Diddle we learn that the amount of hay haled in this vicinity this season falls 50% short of last year's work. They have haled about 275 tons in this valley and Sanel, and have yet a small amount to do. They estimate the whole amount haled at less than 500 tons as against 1,200 tons last year. Much more has been stored and sold loose, however, than last year.

**FINE CATTLE.**—J. M. Dill passed through last Tuesday with over a hundred fine beef steers. He has a fine range, both for bear and cattle, beyond Long valley, and has shown diligence in the care of it and his stock. Jerry Lierly also drove about 30 head of handsome beef through town a few days before, from the classic shades of Sanhedrin.

## MODOC.

**OATS.**—*Independent*, Aug. 9: John Guill brought to this office a hunch of oats which measured over six feet and a half in height. It was raised on the ranch of C. W. Williams, at South Fork. Some man at that place took the trouble to count the kernels of grain on one of these stalks, and found that there were 4,550 grains raised from a single seed. Mr. Williams has about 80 acres in one field under cultivation.

## SACRAMENTO.

**FRUIT.**—*Telegraph*, Aug. 16: The grape yield in this section promises to be abundant, and several large vineyards near this place will supply grapes for the manufacture of wines and brandies, besides affording grapes for raisin-making. Apples have lately sustained much injury from the excessive heat, many having fallen from the trees in a nearly roasted condition.

## SAN BENITO.

**NOTE ON PLOWING.**—*Enterprise*, Aug. 16: Thirty thousand cents of wheat and 15,000 cents of barley were raised this year on 3,000 acres of Flint, Bixby & Co.'s land near San Juan. This large yield, with but a slight rainfall, is owing to the deep plowing which was done when the crop was put in.

## SAN DIEGO.

**PEACHES.**—*News*, Aug. 5: This delicious fruit continues to come into market freely, and are cheap. Four years ago it was difficult to buy a San Diego peach in market. It is not so now. Day before yesterday morning, Mr. Swau had on sale—and they are for sale by Wolfsheimer—five Early Crawfords, of splendid size, color, flavor, etc. One of these peaches we took the trouble to measure, and found it had a circumference of 10½ inches the long way and 10 inches the short way or around the bulge of the peach. They are fine for putting up.

## SAN JOAQUIN.

**LOW'S GRAIN-SAVING ATTACHMENT.**—*Lodi Review*, Aug. 16: A grain-saving attachment for threshing machines has lately been introduced in this vicinity by Mr. Miller, of the firm of Linnell & Co., Sacramento. They have put one on the separator of Mr. Guernsey, and it gives the utmost satisfaction. Mr. S. S. Stewart, who is a very good judge of wheat in the stack, says that in a stack he estimated would go 1,500, turned out over 1,700.

**ODESSA WHEAT.**—*Stockton Independent*, Aug. 14: Hitherto one of our greatest troubles in the tules has been the great liability of wheat to rust. I think, however, we have been this year fortunate enough to find a wheat that comes as near being rust-proof as anything we may hope to get. Through the courtesy of Mr. J. D. Peters, who put himself to a great deal of trouble in the matter, I secured last spring a small lot of Odessa wheat; a strong, hard, red variety that I was told had proved to be free from liability to rust. I think the test given it was as severe as can well be imagined—it was sown on the 15th of April on peat land that had only been reclaimed nine months. The land had never been plowed, and the seed was simply harrowed in in ashes, the subsoil being as spongy and hollow as it is possible to conceive. The wheat matured in about 100 days, the straw being about three feet six inches high, small but stiff and standing up well, and we estimate the yield over the 60 acres sown at 25 bushels to the acre. A little Chile, Nonpareil and Chuh was sown at the same time for comparison, and while every straw of these varieties is so thoroughly rusted as to produce no flour-bearing grain, the Odessa is entirely free and has matured a plump kernel. The grain appears a little liable to shell out, but will thresh well, thus I think it may be of interest to gentlemen farming low lying land.—JOHN W. FERRIS, Roberts Island.

## SAN MATEO.

**GRAIN.**—*Redwood Times*, Aug. 16: Threshing has been going on very lively since Monday of last week, and now will probably continue until the end of September. The grain in some places is not turning out as well as expected, the late rains having stimulated the weeds and checked the grain. Nevertheless, with all the drawbacks, a fair average grain crop will be ensured.

**ARTESIAN WELL.**—Work on the new 12-inch well at the Town Water Works has come to a temporary standstill, owing to two circumstances. In the first place the anchorage for the lever by which the tubing is forced down worked loose, requiring resetting. Just at that time a very liberal flow of water had been struck, which, running to waste, rendered digging for a new anchorage in immediate proximity to the well impracticable. A powerful hand pump was procured to lower the water in the well and conduct it to a distance away; but this pump was found unequal to the task. It was then proposed to procure the services of the fire engine as the only machine capable of effecting the desired object. The well is now down about 143 feet, or very nearly the same depth as the old wells. The intention was to pass the vein which was known to exist at that depth, and go on down at least 200 feet with the expectation of finding as strong a flow as Mr. Cooley has struck at Ravenswood. The new well, as stated above, is down 143 feet. The main depth, after passing the adobe, was through yellow clay, under which a fine bed of beach sand was struck, of the same character as that which has caused so much trouble in the old wells. Passing that, coarse gravel was found, ranging in size from a bean to a goose's egg, all noticeably smooth as if at some former period subject to the washing of the sea. It is in this bed of gravel that the bottom of the well now rests. At the surface the well discharges a strong stream of water which flows away in the neighboring gutters like a small rivulet. It is clear, sweet and cool, not materially different from that heretofore supplied. In quantity, it is at least double, and the engineer says four times as much as the old wells combined yield. It has been decided to continue the new well to a lower depth, and the fire engine is employed in keeping the water down while the anchorage for the lever is being re-adjusted.

## SANTA BARBARA.

**LOS ALAMOS.**—*Cor. Guadalupe Telegraph*, Aug. 16: Mr. Snyder, of the Arcade Hotel, informed me that his wheat turned out 15 sacks to the acre, and his Chevalier barley 35 sacks to the acre; and that none of the wheat in the valley will turn out less than 10 sacks to the acre. There is one field of wheat that turned out 27 sacks. Between the kangaroo rats, squirrels and mice the farmers are having a serious time. The corn and bean crop will be a failure, and the grain has to be taken out of the fields as soon as threshed on account of these pests—the worst that have ever been known. Then the quail are getting so numerous that the farmers are resorting to poisoning them. The banks of

the streams and mountain sides are literally alive with them.

## SONOMA.

**EARLY PLOWING.**—*Santa Rosa Democrat*, Aug. 16: Passing along the lower Laguna road, in the vicinity west of Lytaker's blacksmith's shop, we noticed a number of fields that had been plowed, and were apparently ready for next year's crop. In one field sowing had already commenced.

**POTATOES.**—We are informed by a gentleman just from the Bodega spud-growing section that the prospects favor an abundant yield. We only regret that the prices range so low as to scarce warrant the hope of an adequate remuneration to the farmers.

## TEHAMA.

**GRAIN YIELD.**—*Tocsin*, Aug. 16: Mr. Chas. Hazlett on the other side of the river put in 500 acres of grain which has probably yielded larger in proportion than any of his neighbors, resulting in a total of 13,000 bushels, making an average of 26 bushels to the acre.

## VENTURA.

**BARLEY.**—*Free Press*, Aug. 16: We learn that the barley crop on Mr. Peter Donlan's place, on the Colonia, averaged 120 pounds to the sack, and over 18 sacks to the acre. The grain is bright and plump as the best up-country product. The same is true of the crops of Messrs. Leonard, Scarlett, McGrath and others.

## YOLO.

**THE HARVEST.**—*Democrat*, Aug. 14: Harvest is gradually drawing to a close. The majority of our farmers have threshed, and for the next four or five weeks wheat will flow into our warehouses at a lively rate. The wheat is of a much better quality than last year's crop, and the yield in most parts of the county has been far more satisfactory, while we hope the prices will meet the expectations of our agriculturists.

## NEVADA.

**THE GRASSHOPPERS.**—*Reno Gazette*, Aug. 15: Mr. Patterson, one of the proprietors of the Reno and Goose Lake stage line, came into town last night. In conversation with a *Gazette* reporter, the subject of grasshoppers naturally came to the surface. Mr. Patterson says some people are making a great fuss about the hoppers because they haven't got used to them. In Surprise valley, the ranchers are reconciled to the insects. The hoppers have spent the last four summers with them. Although not flattered by their attention, the Surprise Valley people put up with them good naturedly and keep on sowing crops for them every spring. The Surprise Valley hoppers seem to be sensible of this resignation on the part of the ranchers. The insects there do not spread out diffusely all over the valley, eating here a little and there a little. No, they keep together, devouring Jones' crop one year, Smith's the next season and Brown's the following summer. This peculiar rotation of crops is pleasing to the farmers. The winged visitors have appeared there for four successive summers. This season they are scarce in Surprise valley and next year they may disappear. The best thing about the grasshopper is his ephemeral nature. There is comfort in the thought that he is only a transient hoarder.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

**SAFETY ATTACHMENTS FOR CHAINS.**—Richard Y. Anderson, Santa Clara, Cal., dated Aug. 5th, 1879. The object of the inventor is to produce a safety attachment for chains, intended more particularly to make connections between chain or cable and mining buckets or cars, but it may serve for other purposes. The invention consists in forming the shank of the hook of considerable length, and placing the hole through which the chain crank passes near the outer end of the shank, so that the hook will at all times swing transversely to the chain on which it hangs, thus reducing the liability of disengagement of the hook. A sliding plate is placed upon the link above the hook, which prevents the passage of more than one link through the eye of the bail. This device has been used at the "Little Pittsburg mine," in Colorado, and several other places, and gives general satisfaction.

**POTATO CUTTER AND DROPPER.**—Thomas Lahrec, Castroville, Cal., dated August 5th, 1879. This device relates to an improvement in potato cutters and droppers; and consists in providing a case or box which may be mounted on the beams of a gang or sulky plow, the box carrying a cutting knife, which is operated by a lever moved by cams on the wheels, so that the potato is cut into two pieces, and one piece dropped at a time into the furrow behind the first plow so as to be covered up by the second one.

**HARROW.**—Silas Harris, No. 7 Liberty St., San Francisco, patent dated August 5th, 1879. This invention consists in making the bars holding the teeth of what is known as "channel-iron," and providing a peculiarly made spring clamp between the flanges of the iron, which holds the teeth firmly in place. Wheels are provided, which are attached to the teeth at the corners so that the harrow may be moved to or from the field, when they may be removed and placed upon the upper end of the teeth in an adverse position.

## News in Brief.

CHOLERA is still prevalent at Cahul. GEORGIA Mormons are emigrating to Utah. PIANOS are being shipped from New York to Japan.

THE anti-tax disturbances in India are becoming serious.

THE Victoria Chamber of Commerce has been dissolved.

RAIN fell August 18th in London for 12 hours continuously.

THE National Board of Health met at Cairo, Ill., August 18th.

SINCE 1859 the Colorado mines have yielded \$82,000,000.

THE ZULUS generally acquiesce in the deposition of Cetewayo.

MISSOURI is taking vigorous steps to secure foreign immigration.

At Havana, Cuha, last week, 100 deaths occurred from yellow fever.

LOCUST GROVE HOTEL, of Bath, L. I., was burned August 18th.

THE Indian corn crop in Bulgaria is almost a total failure from drouth.

A GREAT Socialist demonstration took place Monday at Dresden.

THE Arctic exploring yacht *Jeannette* arrived at Ounalaska August 2d.

A DISASTROUS waterspout occurred on the 15th at Pays de Gex, Switzerland.

FOUR persons killed and 30 injured by a railway accident in France.

AN International Convention of Jews will be held in Paris in September.

SCHUYLER COLFAX is to reappear as a lecturer during the coming season.

THE loss by the Tremont Temple fire in THE Porte has appointed Plenipotentiaries to arrange the Greek frontier.

THE firman of investiture of Tewfik Pasha was received at Cairo, August 18th.

Boston will not exceed \$105,000.

SPECIE in the Imperial Bank of Germany decreased 539,000 marks the past week.

THE drouth in Cashmere continues, and the condition of the people is deplorable.

TWO streams of lava flowed from Mt. Vesuvius recently as far as the base of the cone.

A RIOT occurred at Quebec August 18th, in which a great number of persons were injured.

NELLIE (GRANT) SARTORIS is not dead, but Mrs. E. Sartoris (formerly Adelaide Kimball) is.

THE imports of specie at New York last week amounted to \$1,073,416—\$963,587 being in gold.

THE Cashier of the Citizens' National Bank at Washington is a defaulter in the sum of \$60,000.

MEMBERS of the British Parliament are about to visit America to take cognizance of the present harvest.

BULLION withdrawn from the Bank of England August 18th, £30,000, which was shipped to Canada.

ANOTHER death from yellow fever occurred August 18th at the New York quarantine hospital.

THE Napoleonic fete of the 15th of August was omitted in Paris this year, the first time in 30 years.

COLLECTOR BALL has been elected Mayor of Sitka, a civil government having been fully organized.

MISSISSIPPI planters fear a great increase in the exodus of laborers after the cotton crop is gathered.

PARIS has 65,000 houses, London 460,000 more than Paris, Berlin and New York combined.

A MAN was arrested near Erie, Pa., the other day charged with a murder committed in Philadelphia in 1865.

HUNGARY produces more horses than any other country of its size—2,158,000 for a population of 15,000,000.

IN Illinois this year 42,041,252 bushels of wheat will be harvested—the largest crop ever raised in that State.

IT is stated at Madrid that the marriage of King Alfonso and Archduchess Maria will take place at the end of October.

A GENTLEMAN, representing 250 Scots, has gone into the Yellowstone country to find an American home for them.

RYE, the principal bread material of Germany, will only yield half a crop this year, while wheat will yield a full harvest.

At Liverpool August 18th wheat was quoted at 8s 6d to 9s 6d for average California white, and 9s 5d to 9s 10d for club.

A PRIVATE gentleman at Moscow, Russia, has been sentenced to 12 years in the mines for attacking and insulting a sentinel.

THE Bishop of Belgium excommunicates all teachers in schools established by the State under the education law.

IT is estimated that the log crop of Wisconsin this year will reach 1,635,000,000 feet, against 1,075,000,000 last year.

IN San Francisco half dollars are quoted at 99½ selling, 99½ buying; trade dollars, 97 buying, 98 selling; Mexican dollars, 98 buying, 98½ selling.

THE great map of the moon upon which Dr. Julius Schmidt, of Athens, has been at work since 1867, shows 32,836 craters and ring-like formations on the lunar surface; and 348 rills and clefts. The number of craters would be increased to 100,000, according to Schmidt's estimate, in a complete chart representing the moon as it appeared when seen with a magnifying power of six hundred.





### God in Nature.

[Written for the RURAL PRESS by PHILMORR.]

In the beginning God spake; and the world from chaos sprang.

What matter if a day or six, or twice six thousand years, The measure of the time? With God 'twas as a thought. He counteth not the days by suns, nor years by season's morn:

Summer and winter marks he not, by heat or cold, Yet 'twas from his first order thus it came to pass. And so from age to age the wheel revolves, and primal order reigns;

Yet, what is God? And whence the power that sways and governs all?

Go ask the wise, and hear him sagely tell Of power and goodness: an Alpha and Omega;

A spirit unseen and all seeing, allwise and everlasting. So plain! We knew it all before; yet know we naught.

We know the sun comes forth, and gives us light by day; The moon by night; but whence the power that guides them in their course?

What, say the wise? 'Tis Nature's law the universe that sways.

Ah, yes, 'tis Nature's laws. Whence Nature; where her birth?

Whence came she forth full robed; her author who? 'Tis God, Omnipotent and high, that sowed the seed,

And nursed the tender buds, and opened the flowers. He made the rocks and everlasting hills.

The earth is His, and all the fruits thereof. The ocean vast is but a speck to Him that notes the spar-

row's fall;

And numbers every hair, and sees our very thoughts. The earth and heavens proclaim His boundless will.

He speaks in thunder, and in the whispering breeze. The storm and tempests tell His wondrous power.

Their author creeping insects know and feel. All these are God's; of Him all these are parts:

And of the world not land or sea alone, Nor rocks, nor mighty hills, nor streams that ever onward flow.

For things that are, were not; and those that are, not were.

Streams have run dry, and trickling fountains failed. The quaking earth has changed, and fiery mountains ceased to burn.

Another, bursting forth, spreads desolation dire. Where yesterday was peace and rest and quiet homes.

There is no changeless thing; and yet we note no change. As days, and weeks, and months roll on.

We see ourselves as yesterday we were; But what of years? The faithful sun reflects not now the same;

The shadows change; so things of beauty fade; And they are joys no more, but loathsome and abhorred.

But other joys are born, and other beauties live; The trees, the grass, the flowers, that in the beginning were not.

Now bless and beautify the earth. God makes them all. But these came forth to-day, nor bloomed in years ago;

Nor in the beginning were: since some their color change, And grow in beauty by the cunning hand of man.

True, God created man: to Him the glory all; He, the first cause, and last. He was and is.

No flower puts forth without His power—no insects born. He spake. He speaks to-day, creating worlds as He has done before.

And ever will. Nor are they all complete, Though from His hand each atom perfect falls.

Ye wise go forth and tell the story still. Tell thoughtless children how it came to pass:

Six days he labored and rested on the seventh. But through six thousand years no record lives.

Has God been idle since? We stop appalled and loose ourselves in thought.

Let reason guide us, and not our childhood's lore, For God has given us thought and reasoning powers.

Each day He to us speaks. We hear him in the breeze; We see Him in the trees, and in the starry sky;

In the rainbow arching high, and in the lowly flowers. He is an ever-changing God, yet changeless ever is.

### What Became of "Sam."

It was generally supposed that Sam was what is called "deficient." As to his own family, they were sure of it; at all events, they treated him as if it were so. Not that they were unkind to him; on the contrary, they were all very fond of "poor old Sam," but it seemed to be taken for granted that whatever he said was not worth noticing, and almost everything he did was to be made fun of more or less. He was, in fact, the family butt, though shafts, were, as a rule, tipped with good nature so as not to hurt his feelings. Hardly ever did he attempt to say or do anything in serious earnest, since almost everything he did or said was treated as a sort of a joke.

There was one exception to this. Mothers always know best how to deal with the weak in the flock, and Sam's mother never laughed at him, and never despaired of him. "What is to become of Sam?" his father would say; "he'll never earn his own living," and his mother would quietly answer: "Wait a bit, my dear, there is more in him, perhaps, than we think, but it wants to be drawn out, and I doubt if we are acting wisely in laughing at him as we do." She said "we," poor soul, but that was only her discreet way of putting it.

Now, Sam had a sister, Mary, of whom he was especially fond. Perhaps it was because she was the sister nearest to him in age, but it was more likely because she placed a little more confidence in him than the others did; it wasn't much, but it was more than he got from any of the rest.

He would do anything for Mary, and when a certain Mr. St. Leger in the neighborhood took a fancy to her, it was amusing to see how Sam resented the engagement. This Mr. St. Leger had lately come into the neighborhood—no one knew where from; but he had plenty of money and very agreeable manners, and was a general favorite with the Frere family. Sam, however, never liked him from the first, and when at length he became Mary Frere's accepted suitor, Sam's aversion to him became intense.

The day was fixed for the wedding, and the Sunday had arrived when, in deference to Mary's particular wish, though very much against Mr. St. Leger's inclination, the banns were to be published in church. The Freres were in their place—a great square pew in the front of the pulpit. The names were read out in due course. Mary was recovering from the electric shock of hearing them; the villagers were interchanging glances, some even cautiously rising a little to peep into the square pew when a voice was heard all over the church, saying, in a most emphatic way, "I forbid the banns."

Surprise was on every face, but it quickly gave way to the ludicrous as Sam was seen standing up in the middle of the pew, looking the clergyman steadily in the face, as much as to say, "There now, get over that if you can!" The clergyman was so amused that he had to rush on with the service to prevent any unseemly display, while Sam's kindred in the square pew were in every attitude of painfully restrained amusement.

And there he stood, unabashed and defiant, until his father plucked him by the arm and made him sit down. But none of them for a moment thought it was a very unaccountable freak of "poor old Sam's."

No sooner was the service over than he was assailed on all sides for an explanation. Two only were serious about it—his father and Mary.

"What is the meaning of this, sir," said his father sternly; "what could have possessed you to make yourself so ridiculous?"

"He has got a wife already," said Sam doggedly.

"Who has?" was the general exclamation.

"St. Leger."

"Who told you so?"

"Tom Tyler!"

Tom Tyler was the village letter carrier.

There was a shout of laughter at this piece of information.

"When did Tom Tyler tell you this?"

"Yesterday. He brought me a letter for Mrs. St. Leger."

Another shout of laughter greeted this; but Mary looked very grave, while her father said that, of course, the letter was for St. Leger's mother, of whom he had more than once spoken. So Sam was sharply rebuked for listening to Tom Tyler's idle tales, and told to hold his tongue. "You'll have St. Leger try his horse-whip across your shoulders, if you don't mind," cried his eldest brother, and they all laughed again; but Sam was very unlike himself and did not join in the laugh, but maintained a grave composure they had never noticed in him before.

Nor was it a laughing matter somewhere else. The news of that morning's interruption flew apace, with various additions and amendments. Thus improved upon, it reached the ears of Mr. St. Leger, who lived but a few miles off, and it created a profound sensation, so much so that, instead of spending the afternoon with the Freres, as expected, he took himself off and was never seen by them again. It was discovered that Tom Tyler's version had been correct after good riddance for Mary Frere; but a heart trifled with and wronged can never quite recover itself.

For a time Sam was almost reverently treated at home. They felt the force of his simple explanation why he had chosen such a singular way of uttering his suspicions, that it was "because they would only have laughed at him if he had told them," and were a little ashamed of themselves. But the old habit revived after a while, as old habits, both family and personal, so easily do, and Sam's brains were held as cheap as ever, except by Mary, who was drawn to him more than ever, and by his mother, who never ceased to ponder in her heart, as only mothers do, the meaning of that display of firm intelligence and almost fierce affection.

"I'll tell you what it means," said her brother to Mrs. Frere one day when she was talking to him about it—he was a lawyer in London, old John Quicksett, of Gray's Inn, who could see a thing as shrewdly as most people—"it means this, that Sam has got a heart and a head, but his head is more out of the way than usual, and can only be got at through his heart, like an old-fashioned bedroom that can only be reached by going through another. Look here, sister, I like amazingly that story of the banns—it's grand. Not that there was anything clever in what he did, just the reverse; it might have been a most stupid mistake; but that is what takes my fancy so, the firmness of purpose, a far higher quality of mind than mere cleverness, that could make the poor fellow face everything he did for the sake of the sister he loved. There must be something in one who could run the gauntlet like that, when his heart was once fairly unlocked; and I think I have the key."

"I always thought so," cried Mrs. Frere, greatly excited.

"Well, let me try. I'll run away with Sam and make a lawyer of him. What do you say?"

The grinning was epidemic round the table after it was known that Sam was to be a lawyer. His brothers and sisters could hardly look at first without smiling; it did seem so droll, so absolutely contrary to every notion they entertained of him. Had he sat before them in full naval costume as Admiral of the Channel fleet, it would hardly have struck them as being more unlooked for and preposterous. Uncle John's presence saved Sam from collective bantering, though the old lawyer was too wise to make any fuss about the matter; but when Sam was alone with his brothers and sisters he had a hard time of it, though all was, as usual, in perfect good humor.

At first Sam had, of course, to go through the usual drudgery of a lawyer's office, in which, if it be possible for every one to shine, he certainly did not. His blunders were awful, and provoked the wrath or ridicule, as the case might be, of his fellow clerks who were all well seasoned and somewhat ancient men. But his uncle never found fault with him. The most he said when some frantic huncle was brought to his notice was, "Sam, do this over again; you know you can do it a great deal better than that." And, sure enough, it was done better the second time. In short, his uncle began with, and in spite of every discouragement, persevered in the plan of trusting him, and by degrees he found the more he trusted him the better he did, and the more he treated him as if there were something in him the more he got out of him. Had Sam nothing in him to begin with the plan could not have answered; but this was just what his uncle believed, namely, that there was something in him, but it had been systematically laughed down and sat upon from superfluous consideration, and that it could be brought out by a total change of external influence and treatment. And now his powers began to show themselves and to expand, just as a shrub that has been stunted and blackened from want of room and uncongenial soil begins to throw out vigorous shoots when transplanted to ground that suits it and where it has space to grow.

"Sam," said Mr. Quicksett one day, "we shall all of us be away the whole afternoon, and must leave you in charge of the office. If that fellow, Choker, should come, mind, you're not to let him see anything."

As the fates would have it, Choker did come. Perhaps Mr. Quicksett knew he was coming. Possibly Mr. Choker, who was a sharp and not very scrupulous professional opponent of his, had made himself aware of the unprotected state of Gray's Inn, and he brought with him a man that looked every inch a prize-fighter.

"Is Mr. Quicksett in—No?" Well, it's of no consequence. I merely called to see as a matter of form one or two documents in Smith vs. Jones."

"Then I must trouble you to call again, when Mr. Quicksett is in."

"Quite right, young man," said Choker, approvingly; "that's the right thing to say in ordinary cases; but you see this is not an ordinary case. We've got an order from the court to inspect these documents."

"Where is it?" said Sam bluntly.

"You've got it with you, haven't you?" said Choker, carelessly turning to his companion. The young athlete fumbled in his pockets, and declared with great apparent vexation that he must have forgotten to bring it.

"I don't believe you've got it to bring," said Sam.

"We'll have no nonsense, sir," said Choker in a passion; "at your peril refuse to show us what we want to see," and the two men advanced on Sam in a threatening way. But, little as he was, he never hunched an inch. "I tell you what it is," he said, with all the coolness imaginable, "if you two don't leave the office this minute, I'll send for a constable."

There was no need to attempt that difficult operation. They were only trying it on, and with an affectation of injured innocence, Mr. Choker and his satellite withdrew.

On another occasion, after Sam had been a couple of months in the office, his uncle came out of his room one day and bade him to go down at once to the Judge's chambers and look after some case that was to come on there. "It is a thing that requires you to have your wits about you to do that, for you come face to face with a shrewd Judge, who can not tolerate a fool." The old clerks in Mr. Quicksett's office appeared paralyzed with astonishment at such an order; and one of them ventured, when partially recovered, to suggest a mistake on Mr. Quicksett's part. "It's rather a difficult case, sir, if you remember," he urged.

"All right, Mustay," was the cheery reply; "I know what I am about. The best way to learn to swim is to be pitched neck and heels into deep water."

The suspense was great among the ancients while Sam was away; but he came back in due time, and reported that the case had come on before the Judge, and that his lordship had made an order in their client's favor. "Did he ask you any questions?" inquired Mustay. "Oh, yes! and I answered them," said Sam; but he did not mention, for he did not know it, nor will it be mentioned in the memoir of the learned Judge when it comes out, that, accustomed as he was to ready answers, it had actually crossed his mind for a moment that the funny little lawyer's clerk would make a capital witness—he was so ready, and said neither more nor less than was wanted.

Whether a good witness would always make a good lawyer we need not decide; but it is certain, that in course of time, Sam made a very good one indeed. He was one of those not uncommon cases where supposed "deficiency" is superficial only, and where a far more grave deficiency is to be found in those who, by constantly laughing at it, run the risk of making it a lifelong imbecility. Sam's relatives never laughed at him again after the first visit he paid them, though they often laughed with him, for his drollery was inexhaustible. He never married, but his sister Mary kept house for him, and was perhaps a great deal happier than she would have been anywhere else.—*Cassell's Magazine.*

The man who finds a pocketbook with cash in it doesn't look at a paper for three weeks.

### The Value of Sunday.

Why should we give one day in seven to religion? It is to be regretted that some very poor answers to this question are so strenuously insisted on. It is always dangerous to support a good cause by a bad argument; for when the argument is discovered to be baseless the thing that seemed to rest upon it is likely to be regarded as without foundation. The bad reason and the good cause fall together. To say that Sunday is needed for physical rest is not to give the best, nor the universal reason for its observance. Many feel no such need. Some constitutions will work 365 days in the year and then dance the old year out and the new year in by way of starting in fresh to repeat the same thing over.

But we want the day because man has a soul. We want it for the soul. The authority for its sacred observance lies deeper and goes farther back than any verbal commandment or ceremonial institution; it is written in the constitution of man. For some reason, the number seven, in ancient times, was held in mysterious reverence. Many nations and tribes besides the Jews observed every seventh day as sacred. There seems to have early arisen a sense of such a need for the better life of man. The finer qualities of the soul demand care and a special time devoted to their culture; otherwise, they will not prosper. If man were but a compound of stomach, muscle and pocket, a being that eats, works, gets tired, and lays up money, he might well stop with good care of the body. But when he makes the discovery that he is a soul, it throws a new interest into life. It is a stirring surprise. He has a new car that interests him more, and is even better for the health than a picnic. He must have time for this nobler care. He wants Sunday; he cannot do without it. He wants it for the soul. Great benefit to the body will result, but that is incidental. The soul must be the first consideration in the use of the day, and in the shaping of its arrangements. If lying abed until 10 o'clock, or going to a picnic, or spending the day in social visiting, will do most for the soul, then by all means do these things. But if attending church and Sunday-school, and the quiet study of the great questions of religion at home, will do more, then let the time be conscientiously devoted in that way. A soul well cared for will prove the best care of the body.

We need the day for religion. We need to keep Sunday rather than another day not because the time between Saturday and Monday is holier in itself than any other time, but because there is a general agreement to observe this day; and the uses of the observance can best be attained only in association with others. We need to keep it sacred because if not set apart to religious uses it is almost sure to be diverted to other ends, and its benefits lost.

Give us such a rational Sunday, and the day will soon command the reverence of the people and become "a delight, holy unto the Lord."—*Work and Play.*

PURSE PRIDE.—It is to be lamented that the national character of the English is pride, and the meanness of all pride—purse pride. Even a poor lord is despised, and, to increase his fortune, will marry into a rich citizen's family. An overweening affection for money, an idolatrous worship of gain, have absolutely confounded the general intellect and warped the judgment of many to that excess, that in estimating men or things, they refer always to "What is he worth?" or "What will he fetch?" Were we to point out a person as he passes, and say, "There goes a good man—one who has not a vice," he would scarcely be noticed; but exclaim, "That man is worth \$500,000," and he will be stared at till out of sight. This sordid habit of thinking was finely hit off by a keen fellow of a neighboring nation, who had carried on business in London and failed. Sitting in a coffee-house one day, where a few wealthy citizens were discussing some money concerns, and observing him very attentive, one person turned aside to him, and said: "What's your opinion, sir, of the matter?" "S'blood, sir," returned he, peevishly, "what opinion can a man have in this country who has not a guinea in his pocket?" This makes good what Mr. Burke says, "that a speculator has no faith but in his banker; his ledger is his Bible; the exchange is his church; the desk is his altar, and his money is his god."—*London Globe.*

THE SECRET OF BEAUTY.—The secret of beauty is health. Those who desire to be beautiful should do all they can to restore their health, if they have lost it, or to keep it, if they have it yet. No one can lay down specific rules for other people in these matters. The work which one may do, the rest he must take, his baths, his diet, his exercise, are matters of individual consideration, but they must be carefully thought of and never neglected. As a rule, when a person feels well he looks well, and when he looks bad he feels bad as a general thing. There are times when one could guess, without looking in the glass, that his eyes were dull and his skin was mottled. This is not a case for something in a pretty bottle from the perfumer's, or for the lotion that the circulars praise so highly. To have a fresh complexion and bright eyes, even to have white hands and a graceful figure, you must be well. Health and the happiness that usually comes with it are the true secrets of beauty.—*Quarterly Review*

MONKEYS swim as men do, with the side stroke, not "dog fashion."



## Chaff.

"JAN," said he, "I think if you lifted your feet away from the fire we might have some heat in the room." And they hadn't been married two years either.

Pious old lady: "Just think, Rose, only five missionaries to 20,000 cannibals!" Kind-hearted niece: "Goodness! the poor cannibals will starve to death at that rate."

LADY (to rheumatic old woman), "I am sorry you suffer so. You should try galvanism." Old woman: "Thank you kindly, mum. Be I to swaller it, or rub it in?"

"How do you tie a love knot?" asked Laura, toying with a piece of blue ribbon. "Oh, any way, growled Tom, behind his newspaper, 'Just so it will pull out easy.'"

"JOHN, did you take the note to Mr. Jones?" "Yes; but I don't think he can read it." "Why so, John?" "Because he is blind, sir. While I was in the room he axed me twice where my hat was, and it was on my head all the time."

The man who goes fishing and sits in a cramping posture on a narrow plank from early morning till dewy eve, and calls it fun, is the same chap that never goes to church because the pews are not comfortable.

"SARAH," said a young man the other day, to a lady of that name, "why don't you wear ear-rings?" "Because I haven't had my ears pierced." "I will bore them for you, then." "I thank you, sir; you have done it enough."

THRESHING machines remind us of our boyhood days, and bring one particular occasion distinctly to mind. We thought we would play truant, and we did. The first day was so serene that we tried it again. This time we were troubled. There came up a heavy thunder shower in the afternoon, and we were scared, badly scared, and when we arrived at the maternal mansion late in the afternoon we were met with a request for a private interview. It was granted. The slipper had a good heel on it, and we are not sure but what the imprints are on our person yet. Tears, huge tears, chased each other down our cheek. When we departed for school the next morning we were given a sealed envelope for the teacher. We were suspicious. We were always kind, and we gave that envelope to another little boy who wanted an excuse for being late. He was late—the clock marked 9:15 when he arrived. The teacher read the note, and followed the instructions therein contained to the letter. We were sorry for that boy, but rejoiced that it was not us. The note read thus: "Please whip the bearer, and whip him hard." That little boy and us were never more friends.—*Ex.*

WELL WORSHIP.—In Asia, Africa, and North America, water-sheds and sources of streams, in elevated situations, have at all times been revered as sacred spots, and the native tribes are wont to assemble at them for their religious festivals. Thus, also, the Romans, and the original inhabitants of Switzerland before them, worshiped at the high springs of the Alps, on the Lockmamer, perhaps on the Benardine, and undoubtedly on the St. Gothard, and on the Great St. Bernard, where pillars and remains of temples may still be found. Two rude pillars, whose origin is as yet unexplained, standing at a height of 7,000 feet, on the water-shed of the Julian Pass, seem to point to a yet earlier worship of the Deity. Christian chapels and hospices have been erected on the site of these ancient temples; and the modern inhabitants of the mountains not seldom celebrate their religious festivals on the very same spot where their Pagan forefathers worshiped.—*Sketches of Nature in the Alps.*

HUSBAND AND WIFE.—Harmony in the human state is the first thing to be aimed at. Nothing can preserve affections uninterruptedly but a firm resolution never to differ in will, and a determination in each to consider the love of others of more value than any object whatever on which a wish has been fixed. Sources of discontent very common indeed are the little cross-purposes of husband and wife in common conversation—a disposition in either to criticise and question whatever the other says—a desire always to demonstrate and make him feel himself in the wrong, especially in company. Nothing is so goading. Much better, therefore, if our companion views a thing in a light different from what we do, to leave him in the quiet possession of his views. What is the use of rectifying him if the thing is unimportant? Let it pass for the present, and wait a softer moment and more conciliatory occasion of reviving the subject together.—*Thomas Jefferson.*

WOMAN'S WORK.—Colonel T. W. Higginson comes gallantly to the defense of women's work, declaring that the criticisms that men make upon it grow out of the impression that all work is easy which one does not understand. "Just as hay-making," he says, "is the lightest and most graceful of labors to those who have never personally handled a hay-fork; so is the greater part of a woman's day's work easy to a man until he has tried it. Try him for a while at the occupation that seems lightest—let us say, for two hours steady work at taking out the basting threads from that pretty blue bunting that was bought to please him—and see if he does not get some new views on the subject!"

## Young Folks' Column.

## Our Puzzle Box.

## Numerical Enigma.

I am composed of 11 letters.  
My 5, 3, 7, is a public house.  
My 4, 2, 11, is a contemptible person.  
My 8, 5, 10, 11, is to coin.  
My 6, 5, 3, is a kind of liquor.  
My 1, 9, are found in except.  
My whole is a mercantile term.

VERONE.

## A Zoological Collection.

1. A measure, a vowel, an instrument for producing wind, and a consonant.
2. A projection on a wheel and a measure
3. A falsehood and a preposition.
4. A color, an affirmation, and mean.
5. A novel.
6. A part of the animal body, a river in Europe, a vessel for boiling, and a man's name.

CLAUDE REVERE.

## Charade.

On earth the dearest, most precious thing  
My first by you and me is deemed;  
Throughout the infinite lapse of space  
My second with cycles vast has teemed  
My whole's a blessing on earth given—  
Our work performed, it ends with heaven.

J. L.

## Initial Changes.

1. I am to reduce; change my initial, I am a fruit; again, I am destiny; again, I am behind time; again, I am a kind of door; again, I am a companion; again, I am part of the body; again, I am to estimate; again, I am to satisfy.
2. I am a body of water, change my initial, I am a period of time; again, I am a fairy; again, I am fond of pleasure; again, I am a bird; again, I am a song; again, I am a month of the year.

HORACE.

## Diamond Puzzle.

1. In vice and virtue. 2. A drunkard. 3. Fictitious
4. Reproofs. 5. Acting by choice. 6. A window-blind.
7. A balance. 8. Before. 9. In days and years.

R. B.

## Answers to Last Puzzles.

CROSS-WORD ENIGMA.—Abraham Lincoln.

DOUBLE ACROSTIC.—

C	alan	D
O	ctavi	A
B	arita	II
D	uva	L
E	offend	I
N	ova Zemli	A

RIDDLE.—Day.

INITIAL CHANGES.—1. Brain, drain, grain, train. 2. Beer, deer, jeer, leer, peer, seer.

DROPPED LETTERS.—

She wandered by the lonely shore,  
And listened to the moaning sea,  
And sad and weary was her wail,  
"O waves, give back my love to me."

## Baby Jim.

From the time he was five minutes old everyone called him Baby Jim. The very day he was three years old they took him to a picnic—a real, live picnic, with sandwiches and cookies for the others, and plenty of bread and milk for Baby Jim.

They were going to the seashore, and as they lived a good way off, that had to start very early in the morning. First there came the ride in the steam cars, and then the ferry boat; and I think it must have been 10 o'clock in the morning before Baby Jim began his first hole in the sand with his wooden shovel.

Now, the baby had one little sister and one little brother, and more little cousins than I like to think about in such a very short story; and after the last cookies were eaten, and the last drop of milk was swallowed, what do you think these other babies did to Jim? They dug, and dug, and dug, until there was a tremendous big hole in the sand—almost as big as a very small baby house.

"Come along, Baby Jim," they cried, after the hole was so deep that Cousin Bess tumbled in and had a great time getting out again; "we're going to make believe be giants, and cover you all up."

Baby Jim wasn't afraid of giants, or anything else, so up he came and rolled into the hole without a murmur, and in two minutes they had him covered up to his ears—and the tide was coming in!

But no one noticed the big waves as they rolled up nearer and nearer the round face that peeped above the sand. The children laughed and danced about, and Baby Jim laughed, too.

"How cold my feet are," suddenly said one of the little girls.

"They're wet! just look at them!" said another.

"Oh! Look! look! the water! the water! it's coming after us!" they all cried at once; and knowing no better, they ran away with all their might, leaving poor little Baby Jim all alone with the waves, that came nearer and nearer every moment, and had not a big fisherman come along just then, I can't say what would have happened, for the water was very close to Baby Jim when the strong man dug out the sand and held him in his arms for papa, who ran up just then. How they thanked that good fisherman.

But Baby Jim didn't seem to care anything about it; and when the cars started to bring them all home again, he said "Get up, there, old pony," just the same as ever.—*N. Y. Tribune, Jr.*

"JOHNNY," said a fond mother to her boy, "which would you rather do, speak French or Spanish?" "I would rather," said Johnny, rubbing his waistband and looking expressively at the table, "I would rather talk Turkey."

## GOOD HEALTH.

SUN CURE.—Says the Cincinnati Artisan: A warm and dry atmosphere is not unwholesome, but when cloudy or rainy weather brings a sultry air which dampens everything around us, the atmosphere may be loaded with germs of disease, and fire is needed to destroy them. The walls, the ceilings and the floors of apartments should never be allowed to become damp. Sometimes, when the warmth of the air is oppressive, fire is more necessary to preserve health than it is at another season to protect us from the cold of winter; and the rooms of a dwelling should never be left without the means of warming and drying. Investigations have shown that many of the most fatal diseases are caused by the germs of vegetable and animal life, and that a humid atmosphere is most favorable for their propagation. It is, therefore, neglecting to avail ourselves of the great discoveries of the age, and failing to protect ourselves from the scourges which so fearfully afflict families, when we ignore the dangers which surround us. Apartments exposed to the full action of the sun may be less comfortable in hot weather than those from which the sun's rays are excluded, but they are more wholesome, and when contagious diseases prevail in closely-built cities, it is found that the inmates of houses on that side of the street exposed to the sun are less liable to be attacked, while the greatest number of sick are always found where there is the least exposure to the rays of that great disinfectant—the sun.

## THE TONGUE AND THE SENSE OF TASTE.—

The tasting power of the tongue is not regularly distributed over all parts of that organ. According to the unanimous judgment of physiologists, the back part of the tongue is best qualified for this function, while there is a difference of opinion as to the tip of the tongue. The older observers have repeatedly said that a tasting power in the tip is limited to certain persons, whereas more recent ones affirm its presence in all men. In experimenting on the so-called "reaction-time," Herr Vintschgau lately met with a case of limited tasting power in the tongue-tip, and this led him to a thorough investigation of the subject. The observations were made with solutions of chloride of sodium, sugar, quinine and citric acid. The results were as follows: There are persons who are capable of accurately distinguishing all principal tastes with the tip of the tongue alone; others perceive with certainty the qualities of sweetness, saltiness, acidity, but less distinctly bitterness. Others, again, can only with great difficulty distinguish tastes with the tip of the tongue; and, finally, there are individuals who cannot do this in the least.

THE AMMONIACAL SULPHATE OF COPPER IN TIC DOULOUREUX.—Dr. Fereol, of the Lariboisiere, has met with an amount of success in the use of this almost forgotten remedy in four cases of old and obstinate tic douloureux, that leads him to believe that it is one to which attention should again be drawn. He prefers the fluid form, as in the following mixture: Distilled water, 100 grammes; syrup of orange or mint, 30 grammes; and ammoniacal sulphate, from 10 to 15 centigrammes. This is to be taken chiefly at meal-times, within the 24 hours. If the neuralgia persist, the dose may be gradually increased; and in one case as much as 60 grammes per diem was given, but then began to cause gastro-intestinal disturbance. Even in the ordinary dose, after two or three days, fetid breath and a metallic taste may be perceived; but, in spite of this, the medicine must be continued at 10 centigrammes per diem for 12 or 15 days, especially at meal-times.

TRANSFORMATIONS OF NERVOUS PHENOMENA. In reviewing the affections and the nervous phenomena which are propagated by a transmission and a transformation of motion, from simple yawning to epilepsy, fascination, panic, etc., J. Ramboisson formulates the following general principle: A purely physical movement may be transformed into a physiological and into a psychic or cerebral movement by simple transmission to special portions of the system, and reciprocally, a psychic movement can be transformed into a physiological and into a physical movement by simple transmission to a different portion of the system, and that without losing its character; for it reproduces the same phenomena, after all these transmissions and transformations.—*Comptes Rendus.*

BORAX AND NITER FOR HOARSENESS.—La France Medical remarks that these two salts have been employed with advantage in cases of hoarseness and aphonia occurring suddenly from the action of cold. The remedy is recommended to singers and orators whose voices suddenly become lost, but which by these means can be recovered almost instantly. A little piece of borax, the size of a pea, is to be slowly dissolved in the mouth ten minutes before singing or speaking. The remedy provokes an abundant secretion of saliva, which moistens the mouth and throat. This local action of the borax should be aided by an equal dose of niter, taken in warm solution before going to bed.

## DOMESTIC ECONOMY.

## Proverbs in Cookery.

Miss Dodd's demonstrative lectures on cookery are being continued in Philadelphia. They are full of little bits of information that might properly be called culinary proverbs. Here are a few of them:

There is a greenness in onions and potatoes that renders them hard to digest. For health's sake, put them in warm water for an hour before cooking.

Good flour is not tested by its color. White flour may not be the best. The test of good flour is by the amount of water it absorbs.

In cooking a fowl, to ascertain when it is done, put a skewer into the breast, and if the breast is tender the fowl is done.

A few dried or preserved cherries, with stones out are the very best thing possible to garnish sweet dishes.

Single cream is cream that has stood on the milk 12 hours. It is best for tea and coffee. Double cream stands on its milk 24 hours and cream for butter frequently stands 48 hours. Cream that is to be whipped should not be butter-cream, lest, in whipping, it change to butter.

To beat the whites of eggs quickly, put in a pinch of salt. The cooler the eggs the quicker they will froth. Salt cools and also freshens them.

In boiling eggs hard, put them in boiling water. It will prevent the yolk from coloring black.

You must never attempt to boil the dressing of a clear soup in the stock, for it will always discolor the soup.

In making any sauce, put the butter and flour in together, and your sauce will never be lumpy.

Whenever you see your sauce boil from the sides of the pan, you may know your flour or corn starch is done.

Boiled fowl with sauce, over which grate the yolk of eggs, is a magnificent dish for luncheon.

Tepid water is produced by combining two-thirds cold and one-third boiling water.

To make macaroni tender, put it in cold water and bring it to a boil. It will then be much more tender than if put into hot water or stewed in milk.

The yolk of eggs binds the crust much better than the whites. Apply it to the edges with a brush.

Old potatoes may be freshened up by plunging them into cold water before cooking them.

Never put a pudding that is to be steamed into anything else than a dry mold.

Never wash raisins that are to be used in sweet dishes. It will make the pudding heavy. To clean them, wipe in a dry towel.

To brown sugar for sauce or for puddings, put the sugar in a perfectly dry saucepan. If the pan is the least bit wet, the sugar will burn and you will spoil your saucepan.

Cutlets and steaks may be fried, as well as broiled; but they must be put in hot butter or lard. The grease is hot enough when it throws off a bluish smoke.

The water used in mixing bread must be tepid hot. If it is too hot, the loaf will be full of great holes.

To boil potatoes successfully, when the skin breaks, pour off the water and let them finish cooking in their own steam.

In making a crust of any kind, do not melt the lard in the flour. Melting will injure the crust.

In boiling dumplings of any kind, put them in the water one at a time. If they are put in together, they will mix with each other.

CARE OF TABLE CUTLERY.—The greatest care should be used by the housekeeper as to the preservation of the ivory handles of the table cutlery. The handles should rarely, if ever, be put in water, and then only wiped with a moist towel, and immediately dried. There is a kind of tin vessel made, with wire slats on top, in which the knives can be placed, which only allows the immersion of the blades in the water. There is in cleaning steel knives often an abuse of cleaning. It is by no means necessary to be always grinding off the surface of the metal on a board covered with Bath brick. If acid food be used at table, such as corrodes the metal, then the board with brick becomes useful. In most cases, however, if servants were careful, and the mistress of the house knew how to supervise matters, it would be found out that, after usage, a good washing of the blades alone, and rubbing on a towel or on a piece of leather would suffice. Of course Bath brick is necessary, but it is mostly too coarse, and scratches the steel. English servants, who are very careful in using Bath bricks, generally lixivate this material. This consists in scraping up the half of a brick, stirring it in water, pouring off the material in mechanical suspension, drying that, and only using this finer substance. Two boards for cleaning steel knives, entirely separate and distinct, should be used. On one Bath brick can be employed, the other should be covered with plain wash-leather and be free from all erosive substances. In large houses sometimes mechanism, more or less complicated, has been called into use for cleaning knives, but this uses up the metal in double quick time. If from the very start the table cutlery is kept clean little trouble is found in keeping it always in good order.





DEWEY &amp; CO., Publishers.

A. T. DEWEY. W. B. EWER.  
Office, 202 Sansome St., N. E. Corner Pine. St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line..... .25 .80 \$2.00 \$ 5.00  
Half inch (1 square).....\$1.00 \$3.00 7.50 24.00  
One inch..... 2.00 6.00 14.00 40.00

The Scientific Press Patent Agency.

DEWEY &amp; CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. G. H. STRONG

SAN FRANCISCO:

Saturday, August 23, 1879.

## TABLE OF CONTENTS.

EDITORIALS.—Landscape Gardening—No. 4; Separating Cream by Machinery, 113. The Week; On the Occurrence of Rust on Grain, 120. Tucson, Arizona; Tree Growing on Scoria Soils; Rabbit Choking in Australia; The Rise of the Grape Interest, 121. Mechanics' Institute Fair, 124.

ILLUSTRATIONS.—Landscape Gardening, 113. City of Tucson, Arizona, 121.

QUERIES AND REPLIES.—Orange Growing in Australia, 120.

CORRESPONDENCE.—Across the Sierras by a New Route; A Fruit-bearing Japanese Persimmon; Sonoma County Mechanical Notes, 114. Causes of Hard Times—No. 2; Farmer's Speeches, are not "Squawks," 116.

FLORICULTURE.—The Conservatory at Golden Gate Park; The Passion Flowers, 114.

THE FIELD.—The Sugar Industry, 115.

THE GARDEN.—Substitutes for Glass Frames, 115.

THE APIARY.—Ventura County Beekeepers' Association; Plant for the Bees; How Far will Bees go for Honey, 115-22.

PATRONS OF HUSBANDRY.—The Grange in New Hampshire; Grange Re-Union, 116.

AGRICULTURAL NOTES from the various counties of California and Nevada, 117.

NEWS IN BRIEF on page 117 and other pages.

HOME CIRCLE.—God in Nature (poetry); What Became of "Sam"; The Value of Sunday; The Secret of Beauty; Chaff; Husband and Wife, 118-19.

YOUNG FOLKS' COLUMN.—Our Puzzle Box; Baby Jim, 119.

GOOD HEALTH.—Sun Cure; The Tongue and the Sense of Taste; The Antimonial Sulphate of Copper in The Douloureux; Transformation of Nervous Phenomena; Borax and Niter for Hoarseness, 119.

DOMESTIC ECONOMY.—Proverbs in Cookery; Care of Table Cutlery, 119.

THE DAIRY.—Instances of Alfalfa Dairying, 122.

MISCELLANEOUS.—New Curiosities at the Smithsonian Institute; A Sandwich Island Volcano; Japanese Wares in England, 122.

## Business Announcements.

Channel Iron Harrow, Smith & Hoppe, S. F.  
Berkshires, Alfred Parker, Bellota, San Joaquin Co., Cal.  
The Temple, Oliver Ditson & Co., Boston, Mass.  
Chrono Cards, J. B. Husted, Nassau, N. Y.  
Strawberry Plants, Gibson & Bennett, Woodbury, N. J.  
Trees, Baird & Tuttle, Bloomington Nursery, Ill.  
Steam Engine, Rice's Engine Works, S. F.  
New Forage Plant, Arthur Taylor, Watson, Mo.  
Manufacturer of tools, F. A. Robbins, S. F.

## The Week.

Again the review of the week's topics brings us to an expression of joyful appreciation of the general serenity which pervades our skies, and the general health which bless our people. While England's home-made bread is still sodden dough, because the persistent rains quench the fire which should bake it; while French vines are robbed of fruitage by excessive moisture and the predatory phylloxera; while as one views the general surface of the globe there is here a flood and there a famine, to us it is permitted to harvest fair crops in fairer weather than other coasts or countries know. And so far as natural conditions go, we occupy the cosiest nook in the country, generally sheltered from the ills which circle the world; for but the other day a gigantic storm hailing from the great gulf region swept up our Eastern coast, driving ill-fated ships upon unwelcome shores, and visiting destruction and death upon a score of cities and hamlets, which lie adjacent to the Atlantic sea-board. The accounts of the storm and its work are appalling, and lead one to face our gentle summer winds, and bless them for their constancy and innocence. So also, while beneath our tempered skies and in our wholesome air, we see the glow of health upon our children's cheeks, and feel in brain and arm the strength which comes of life unvisited by ills to which humanity is heir, we mourn with heartfelt sympathy the disease and death which dreadful "Yellow Jack" is now dispensing along the Mississippi borders. What though the times be hard and man's inhumanity to man visits grinding oppression upon his neighbor—these are society's, not California's faults. Ours is to correct them as the years go on, until this glorious State shall have law and custom, true as its own sublime truth—until Californians shall be worthy of California.

## On the Occurrence of Rust on Grain.

Judging from the prominence of discussion of rust, its occurrence and ways to prevent it, in our Australian exchanges, we infer that the injury by the fungus in the colonies of the island-continent is greater than in other parts of the world. It seems to take place in the list of agricultural curses beside the rabbit nuisance. It would, therefore, be expected that both the practical and scientific acumen of the country should be turned toward the character of the evil and the possibility of averting it. We trust this application may yield something of value, because rust ravages are present, to a greater or less extent in all grain-growing regions, and California sometimes suffers severely.

From a number of reports of lectures and discussions on the occurrence of rust, which we received by the last Australian mail, we shall compile a number of notes bearing upon the subject which will be read with interest by our grain-growing readers. One thing has been disclosed by the study of rust, and we have briefly alluded to it before; that is, that the spores of the fungus formed on the wheat plant (the "red rust" as we see it) go from the wheat, and fix themselves upon neighboring plants, and develop there another kind of spore (or seed), which then fastens upon a wheat and pursues its growth. Thus it was first shown that the fungus on barberry bushes was communicated to the grain and there became rust. When this was plainly shown it resulted in cutting away the barberry bushes which were near the English grain fields. But it has also been shown that the fungus will reach one stage of its growth on other plants than the barberry. It will grow on the wild oats, on weeds and perhaps on many other plants. So far as the fungus is now understood, it appears likely that if there were no other plant in the vicinity the rust could not attack the wheat, because it seems to be the nature of the fungus that the rust cannot go from wheat directly to wheat, but must pass one stage of its growth on some other plant, as we have remarked before. This belief has been the result of many experiments, and in case any of our readers are microscopically inclined, we will outline an experiment for them, using the words of Dr. C. Mueke in the *Adelaide Observer*: "Take a small quantity of the brown dust found on the wheat plant affected with red rust, place it under a microscope, and you will find it to consist of oval capsules. This dust is not the parasite itself, but the seed of the ripe and dead parasite plant. Place this dust when under the influence of a humid heat between glasses under your microscope, you will see a sprout germinating out of every grain with fibers attached like thin white cotton. If proper preparations are made, say by placing a suitable plant under or near your instrument, it will be observed that the sprouts grow towards the plant, and enter the pores which are in the stalk. After that the parasite feels at home in its mother plant, and the seed left outside dies off. Any one accustomed to the microscope could easily prove the above-mentioned fact by giving the process a trial. Having thus arrived in the interior of the plant the parasite continues its growth from cell to cell of the stalk, living on its sap, at the same time always growing upwards, dying off at the lower end. As soon as it attains its individual development it forms a numerous deposit of strings under the epidermis (first skin), the strings penetrate this skin, and on the point of every one a seed-spore is formed, the parasite terminates its existence, dies, and the seed falls off, is carried away by the winds, and recommences its destructive growth as soon as it finds the sustenance required. I had little or no difficulty in finding my way so far, but after this it puzzled me very much that I could not make the spores taken from the wheat grow, either by sowing them with the wheat or by resting them on the plant, or even by artificially infusing them with the plant. What was more natural than a trial of transplanting, and the result soon proved that the spores from the grasses grew on wheat, and the spores prospered on the grasses equally well." The inference from such experiments is that it must be understood that the rust cannot spread if there are no plants near on which the spores which formed on the wheat plant can undergo their change, and the above remarks will show distinctly that the seed which ripened on the wheat plant in this year is unable to attack the young wheat next year. This is a wise dispensation of Providence, otherwise we should soon have to stop cultivating grain altogether, as there are millions of spores on one plant, quite sufficient to destroy a whole district. The practical suggestion from this peculiar habit of the rust fungus, is that it is important that the surroundings of grain fields should be kept clean so far as possible. Growth of weeds in the edges and corners of the fields, and along the roadways should be prevented.

Another point discussed by the Australians is the conditions favorable for the spread of the rust on the grain. These as laid down in a lecture by Mr. McIvor are as follows: "The germs of rust might be easily distributed, as they were often carried long distances by high winds, and by animals fed on affected straw. The spores of rust might lie in the soil for a considerable time, if circumstances were not favorable for development, being protected from injury by their oily covering. The conditions favorable to their development were warmth and moisture combined, showers, with

intervals of sunshine. The wheat plant, however, was not very liable to be attacked unless there was an over-succulent growth at the time of flowering. Rank growth in plants was a sign of unhealthiness, and they were more liable to be attacked by the fungus, through the openness of the pores allowing the spores to penetrate freely. Rain or heavy dew, followed by a hot sun, might stop the circulation of the sap, and cause the epidermis to crack. Heavy rain, without heat, would not cause rust."

There is some confusion in the minds of some people as to the growth of the fungus. When they see the red dust on the plant, they say the red rust has attacked the wheat, while the fact actually is that the damage is already done and the parasite has died off, showing its seed outside as explained before. Another popular error is to say the crops are saved. A good shower of rain has washed the rust off, when in reality the parasite is dead, and it depends altogether upon what influence it has had on the plant whether the farmer can expect a crop or not.

The subject of a preventative for the rust injury is at the same time the most obscure and practically valuable question connected with the subject. No specific that would cure rust has yet been announced. Sulphur is the general antidote for fungus growth, and it has therefore been first thought of as a material to save the wheat. But it would seem to be no small task to sulphur fields which contain hundreds and thousands of acres as we have them in this State. An Australian, however, attacks this problem boldly, on theory we presume, and suggests that sulphur fumes would be a remedy for red rust, and thinks that (as the fumes of burning sulphur are heavier than the atmosphere at night) if sulphur were burned on still nights to windward of rust-affected crops, the smoke would roll over the field in a cloud. He imagines that two or three fumigations would be effectual, and that the whole could be carried out at an expense of about five shillings per acre.

There is also a point to make in the choice of clean seed. Dr. Mucke writes of Australian experience as follows: "Notwithstanding warnings which I had given, after the first year the rust appeared the farmers were advised to sow the shrivelled and rusty seed, and thereby infected the whole colony. The great danger which arose from this action was only diminished by the following spring being very frosty, thus hindering the growth of the native grasses. Any one thus misleading the farmers by advising them to sow shrivelled and undeveloped seed is to say the least of it, guilty of an error of judgment, as science teaches us that only the best well-developed seed ought to be used (pedigree seed). Wheat for seed should be chosen from the strength of the straw, which is better able to resist the penetration of the spores, and the farmer should pay strict attention to all the rules which are calculated to ensure a healthy, natural, normal and strong growth of the plant, and have proved a success over and over again."

For killing the rust spores which may cling to the seed grain there is perhaps nothing better than soaking in blue-stone solution as has been successfully adopted for killing the spores of smut, another fungoid parasite of grain.

The search after rust-proof varieties of wheat remains as worthy of practice. The Odessa wheat largely grown at Anaheim, in this State, still baffles the rust according to the accounts which we have received. It has been found abroad that the red and white Tuscan were two sorts that had been proved to stand better than any others. As a rule, the harder the straw in a variety, the better would it resist the attacks of rust.

## QUERIES AND REPLIES.

## Orange Growing in Australia.

EDITORS PRESS:—Some two months since, there appeared in your journal queries in regard to the alleged superior value of the Seville or Bitter Root as grafting stock for the orange. Believing that very little trustworthy information on that point could be obtained in California, I submitted a series of questions, about this and other matters interesting to orange growers, to Mr. S. W. Pye, of Paramatta, New South Wales, Australia, knowing him to have had experience in orange culture, second probably to no living man. Mr. Pye's father, now close upon 80 years old and who is still associated with his son, has followed this business for 60 years, an amount of experience which must give his opinions extraordinary value. I enclose the questions with Mr. Pye's answers attached.

For the information of those who think that orange growing may be easily overdone in California, I will give an extract from one of Mr. Pye's communications to me. He writes, alluding to the orange orchards in his immediate vicinity: "There is a family of the name of Pearce who have 200 acres of orange trees under cultivation (bearing trees), and the whole district for miles adjoining are orange groves also." Yet oranges sell for 20 shillings (\$5) per case. These cases (I have one in my possession) would not hold much over 100 good-sized oranges.

This high price is obtained notwithstanding that their market is limited (if we except those shipped to Europe by a long and expensive ocean voyage) to the sparsely populated colonies of Australia and New Zealand; while we have a population of over 50,000,000 (the United States and Canada) comparatively close at hand, to supply which there was imported last year, through the port of New York alone, oranges and lemons to the value \$2,500,000, paying a duty of \$500,000. Nor must it be supposed that the Australian orange plantations above alluded to are composed of young-bearing trees. Mr. Pye writes of trees in his own orchard, 50 years old, 34 feet high and yielding the enormous amount of 6,000 oranges each.—A. JONSTON, Orange, Los Angeles Co.

The information to which our correspondent alludes is certainly of wide interest and importance, and we give below the questions asked and Mr. Pye's answers to them:

What stock is the best on which to graft the orange? The Seville or Bitter Naval; I believe one is as good as the other.

For what reason is this the best?

Because it is the hardiest of all the citrus tribe; free from disease (other than red-scale, which affects it but little); grows and bears better than any other, in both hot and cold countries.

Are trees grafted on this stock more exempt from the attacks of insects or other parasites?

Most undoubtedly they are.

Are trees on this stock more exempt from the black, sooty deposit on their leaves sometimes called "black fungus?"

Very seldom affected when grafted on the Seville stock.

Do oranges grown on this stock keep longer than those on other roots?

Yes.

What means, if any, do you use to rid the trees of the brown "scale insect?"

Gishurst compound and Fowler's insect destroyer are much used here, and are effectual but costly.

Do you have the red "scale insect," and if so how do you meet its attacks?

Same as above. The best time is to syringe the trees after sundown. The consistency is generally two gallons of water to the pound of either Gishurst compound or Fowler's insect destroyer.

What other enemies have your orange trees that are permanently injurious, and how do you get rid of them?

The white coccus is the worst we have ever had. It infects the trees all over, from butt to the top branches; very much like a white louse; gets all over the leaves (on both sides), all over the limbs, and lives on the sap, which eventually kills the tree; generally brushed off.

What variety keeps the longest, the stocks and other conditions being the same?

The common orange.

Which is the next best keeper?

The Seville.

What variety do you consider the best for general purposes?

The common orange.

Which is the best flavored orange?

The Thorny Mandarin.

Which the next best?

The common orange.

What variety is the most abundant bearer?

The Seville.

Which the next most abundant?

The Emperor Mandarin.

Is the "Navel" orange a "shy bearer?"

Yes, very shy.

Do you attribute this to any peculiarity of your climate (such as spring frosts or drought) or do you think it would have the same characteristics in all climates?

I think it has the same characteristics in all climates. I have heard, on good authority, that where the soil is very moist they bear better.

Is the "Blood" orange a profitable orange to grow?

No.

Will it keep well enough to ship?

Yes.

Is the Emperor Mandarin a more profitable orange than the "Navel?"

Twice as profitable.

How much more fruit (in weight) would you estimate it would bear to the acre than the "Navel?"

Three times the quantity.

Which is your earliest variety?

The Thorny Mandarin.

What variety is now being most generally planted in your district?

The common orange.

## Remarks upon Queries.

Dr. Sickler remarks that the Seville orange is not at all affected by frost in Italy ("London's Cyclopaedia of Gardening").

It is the only kind of orange that will grow and bear fruit in Cseleutta ("Perfinger's Manual for Gardening in India").

I have seen an orchard with 400 large orange trees, all dying from a disease called bark-rot (i. e., rotting of the bark at the surface), and two or three Seville orange trees growing in the midst of them, looking beautiful, loaded with fruit, and in no way affected by the disease.

The oldest orange tree in France, called the "Grand Constable," now 460 years old, is a graft on the Seville.

Although the "red scale" affects the Seville orange, it does not seem to injure it, as it does all other kinds.—S. W. PYE, Paramatta, New South Wales.

## Effect of Tar on Fruit Trees.

EDITORS PRESS:—The answer to the question put by "Reader" as to whether tar is injurious to trees, I think I can safely say that it is, as it appears to fill up the pores in the bark, and retard the growth in most trees, while some trees, especially pears, it will kill outright. Two years ago I set out some 350 pear and apple trees, all of which I tarred about 2½ feet above the ground, to protect them from rabbits, and the result was as I have stated. In the trees that did not die the bark dried up and cracked, and left the trees rough and seamed all the way up where the tar had been, and I very much doubt if these trees will ever become good bearers in consequence. The best way I know of to keep rabbits from trees is to take a bar of ordinary washing soap and a little water and rub the soap on the tree until you have a good dry soapy covering, which will last, in anything like fine weather, for at least a year, to keep the tree so that no rabbit will touch it. The tar I used was "Stockholm," which I chose on account of its being less liable to burn than any other kind. I should fancy coal tar would kill a tree to a certainty.—EDWARD P. TOMKINSON, Green Meadows, Los Angeles Co.

THE United States produces annually 200,000,000 pounds of wool, and imports for manufacturing purposes about 50,000,000 pounds. We manufacture four-fifths of all goods made of wool which enter into the world's consumption, and use our own wool for four-fifths of that manufacture.



## Tucson, Arizona.]

We learn from "Hinton's Handbook to Arizona" and other sources, that the early origin of Tucson is obscure. It is claimed that the valley was settled about the year 1560, which would make it the oldest city in the United States except Santa Fe, which was settled in 1555. Three miles below Tucson, and one mile east of the mission of San Augustin are the ruins of an old town, but no clew can be obtained as to its origin, history, or the date and circumstances of its destruction.

The lands near Tucson are very rich and were once extensively cultivated, but the Apaches compelled the people to abandon their ranches and seek safety within the town.

The climate is one of considerable range; frequent frosts at night in winter, succeeded by weather comfortably warm during the day. The summers are quite hot, with a sufficient fall of temperature at night to make comfortable sleeping. The spring and fall are quite variable. A little stream flows past the town, the water from which keeps the valley perennially green.

How like a *fata morgana* it looks when you first see it in this enchanted atmosphere: the intensely blue sky overhead, the plain above it covered with sparse grass and fantastic cactus, that hide the sand and make the earth look verdant; the low, white dome and the picturesque buildings clustering about it; the adobe garden walls, with arched gateways, sometimes whitened, sometimes left in their native mud color, toned down by age and the glare of the sun; a tall mesquit tree, or a group of cottonwoods striving heavenward from among the adobe houses; Saddle mountain, with its ever changing tints and its strong lights and shades in the far distance, and Sugar-loaf or Sentinel hill to the immediate left. On the plain between town and the Sugar-loaf, the ruins of what in any other country I should pronounce to have been a monastery, lift themselves from the fresh dewy green—venerable, gray and stately—some wild vine creeping stealthily in at the frameless window, and out again at the roofless top.

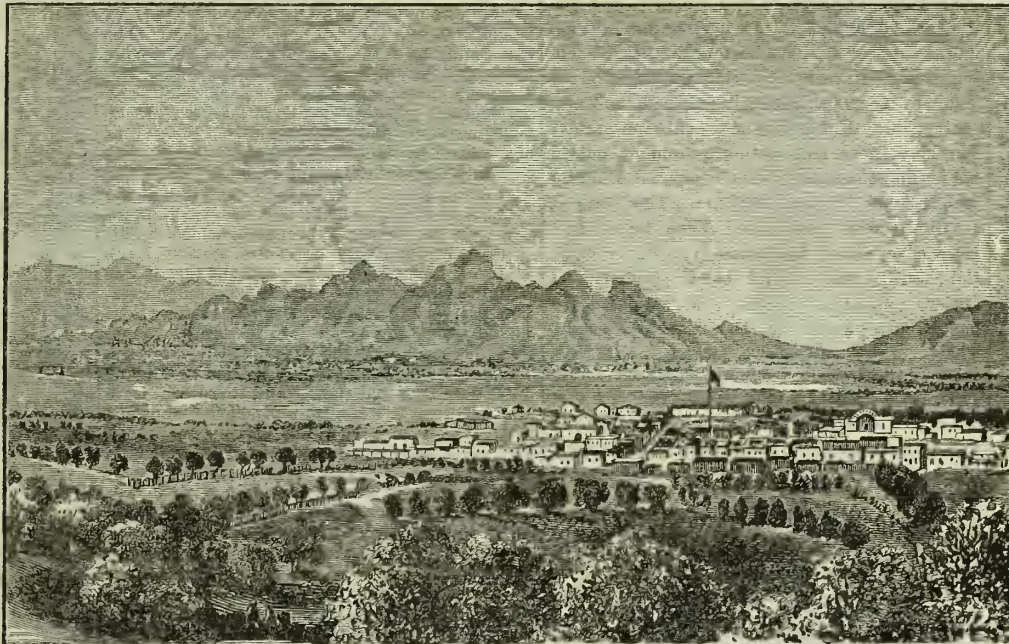
Tucson is seen to be located about two-thirds of the way southeast, on a huge plain or plateau, which presents many very striking features. The wonderful effects of the clear and rarified atmosphere are seen here at their best. The great plain or plateau in which just above this place the Santa Cruz sinks for many miles, to enter by a subterranean channel the Gila river, near Maricopa Wells, is certainly over 100 miles in its greatest length and not less than 50 at its widest, which, from the trend of the encircling mountain ranges, is in this vicinity. Looking north and west the eye rests upon the deep blue faint outlines of ranges at a distance of at least 75 miles. Nearer and in the wonderful fore-shortening, which is one of the most charming effects seen here, to the east and west may be seen the bold cones of the Picacho and Desert peaks. They stand out in the translucent sky and the luminous sunrise or sunset, with their wonderful combination of colors, so vivid and startling as to defy even the brush of Turner himself, as if one might walk over to them between breakfast and the gray glooming which indicates that the night has passed. Nearer and closer, until their serrated summits seem about to bow down to us, on the east, trending from the northwest to the southeast, is a bold and remarkably well-defined mountain range known as the Santa Catalina, which sweeps in a bold semi-circle, framing the Santa Cruz valley in a massive way. The range lowers and a pass opens just to the east of Tucson. The continuing portion of the range is sometimes called the Rincon mountains. It looks wonderfully and fascinatingly beautiful—the deep shadows and purple tones in which the sunset clothed its sides, while the mirage, which accompanies sunrise and sunset in this latitude, and plays such "fantastic tricks" to tantalize our vision with, gave to the summit lines and peak tops new and shifting images and forms. It is difficult to realize as one looks at the landscape here, that some of the green fields in which Tucson is set like a dark pebble in an emerald border have been under continuous cultivation for over 150 years. Contemporaneously the Pilgrims landed at Plymouth Rock, and that other fateful cargo had been placed on the banks of the James river, in Virginia; the Spanish conquerors of Mexico had established a presidio at this point, and the Jesuit Fathers had raised the symbol of Christianity, and erected houses of worship amid savage tribes and in the very heart of a wilderness. The town of Tucson then became the presidio of Tucson. North of this point there was no settlement or mission, nor west of it either, the Puerta de San Diego being the nearest in that direction. Tucson was then, as now, the principal place in the Territory. It still stands as the representative of the old semi-Spanish-Indian civilization; for the Mexicans comprise two-thirds of the resident population, and "the Church" occupies, with its offices, the place of honor customarily assigned to it in the laying out of a Spanish-American town—the principal portion of the chief plaza or grand square thereof. A map of Arizona will show

the value of this point as a trading post, and will indicate also its future importance, provided always the railroads going east and south shall pass through it. Tucson is now the central point on the overland route, and for communication with Sonora. It is the seat of the nearest United States Custom House thereto.

The engraving on this page, taken from "Picturesque Arizona," published by the Continent Stereoscopic Co., of New York, represents Tucson as it appeared in 1877. Since that time we understand that the city has grown considerably, though, of course, the site and surroundings have not changed.

## Tree Growing on Scoria Soils.

We have in some parts of this State scoria soils or soils formed of partially decomposed matter of volcanic origin, but we are not aware what has been attempted or accomplished in the line of growing trees in such situations. Much doubtless would depend upon the condition of decomposition of the scoria and of the deposit of organic matter through the decay of lardy growths which have thrived upon it and thus deposited available food for plants of more delicate appetite. In order to draw out the knowledge of any of our readers who have experience or observation on the utilization of this kind of soil, we shall allude briefly to a report of 13 years' experiments in tree growing on scoria soil near Mount Eden, in New Zealand. The report is by Mr. Justice Gillies, in a paper read before the Auckland Institute in June. The land was wild scoria land, the surface covered with scoria boulders, the partial disintegration of which had formed soil below, in which were also imbedded scoria boulders. At a greater depth were masses of scoria rock and ash partially decomposed, and in many places



CITY OF TUCSON, ARIZONA.

forming rocky cavities. The surface vegetation was grass and fern. The young trees when planted were from one to two feet high, probably two to three-year-old seedlings. Oaks and other deciduous trees did not thrive, and ultimately died off, except the upright poplar, one badly grown elm, and the weeping willow. Peach trees grew rapidly and fruited well for a few years (about seven), and then ceased to bear. Apple trees grew well and fruited freely for a few years, and then died off from a sort of dry-rot at the roots. Plums, apricots and cherries did badly in this soil. It is shown by table of measurements prepared by Mr. Gillies that coniferous trees grow wonderfully in such soil, especially *Pinus insignis*, *tuberculata* and *radiata*, being 59 feet, 54 feet and 49 feet high respectively; as also *Cupressus macrocarpa*, 29 feet to 39 feet; *Taxodium sempervirens* (redwood), 28 feet; and *Araucaria excelsa* (Norfolk Island pine), 35 feet high. *Sequoia gigantea* grew from 17 feet to 23 feet high, growing very slowly but making a large butt, about three feet in circumference at the base. These are in brief the New Zealand experiments. Who will cite California experience under similar conditions?

LANDSCAPE GARDENING.—We print this week the last of the series of articles written for us by Mr. J. B. Armstrong, of Santa Rosa. We are sure our readers must have enjoyed these articles, with the fresh style of expression, the love of nature, and the practical suggestions which have characterized them. We doubt not the effect of the articles will be to awaken thoughts of the opportunity for tasteful and natural adornment which most of our home environment will admit of. This will doubtless fully compensate the writer for the labor which the articles have cost him, and will delight us for our share in the good work. Landscape gardening and rural adornment of all kinds are live subjects, and ones which exert incalculable influences for good, and we trust all readers to whom the subjects commend themselves will favor us with their views and practical experiences in attaining the objects sought.

## Rabbit Choking in Australia.

The Australian war against rabbits continues, as we learn from our exchanges. It seems now that they are trying machines which force some kind of suffocating fumes into the burrows. We read that each of three parties working on a large estate—consisted of two men, one in charge of the machine and the other with a spade—proceeded in regular order to one or other of the burrows on which the boy in advance had planted a flag, and then began work. The machine had much the appearance of a large sheet-iron oil can, mounted on the framework of a long wheelbarrow, which was partly wheeled and partly carried from place to place, and in which the gas for the destruction of the rabbits was generated. This gas was represented to have been from charcoal—of which material there was any quantity lying about—whiting and white lead. When the mouth of the burrow was reached, one end of a flexible tube about an inch in diameter by five feet to six feet in length, attached to the gas generator, or gas reservoir, was inserted in the burrow to the extent of 12 inches to 18 inches, and allowed to lie there till the fumes began to return. The man in attendance on the machine with a spade then closed up that hole, leaving no room for the escape of any gas except by some other aperture, when immediately afterwards it began to force its way through some other mouths, in some cases from six to seven at a time, which were all closed up with earth, and stamped down as quickly as possible so as to make them secure. When this had been done the flexible tube was withdrawn from the first mouth of the burrow, and all was made secure there as it had been with reference to the other mouths before

## The Rise of the Grape Interest.

We have from time to time noted the buoyant feeling which now characterizes our grape interest, which is produced by the emptied cellars and the advanced prices which are being offered in our leading vineyard districts. We have mentioned also the bright prospect which is before grape growers because of the increasing demand for pure California wines abroad. It seems assured that an era of unusual prosperity is just opening to this branch of our agricultural production, and as a result thereof we look forward to the extension of vineyard planting and the enriching and development of signs of prosperity which always attend successful enterprises. While we drink no wine nor advise anyone to do so, we take it as a fact that wine is an article for which there is a large popular demand, and, while this is true, we desire that this demand should be supplied by a pure article of home production to the exclusion of the poisonous mixtures which are largely sold under foreign names. As the facts are more clearly recognized that unfortunate France, because of the ravages of the phylloxera, is compelled now to import grapes for her presses and to import wine to supply the home demand, it will also be perceived that the great mass of so-called French wines brought to this country must be the work of French chemistry rather than of French grape growing, and this understanding of the facts will impel our people away from the purchase of adulterations.

The telegraphed reports from France which came to hand this week, show that this conclusion cannot be avoided. We are informed that there is no disguising the fact that the French wine production is seriously compromised. Besides the ravages of phylloxera, the extraordinary wet season has considerably added to the mischief. The *Coulure*, another disease, believed to be produced by humidity and defective sap and the rank growth of weeds, has been added to the trouble of the vigneron. The phylloxera is steadily extending its ravages, and unless science finds some remedy, French wine will soon be a thing of the past. French wine merchants already import grapes from Greece and Asia Minor to be pressed in France. Of late, too, the imports of wine from Italy and Spain into France have been very heavy and continually increasing. They have amounted in the first five months this year to 30,745,836 francs, an increase of 300% in two years.

The best French sources of information furnish the following facts: In the western region, including all the vineyards from the Loire to the Garonne, rain has been incessant. It is this district which has most suffered. Charente and the Lower Charente have been attacked both by the *oidium* and the phylloxera. Pure brandies are almost unobtainable. In the central region, where such fine wines as the Chahlis, Cote d'Or, etc., are grown, the weather has been more favorable, but there is an advance of five or six francs per piece in Paris. In the eastern region, including all the champagne and Resine districts, the pyrale has done great damage to the vines. In upper Alsace, the Tokays, Rieslings and Muscats will produce nothing at all, owing to *oidium* and humidity. The southwest region, including the Bordeaux region, suffers from a combination of all the above-mentioned evils. In the southern region there is a more favorable outlook, and some very heavy purchases have been made.

In the face of the ruin wrought by phylloxera in France, it has been often urged that our grape-growers should do something to guard against its spread in this state. Such certainly would seem to be the dictate of wisdom. It is true that the progress of the insect in this state has been much slower than in France; but still its work can be found here, and it seems at any time to be liable to take on the features of a scourge. It seems to us that the grape-growers, on their own account, should undertake a sharp investigation of the evil, or should urge the State to give this protection to their industry. We hope that there may be some natural barriers to the spread of the insect in this State, but in view of its progress abroad this seems to be hoping against hope. Certainly the work of the insect in this State should be ascertained, clearly defined, and, if possible, restricted to vineyards now known to be infested, or stamped out entirely.

CATS FOR GROUND PESTS.—While our Jersey farm friend is elaborating his experiment on the use of large importations of cats for squirrels and gophers, we may remark that in one of the Australian colonies the wild cats are found to be of good service in reducing the rabbit nuisance, and on some of the runs litters of kittens are regularly turned loose to join their wild *confreres*, and in due course to take part in the work of destruction.

KEEPERS OF GAMBLING PLACES, dance houses and Chinese opium dens at Modesto were ordered by the citizens to close up Thursday night and leave town within 24 hours.

SOUTHERN CALIFORNIA HORTICULTURAL SOCIETY.—We have been favored with a call by L. M. Holt, Secretary, who has been in the city during the work on business connected with the coming fair of the above society at Los Angeles, October 20th to 25th. Mr. Holt promises the public a much better fair than that of last year, and that was a pronounced success. We understand that he has secured the co-operation of a number of exhibitors in this part of the State and Oregon, and thus outside material will be added to the rich displays from the southern counties. The third week in October will be a good time to make southern visits.



## Plant for the Bees.

[CONTINUED FROM PAGE 115.]

with the bee, in the mind of anyone from the Atlantic coast, is buckwheat. People do not seem to know how widely it may be grown in this State. The coast, at least, is admirably adapted to it, and so are the delta lands of our main rivers, if the soil is well prepared and sown at the proper time. From the middle of March to the middle of April is about right in this locality if it is to be cut for grain. It grows luxuriantly in the experimental grounds of the University, and the loud hum about it on a bright day tells that the busy workers are gathering its sweets. That from Chinese seed is far more vigorous and persistent in bloom than that from Eastern seed.

Though this article has already reached or passed a reasonable length, I have only touched upon a subject of great importance to many of your readers. There must be others who could give valuable hints from their observation and experience.

C. H. DWINELLE.

University of California, Berkeley.

## How far Will Bees go for Honey.

This is a question upon which our California apiarians doubtless have interesting observations which we should like to hear. In Quinby's "New Beekeeping," a book just published and edited by his son-in-law, Mr. Root, the following is found: The precise distance that bees will fly in search of forage, I am unable to state. Some consider three miles to be the extreme limit, while others place it as high as 12 miles. The most satisfactory results may be expected, if abundant stores can be found within two miles. It is evident that they will work more freely upon blossoms at some little distance, than when these are very near the apiary. If I were to sow anything with a view to a supply of honey, I should prefer that it should not be in the immediate vicinity of the hives. Their flights are evidently modified by local conditions. During the large yield from basswood in 1874, as the blossoms failed in the valley, the bees continued bringing in the same quality of honey, following the basswood day by day, as it opened on the hills, until the first week in August, when they still came in heavily loaded, but very tired from a long flight. I drove to the heights, six miles distant, and found that basswood was there just coming into bloom. I immediately moved 48 swarms to this location, and in the following week these 48 colonies gave me one ton of surplus honey, while the 71 swarms left at home did not secure one-half that amount, yet they continued working upon the same ground during the entire period. This is a fine illustration of the advantage of obtaining forage within a reasonably short distance. I have never had direct proof to the effect, yet there is ground for the belief that, if honey could not be found nearer, bees would not fly the distance named, without being gradually led along by newly opening blossoms as in the case mentioned.

## THE DAIRY.

## Instances of Alfalfa Dairying.

Gen. John H. Shields, of Florence, has a letter in the Los Angeles Herald, defending Los Angeles county as an agricultural and fruit-growing region, and enforces his views by citing several instances of prosperity. We quote: First, is the case of Judge Venable, of Los Nietos. Judge Venable and his partner, Mr. Cheney, have a dairy. Among the facts established in their experience are the following: Forty acres of alfalfa will maintain 80 cows in high milk-yielding state. At eight cents a pound, the extremely low price of cheese, the gross income is 32 cents per cow per day, 64 cents per acre per day, \$192 per acre for 300 days out of the year. The offal of the dairy and the increase of the cattle will pay the expense of milking and making up the cheese. But these results require good stock and wise management. It is easy to figure up the income from 40 acres. Judge Venable's opinion is that dairying is the most profitable use to which alfalfa can be devoted. He thinks the alfalfa land will gradually drift into use for dairying. Considers that the profits of dairying are liable to diminish as the herd is increased say from 50 to 100 cows. Advises the cutting of alfalfa as soon as a few scattering blooms appear. Is convinced that soiling rather than grazing alfalfa is to be preferred. Would rather feed properly cured dry alfalfa hay all year, even at the additional expense, than to graze it. Indeed, all things considered, thinks it economy to feed alfalfa in the form of dry hay. Thinks that at present prices alfalfa pays, while corn, barley and some other products result in loss to the producer. Compares alfalfa with U. S. bonds for safety as an investment. Considers alfalfa preferable as much on account of certainty as on account of greater volume of income when compared with other modes of using land. Believes that gypsum lime, strawing land or plowing in the alfalfa say the third year, to come again, tends to a better original stand in alkaline soil and to preserve it thereafter. When the alfalfa gets ahead of the cattle, which it is apt to do, Mr.

Cheney buys up calves from six to ten months old at from \$5 to \$10 each, which come in as milch cows at about two years old and then sell readily at from \$30 to \$50 each.

The next case is that of Mr. W. W. Orr, of Norwalk. Seven years ago Mr. Orr bought 40 acres of land on a credit at \$20 per acre, or \$800 for the tract. One-half the land is good; the other half is so strongly alkaline that salt grass is about all that it does or will produce. The good one-half of the 40 acres is devoted to alfalfa, vegetables and a few other products. Mr. Orr started seven years ago with this land, two cows, a debt of \$800, a fair capital of will to work, but no cash capital. To-day Mr. Orr holds his land clear of debt, owes no man, has fenced one-half of his farm, has a fine Jersey bull, 30 cows worth \$50 each; 20 head of cattle worth \$30 each; hogs worth say \$200; horses, \$400; wagon, implements, etc., say \$400, and some money besides. Moreover, has supported his family in the meantime. Some of Mr. Orr's neighbors, with an equal or even a better start, are either no better off than they were seven years ago, or are worse off in some cases by the amount of a mortgage debt. One of his neighbors said to be a worthy gentleman, was in the dairy business, and always had ready money more or less, and owed no debts. He quit the dairy for corn, fruit, etc.; also quit having surplus funds, and is now seriously in the mood to resume alfalfa and the dairy.

## New Curiosities at the Smithsonian Institution.

A number of interesting specimens have, according to the Washington Republican, been recently added to the ethnological division of the Smithsonian Institution, among the most important of which are the following: A carved figure of a man's head, made from iron pyrites. It was found in southwestern Mexico, and is supposed to have been an amulet, belonging to a great cacique, during the reign of the Aztecs. The work is highly polished, and presents a beautiful green and gold appearance. The eyes, nose and teeth are brought out in bold relief, the former being composed of opals, which gleam like sparks of fire. The features are of the most pronounced Aztec type. In a large cave, about two miles from Silver City, Col., there were found some specimens of ancient remains, which are supposed to have been made by the Pueblo people. They consist of arrows, which still have remnants of their sinew shaftings, rain gods, and fetiches in carved and painted wood, tribal totems, and bundles of straw bows and arrows. All these articles are in a remarkable state of preservation, and it is thought that the cave in which they were found was formerly used as a burial place. The entire collection was presented to the Smithsonian, and will be placed on exhibition in a few days. Probably the most important relic that has been added to the museum in a long time is an obsidian vase, made from itztle, or volcanic glass. The workmanship on the vase is perfect, not a flaw having been discovered in the work. It represents a monkey in a sitting posture, with his head bent slightly forward. In the back and shoulders are apertures in which articles for ornament were placed. The carving is exquisite, and shows what perfect lapidaries the semi-civilized people who made it were, as the material of which it is composed is considered the hardest to work in, owing to its brittleness. This relic was also found in the Aztec country of southwestern Mexico.

On the first floor, in the main hall, stands another curiosity which deserves particular attention. It is a large case, nine feet by four and one-half wide, containing numerous species of snakes, all of which are alive. Through the top, which is covered with glass, the movements of the reptiles can be plainly seen. The cage is filled with stumps of trees, grasses, ferns and sand, and an artificial lake keeps the ground continually moist. There the reptiles have full sway, and although somewhat repulsive, their cage is always surrounded with curiosity lovers. Some of the varieties are: Coach-whips, indigo or gophers, chicken, black and garter snakes. A king snake is also among the collection, and has to be carefully watched, as he is fond of hugging his companions, and very frequently kills them, after which they make a meal for his highness. This snake is the mortal foe of the rattlesnake, who always comes out second-best in their fights.

The work on the annex to the Smithsonian, in which are to be stored the Centennial exhibits and contributions from foreign governments to the United States, progresses rapidly, a large force of workmen being employed. The brick work on the lower story is nearly completed, and the beams for the floors will be placed in position during this week. Nearly two and a quarter acres will be covered by the new building, and when completed it will be a great ornament. A visit to the Smithsonian will well repay all lovers of interesting and curious relics.

IN THE Auburn (N. Y.) state prison, 900 convicts are under 30 years of age. The warden says seven-eighths of them are there by strong drink.

## A Sandwich Island Volcano.

We take the liberty of giving our readers the following private letter, lately received from a friend in the Sandwich Islands, whose glowing description of a visit to the famous Hali-a-ka-la, in Mani, cannot fail to interest them. All the better that it was written with no thought of the types:

A short time since I, with a party of ten, made a trip to the wonderful crater of Haliakala, on the summit of the mountain of that name. The usual way for excursionists is to make the ascension in the afternoon, stay all night at Summit (so as to be there at sunrise), freeze one side roast the other, and be devoured with fleas, which live and flourish in the lava beds. But our party decided upon what we thought a better way. We left here at a little past midnight, all on horseback, the ladies, all but myself, on the Mexican saddle for safety, and bundled up with every article, thick and warm, that we could command, with a good supply of provisions and water on an extra horse. The night was perfectly clear, the moon shining in all her brightness, while the constellation of the southern cross hung low and brilliant upon the southern horizon.

We were a jolly company, and for some two or three miles were able to keep up a brisk gallop, then our path became narrow and winding, and the ascent quite steep. About two miles this side the summit we halted at the cave to have our saddle girths tightened, to give our tired horses a moment's rest and to bring some warmth into our numbened feet and hands by stamping and pounding, for it was now just beginning to get daylight and bitter cold. From this point on our ascent was quite difficult, and I feared some of the horses would give out entirely. But we kept on slowly but surely and reached the summit just as the sun was rising. We sprang from our horses and stepped into the gap for a first view, and, O, such a glorious sight as met the eye. It was perfectly clear. The sun rising from the clear blue water throwing lights and shadows into the crater—that tremendous chasm, opening over 2,000 feet below us, enclosed with high walls of lava, all once in a molten state, and thrown up from the bowels of the earth by the force and action of heat—was certainly something to contemplate. After the first grand look, we bethought ourselves of the "wants of the inner man." A fire was lighted, and soon our breakfast prepared, which we all enjoyed, especially the hot coffee, then we went exploring about, the air was so light that it was with difficulty I could breathe, and much exertion was very fatiguing. Later in the daylight clouds came up, floating into the crater on one side and out upon the other. Still later the clouds thickened and finally settled around us over both sea and land, and there we were pinnacled, as it were, in mid-heaven, shut out from a view of everything earthly, save the high point upon which we stood. It was to me a strange but beautiful sight to stand there in the clear sunlight and look down upon the clouds so far below us—looking like great snow banks tinted with all the colors of the rainbow by the reflection of the sun. Then, in another direction, we saw the rain falling in torrents, while we stood high and dry above it all. The crater is 19 miles in circumference; there are two gaps or openings through which the descent is made, and through these gaps the lava found its way to the sea when the volcano was in action, which has not been within the remembrance of any one living. It has 40 chimneys, some still red down as far as can be seen as if the fire had but just gone out; and there it stands in all its utter loneliness and barrenness. It is thoroughly dead. You see no vegetable life, save a stunted growth of fern, of the variety call "traveler," and the beautiful "silver swords," which lift their pretty heads up from the black lava, all through the crater. They are of a silvery whiteness, composed of layers of leaves about the shape of a porcupine quill, and these bunched together; in size like a large cabbage, from the center of which extends a stalk two feet long, crowned with a small purple flower like our chrysanthemum. They shimmer and shine beautifully in the sunlight. At a little past noon, our party partook of our remaining cabbages, and then started on our slow march downward, reaching home just at dark, after a day of great enjoyment, but much fatigue.—Work and Play.

JAPANNED WARES IN ENGLAND.—The chief seat of the manufacture of the lacquered, or so-called japanned, ware in England is at Wolverhampton, where at least 100,000 trays and waiters are turned out in a week, when trade is good. Most of these, however common, used to be painted by hand, with astonishing celerity of execution. It was said that a "skilled artist" could with ease paint two gross of landscapes in a day. Most of this common decoration is now effected by the new method of transfer printing, for which, probably, porcelain decoration suggested the idea. The pattern or picture is printed by the lithographic process on fine tissue paper, which is laid face downward on the japanned plate, and adheres to the sticky varnish with which it has been treated. After a time, the paper can be wiped off, but the colors remain, and are afterwards fixed by stoving. A new decorated tin has come into the market printed in the sheet, it is said directly on the metal, with such permanency as enables it to be made up afterwards into canisters and other articles without injury, and this has very much cheapened the production of those articles.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

PETER SAKS & SON, 530 Bush St., S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

## SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

## POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Doves, etc. Eggs for hatching. Send for price list.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine. Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Thoroughbred Berkshire and Poland-China Swine. Light Brahma and Black Cochins Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

## BEES.

JOS. L. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$2,500,000,  
In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

## OFFICERS:

PRESIDENT.....G. W. COLBY.

MANAGER AND CASHIER,

ALBERT MONTEPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

## Grangers' Co-operative Business Association, of Sacramento Valley.

Location: K &amp; 10th Sts., Sacramento, Cal

Dealers in GENERAL PRODUCE, RETAIL GROCERIES, and sale of FRUITS. Desire the co-operation and trade of farmers in general. Pay the highest market rates for all produce, and sell for the smallest profit. Our orders are cash on delivery. Goods shipped; marked C. O. D. W. H. HEVENER, Manager.

## GENERAL INSURANCE

— AND —

## Commission Agent.

## FERDINAND K. RULE,

310 Pine Street, Room 31, San Francisco.

Special attention to Fire, Marine and Life Insurance business.

Insurance placed in none but first-class Companies.

## California Inventors

Should consult DEWEY & CO., AMERICAN AND FOREIGN PATENT SOLICITORS. Established in 1860. Their long experience as journalists and large practice as patent attorneys enables them to offer Pacific Coast inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING AND SCIENTIFIC PAPERS AND PACIFIC RURAL PRESS, No. 202 Sansome St., San Francisco.

50 CHROMO, Gold Border, etc., 10c., no 2 alike, or 20 Cupid Cards, 10c. J. B. HUSTED, Nassau, N. Y.



**Lands for Sale and to Let.****BERKELEY PROPERTY.****Residence and Business Lots**

FOR SALE VERY LOW AND ON EASY TERMS.

The Cheapest and most Desirable Property for Investment or for Homesteads in the State.

Lots worth \$200 sold on installments of \$5 per month.  
Lots worth \$300, \$10 down; installments of \$5 per month.  
Lots worth \$500, \$50 down; installments of \$10 per month.  
Lots worth \$1,000, \$100 down; installments of \$20 per mo.

Within 40 minutes of the business center of San Francisco, reached at an expense of 15 cents for single trips or \$3 for monthly tickets, being a point at which all the important railroads of the State will center, and where the University and other educational institutions of the coast are located. With fine view and delightful climate and its present rapid improvement, all combine to make this the most desirable place to locate.

Give us a call and we will give entire satisfaction, as we have property in all parts of Berkeley, and can sell cheaper than any others. Call on

S. A. PENWELL,

652 Market Street, San Francisco.

Or at residence, cor. 6th and Bristol Sts., West Berkeley.

**FARMS FOR SALE.**

IN THE FERTILE AND HEALTHFUL

**San Pasqual Valley,**  
San Diego County, Cal.

TITLES PERFECT.

The owner (an architect) having recovered his health by a residence of four years in this Valley, is desirous of returning to the city, and so offers the following farms for sale

At a Great Sacrifice:

The Home Farm of 200 acres is well fenced and subdivided. There is beside 600 yards of movable panels,

50 Acres in Alfalfa.

Yielding five and six crops a year. There is an abundance of water on the place for stock, besides running water for garden, orchard, etc., and a one-sixth interest in the S. P. V. Ditch Co. House 28x36, enclosed in a lot 200x180, barn and stable, 54x35, two sheds 24x14 and 18x14, smoke-house, 20x14, with an adobe cellar under it, and every convenience as regards large tanks, etc., for making bacon. The implements are of the best, nearly all new, and in good order. They consist of two farm wagons, 10-foot header, header beds, hay rack, mower, gang plow, single do. harrow, 10-foot sceder and cultivator, small do. sulky rake, two sets of strong harness, together with a lot of other tools, hay, grain seed, etc.

Price for the whole, \$4,000; one-half cash, balance on time at 1 per cent.

For Sale Also,

A farm under cultivation of 116 acres, adjoining the above, suitable for grain, corn or alfalfa, with a one-sixth interest in the Ditch Co., and about one and one-quarter miles of fencing, no other improvements. Price, \$1,200; one-third cash, balance on easy terms.

For Sale Also,

A farm of 120 acres, one-quarter mile from the above ranches, mostly damp land, suitable for a nursery, alfalfa, corn, etc. There is a small house, etc., and a ditch running along its upper side. Price, \$900; one-third cash, balance on easy terms.

The neighborhood is exceedingly healthful and growing. Two schools are in the valley, one within one-quarter mile, and the postoffice within one mile, neighbors with families are all round.

My stock consists of superior brood mares, colts, hogs, etc., and they may be taken at a valuation if wanted.

For particulars apply to **W. B. STEWART,**  
San Pasqual Valley, San Diego Co., Cal.

**Farm For Sale.**

Yields an Income of \$4,000 a Year.

Price, \$10,500.



My Farm and Poultry Business yield over \$4,000 a year. The place—116 acres—with orchard, vineyard and improvements, has cost me \$15,000. The good will of the business is worth fully \$8,000. I will sell the business and farm for \$10,500, half cash, or exchange for San Francisco property. It is a bargain such as is seldom offered.

M. EYRE, Napa, Cal.

Law Office in San Francisco, No. 636 Clay St., Room 25.  
I am in Napa each Saturday and Sunday; other days in San Francisco.

**FOR SALE.**

700 Acres. The Finest Stock and Grain Farm in Northern California.

Price, \$25,000, including Farming implements. The whole under fence.

The Stock upon this farm, all thoroughbred and graded, embracing some of the finest in the State, will be sold at private sale. Among the stock is some that has been awarded different premiums at State and County Fairs.

This is one of the finest opportunities for a man of means in the State. For full particulars apply to

D. B. HAYS,

Real Estate Agent, Oroville, Cal.

**C. C. RODGERS,**  
CALIFORNIA LAND AGENCY,  
Office, 276 First St., San Jose, Cal.

GENERAL LAND, REAL ESTATE, U. S. PENSION AND BOUNTY AGENT.

Will buy and sell Land Warrants; Locate and Survey Public Government Land, Pre-emption Homesteads, Soldier's and Sailor's Homesteads, Timber and Wood Lands, Desert Lands, Etc.

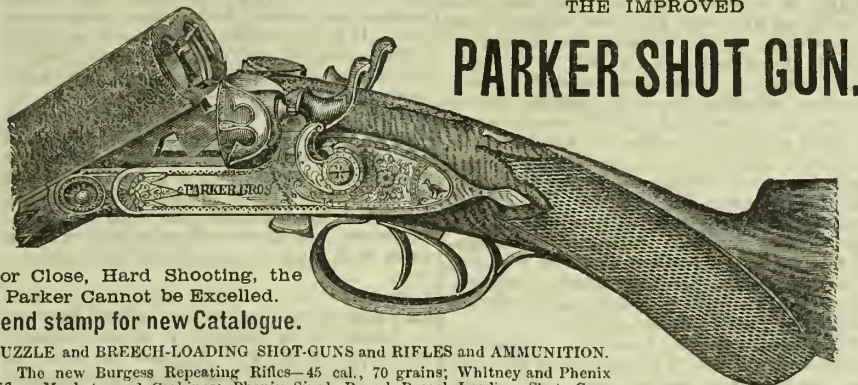
**Secure Patents and TRADEMARKS.**

Through **Scientific Press** Patent Agency.

DEWEY & CO.'S Patent Agency.

OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library containing official American and foreign reports, files of scientific and mechanical publications, etc. All worthy inventions patented through our Agency will have the benefit of an illustration or a description in the MINING AND SCIENTIFIC PRESS. We transact every branch of Patent business, and obtain Patents in all countries which grant protection to inventors. The large majority of U. S. and Foreign Patents issued to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most reliable advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free. **DEWEY & CO., PATENT AGENTS.**

A. T. DEWEY. W. B. EWER. GEO. H. STRONG.

**THE IMPROVED PARKER SHOT GUN.**

For Close, Hard Shooting, the Parker Cannot be Excelled.

Send stamp for new Catalogue.

MUZZLE and BREECH-LOADING SHOT-GUNS and RIFLES and AMMUNITION.

The new Burgess Repeating Rifles—45 cal., 70 grains; Whitney and Phenix Rifles, Muskets and Carbines; Phenix Single-Barrel Breech-Loading Shot Gun; Allen Rifles, 22, 32, 33 and 44 caliber, rim fire, very cheap; Lovell & Sons Revolvers, the best and the cheapest.

**E. T. ALLEN, Agent for Pacific Coast,**

NO. 515 MARKET STREET, - - - - - SAN FRANCISCO, CAL.

**MISSION ROCK DOCK AND GRAIN WAREHOUSES.**

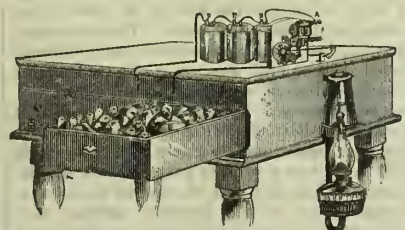
SAN FRANCISCO, CAL.

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

GRAIN consigned to us by water insured in open policy at Special Rates. Wheat shipped by railroads via Stockton, care of the CALIFORNIA STEAM NAVIGATION CO. will be received by them at Stockton and delivered at Mission Rock Warehouse at same rate of freight as to Oakland Wharf. Freight paid, Fire Insurance and Loans effected and proceeds forwarded free of commission. Money advanced at bottom rates, Interest payable at end of loan. Fire Insurance 1% per annum. Short Rates of Storage—First month, 30 cents per ton, or 40 cents per ton if delivered. Each month thereafter 20 cents per ton. Weighing in, free. Weighing out, 10 cents per ton.

**CHAS. H. SINCLAIR, Superintendent,**

Or to the California Dry Dock Co., Office, No. 318 California Street, San Francisco.

**MONEY in CHICKENS**

If You Want to Make Money

By raising any number of Chickens at any season of the year without setting hens, look for the

**ECLIPSE INCUBATOR**

(E. A. SAMUEL'S Patent)

Which will be on exhibition at the MECHANICS' FAIR in this city, STATE FAIR, at Sacramento, SANTA CLARA VALLEY FAIR, at San Jose.

The Incubator will be shown in operation, and its method of working fully explained.

H. W. CALDWELL,

Manufacturer, Waltham, Mass.

**G. G. WICKSON, 349 Market Street, S. F.**  
Agent for the Pacific Coast.

**FARMING LAND**

For Sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

**AMERICAN MACHINE AND MODEL WORKS.**

Experimental and Fine Special Machinery, Planing, Gear Cutting, Patterns, Models for Inventors, etc. Printing Press and General Machine Repairing.

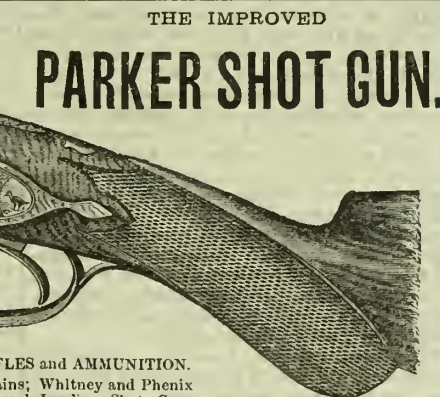
Punches, Dies, Taps, Reamers, etc., made and repaired.

I. A. HEALD, Proprietor.

514 Commercial Street, above Sansome, San Francisco

**AGENTS READ THIS**

We will pay Agents a salary of \$100 per month and expenses, or allow a large commission, to sell our new and wonderful inventions. We mean what we say. Sams free. Address **SHERMAN & CO., Marshall, Mich.**



B. J. SMITH, M. D.,

Professor of Phrenology

— AND —

**MENTAL HYGIENE.**

Proprietor of the Hygienic Medical and Phrenological Institute, 633 California Street, above Kearny.

This Institute has of late been entirely refitted, and is now far more healthful and conveniently arranged for the reception of patients and boarders than ever before, and by combining medical hygiene with the various Water Cure treatments and the most powerful Electrized Horseshoe Magnet in the world, claims to cure speedily and permanently all forms of acute or chronic nervous derangements, Brain, Spinal and Heart diseases, St. Vitus Dance, Palsy, Epilepsy and all Rheumatic, Liver and Kidney troubles. The institution has for the past 20 years made a specialty of treating all forms of weakness and diseases peculiar to males and females. By the use of hygienic remedies and electro-motopathy the worst forms of impotency and seminal weakness in males and sterility in females are speedily and permanently overcome. Hygienic board, with or without rooms. Terms moderate. Electro-thermal, Russo-Turkish and Medicated Baths given daily.

Mrs. Dr. Smith as Matron has charge of the female bathing department.

Dr. SMITH has practiced Phrenology the past 30 years, and during the last 20 years has been constantly using the science connected with Physiognomy, in examining or diagnosing disease in this city, and claims to have made discoveries in the SCIENCE of Phrenology that enables him, by an examination of the head, even blindfolded, to determine the disease to which the person is constitutionally subject, or whether the disease at the time afflicting the person, is the result of accident or hereditary weakness; whether CONSUMPTIVE, DYSPPEPTIC, RHEUMATIC, APOPLETIC, NEURALGIC, LEUCORRHEAL or SEMINAL. Especially does the form of the head indicate the strength of the uterine, genital or reproductive system. The head is also an index of the natural strength of the lungs, heart, stomach, liver, kidneys, spleen, back or vertebra, and it determines the power of the system in warding off and overcoming disease of all kinds.

Ladies or gentlemen, desirous of obtaining a thorough and correct Phrenological examination with Fowler and Wells' charts, will meet with a respectful reception at his consulting rooms. Parties can depend upon a reliable delineation of the character of their intimate male or female friends, by presenting a clearly defined photograph.

Phrenological or Physiognomical examinations without charts, \$1.50; with charts, from \$2 to \$3.

**INVITATION TO INVALIDS**

And all persons who are in any way out of health, who desire to know the nature and cause of their disease, may avail themselves of an examination through phrenology in regard to health free of charge, between the hours of 9 A. M. and 8 P. M. Sundays from 9 A. M. to 12 M.

**Educational.****Washington College.**

The Fifteenth Semi-Annual Term of this Institution will commence on

Thursday, July 31st, 1879.

Catalogues can be had at Bancroft & Co.'s Bookstore, San Francisco, and at Hardy's Bookstore, Oakland.

For further information address

S. S. HARMON,

Washington, Alameda County, Cal.

**HEALD'S BUSINESS COLLEGE,**  
24 Post Street.  
Near Kearny,  
San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, **F. P. HEALD,** President Business College, San Francisco, Cal.

E. CHAMBERLAIN, JR.

THOS. A. ROBINSON



SEND FOR CIRCULAR

**Seedsman.****SEEDS. TREES. SEEDS.**

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco



B. K. BLISS &amp; SONS,

Importers, Growers and dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address

B. K. BLISS &amp; SONS, 34 Barclay Street, N. Y.

**FENCING—CHAPPARAL SEED.**

Parties wishing to experiment in the cultivation of Chapparal as an economical and valuable substitute for fencing, can obtain the seed in 50 Cts. and \$1 packages, at W. R. STRONG'S, Sacramento. Sent by mail.

**EXOTIC F. A. MILLER & CO., Mission St.,**  
**GARDENS.** opposite Woodward's Gardens. Send for Catalogue and Price List.

**PLEASANT SUMMER READING.****THE NEW PENELOPE**

— AND —

**Stories of California Life.**

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. For sale by

**A. L. BANCROFT & CO.**

PRICE, \$2 00.

**Agricultural Books.**

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.



### The Mechanics' Institute Fair.

The Mechanics' Institute fair now in progress at the pavilion is being largely attended, and is in all departments replete with articles of interest. We shall from time to time make mention of classes of exhibits of special significance to our circle of readers.

#### California Productions.

The display of the productions of our agriculture and manufactures allied thereto, made by the *Journal of Commerce Co.*, occupies a commanding position on the right of the main aisle as one enters the pavilion. It is an exhibit which claims the attention of all visitors at the fair; and rightly so, not alone for the inherent interest which pertains to a display of natural productions, but because displays of praiseworthy products are significant of the resources of a State, and their condition of development. The various articles entering into the exhibit are also shown prominently by the aid of proper shelving and other mechanical contrivances, and much time and money have been expended in securing the effects which the visitors enjoy.

Although due credit must be awarded to the enterprise employed in collecting and displaying the items of the exhibit, there is also recognition to be given to every producer who has contributed material, and in our notice of the collection as a whole we shall give prominence to individual contributors.

One of the most attractive divisions of the exhibit is that comprising the growing and fruit-laden citrus trees and banana plants from San Diego county, but to this we have already alluded in a former article. Another collection of growing plants, which is of the highest importance, is that from the College of Agriculture at Berkeley, comprising various cereals, forage, and other economic plants taken from the experimental grounds; together with rare plants intended for test in this climate, for example, cinchona, coffee, and the like.

#### Fruits, Vegetables, Nuts, Etc.

In this department there are some very handsome and praiseworthy exhibits, although the lateness of the season has prevented the assortment from being as complete as desired. The show will, however, be rounded up in this respect by the displays of grapes, etc., which will probably come in before the fair closes. A leading exhibitor of fruit is Sol Runyan, of the Sacramento valley, who shows the famous river fruit in all its magnitude and beauty. His collection of apples, pears, peaches and plums embraces most of the famous varieties and some novelties, as, for example, the Sol Runyan seedling cling peach, a fruit with good points.

General John Bidwell, of Chico, who has done so much to spread the fame of California by his displays at local and foreign fairs, contributes the most comprehensive and varied display of many classes of field, garden and orchard products, grown on the well-known Rancho Chico. His display embraces growths rarely met with, but which promise well for general introduction, together with splendid samples of fruits and nuts of more common occurrence.

Dr. J. Strentzel, of the Alhambra orchards at Martinez, shows some Alexandra apples, a large, showy Russian variety; also, a precocious shaddock, about four inches high, in bloom, in a pot, and a plate of shaddock of orthodox size.

John Reynolds, of Ferndale, sends a jar of Salmon berries, indigenous to our northern coast, and now proposed for general cultivation. They are very large and handsome.

Mr. Rixford, of Sonoma, contributes a novelty in the branch of a Pistacia nut tree; also, Japanese persimmons *in situ*.

Other large fruit exhibits are by L. G. Shresovich & Co., Russ, Meyerink & Co., Spear, Meade & Co., and Gale & Co., fruit dealers, and by the Columbo Market of this city.

Something handsome in melons are two large striped watermelons from A. Cleveland, Bay Island farm, Alameda county.

The exhibit of preserved fruit, pickles, etc., is from the well-known establishment of Sol Wangerheim & Co. of this city, and the San Jose Packing Company. The samples are beautifully put up in glass jars, and show well the progress made in this important California industry, which is making our fruit known to all the world.

Russ, Meyerink & Co., of this city, who have a factory in one of the Mexican ports, show the cases of preserved pineapples which they are now introducing to the trade. The fruit is put up in tin cans and preserved as other canned fruit. The article is new and interesting.

#### Cereals, Flour, Seeds, Etc.

Large exhibits are made in this line by R. J. Trumbull & Co., consisting of usual sale packages of all kinds of seed; also, sample jars of grains and seeds. The Central Pacific Railroad Co. also makes an exhibit of grains in glass jars.

The San Francisco Produce Exchange adds greatly to the display by sending a full line of cereals, flour, seeds, etc., including their standard samples used to determine grade when making sales. These can be studied by producers with advantage.

Hon. G. W. Colby has samples in sheaf and jar of a splendid crop of Propo wheat grown by him on his ranch, near Martinez. This is a grain well fitted to spread our cereal fame.

A fine sample of hullless oats is sent by G.

Hunziker, of Cloverdale. This is a grain which Mr. H. has lately secured, and which he believes has many advantages in point of yield and quality.

Earnest H. Frick, of Centerville, Alameda county, shows a sheaf and sack of the Frick Chevalier barley, a variety developed by him by 19 years careful selection and culture. He took his start from two choice ears he discovered in his Chevalier field, and has now obtained a barley, which for quality and weight of yield, is unequalled.

The Mission Rock Grain Warehouse show samples of grades of wheat, as prepared by them for shipment abroad. This jar is surmounted by a beautiful bouquet of grain heads made by Miss Wood, of Danville, Contra Costa county, and deposited in the Grangers' Bank in this city.

Horace Davis & Co. show a full line of samples of flour as made by the Golden Gate mills for the shipping and local trade.

#### Pacific Coast Woods and Minerals.

The Central Pacific Railroad Co. exhibits slabs of Pacific coast woods as collected by J. R. Scupham, and shown at the Centennial. This exhibit is wide-reaching and complete. The West Coast Furniture Co. have samples of the same woods, highly polished, to show their value in the cabinet-maker's art.

The display of metals and minerals is quite complete, including Oregon pig iron, and the ore from which it is reduced. Pacific coast coals of all kinds are shown by Chas. R. Allen; and in connection therewith are samples of foreign coals, by which comparison between our coal and the imported can be made. The Carbon River Coal Co. show the coal from their mine, together with coke made therefrom, thus claiming that we have a coal which can be coked to advantage, suitable for manufacturing purposes, and can be produced as cheaply as the same is obtained by Eastern manufacturers.

The Colton marble from San Bernardino county is shown both in the rough and polished. Also, samples from roofing slate, contributed by W. H. Martin of this city. Good samples of sulphur can be seen to illustrate our brimstone resources.

#### Mohair and Wool.

A fine display of manufactures from the skin and hair of the Angora goat is made by the Angora Robe and Glove Co. of San Jose. It consists of highly-colored mats and robes, buckskin, morocco, etc. There is also a goat-skin coat, similar to those made for the *Jeanette* Arctic expedition. This exhibit is very attractive.

Falkner, Bell & Co. show a case of wools, cleaned and in the dirt. Also, a case of mohair fleece, and a case of wool samples from different counties, showing the characteristics of each.

#### Wine and Brandy.

S. Lachman & Co., of this city, show numerous samples of wine from their extensive cellars, embracing famous brands which are winning great favor abroad. H. Palmer also shows bottles of his celebrated pure port wine, also other brands. General Nagle, of San Jose, has bottles of his native brandy, which is recommended for its purity by the medical faculty for hospital use, and is thus given preference over the adulterated foreign liquor.

#### The Agricultural Implements Exhibit.

The exhibit of agricultural machinery at this year's Mechanics' fair is in some respects better than it has been for several years. It is true that we miss some of those who have been prominent exhibitors at former fairs, and whose goods we would like to have seen this year, but there was increased effort on the part of others, and the space is all occupied. We are disposed to call this year's display better than usual, because the machines are not shown as "lay figures," but are rattling, rolling, thrumming and roaring away, performing mimic duties with all the precision and fullness with which they do actual work in the field, the grain barn or the warehouse. This, of course, gives life and interest to the agricultural department; it makes a noise in the fair world, and people stop to look at it.

This change in the character of the exhibit is due to the enterprise of Marcus C. Hawley & Co., for they have in their space one of H. W. Rice's strawburning engines which, taking its steam from the main boiler, turns all the machines shown by the firm. This engine of Mr. Rice's is a piece of agricultural mechanism to be proud of. It embodies all his latest improvements, and it is finished in a style which justifies us in saying that it is the handsomest agricultural engine we ever saw. The boiler is neatly lagged with colored woods, the iron work tastefully painted and adorned; the brass well polished, and the machine in every way a model of good workmanship. We have spoken mainly of the finish, because the efficiency of the engine for the uses contemplated has been frequently remarked. The engine was belted directly to a large Gold Medal separator, which was running very smoothly. By means of counter shafts the engine was turning the geared parts of a large header, a barley feed grinder, and a power cornsheller of Adams' self-feeding pattern. M. C. Hawley & Co.'s exhibit also included a champion fanning mill, Buckeye mowers, and a large assortment of plows. There was also within the enclosure handsome specimens of R. I. Knapp's aide-hill plow, made at Half-Moon Bay, San Mateo county, and of which we had good accounts last fall from those who had used

it. It is certainly worth the examination of hillside farmers. It is also well adapted for use as a reversible plow on flat land.

Another firm making a varied and excellent display of agricultural implements is Frank Bros., of this city. Their exhibit is well arranged, and includes many standard and new devices. The most striking feature of the display is a Walter A. Wood's self-binding reaper in full rig, which all those who do not have opportunity to see it in the field should certainly examine with care. This is one of the latest triumphs in harvesting machinery, and is already one of the most famous. Frank Bros. have also a full line of plows, including the Browne gang, and the Browne sulky, and single plows handsomely made and adapted to different requirements. They also show the McSherry grain drill, the La Belle wagon, a hand cider mill, feed cutter, etc. We noticed also the Defiance cultivator, evidently a powerful implement and adjustable to a variety of cultures. The exhibit in general is a very creditable one.

David N. Hawley, another of our well-known implement dealers, makes a display of several popular implements, including the Newton wagon, Meyers' excelsior gang plow, meadow king mower, Archimedean lawn mower, etc. He gives considerable space to an exhibit of scales adapted to all uses, beautifully finished, and so far as we could test them, very accurately adjusted.

A novel device, which will attract much attention, is the fruit picker of L. H. Titus, of San Gabriel, Los Angeles county. It consists of a ladder mounted upon a light truck, and beside it is a large circular hopper of canvas, into which the fruit falls, and rolls into a basket below. It seems well calculated to aid in quick work, and to preserve the fruit from injury.

Another California made implement is Dalton's gang plow, made at the Pacheco foundry, in Contra Costa county. It is well finished, and seems to be well designed for effective work. Many of our local shops are doing good work in plowmaking, and the Pacheco foundry is evidently one of them.

The windmill features of the fair are maintained by the Iron Turbine wind engine, introduced to this State this summer by D. E. Goldsmith, of 419 Sansome street. It has already commended itself to many of our wind-power users, both for its mechanical principles and material employed in its construction, and bids fair to become a popular machine.

There is a good show made of harrows of California manufacture. Gas-pipe harrows, folding and otherwise, are shown in good variety, but without the exhibitor's name attached. Another California harrow is named the "Farmer's Friend" or "Channel Iron Harrow," patented by N. Beauregard, and shown by the agents of J. Smith and R. Hoppe, of 318 Pine St., S. F. It is made in three independent sections, with 24 steel teeth to each section. Thus it adapts itself to inequalities in the surface. The leading points of the harrow are the style of the tooth and its manner of fastening to the bar. As the tooth is grooved or channeled on two sides, it is lighter than the solid tooth and yet strong, and by its shape it keeps itself sharp. Each tooth is held to the bar by an iron strap tightened by threads and nuts. Thus it cannot work loose, but can be loosened and lowered easily when the point wears up. These features are novel, and seem worthy of examination.

Messrs. Hendry & Lennon show an object of peculiar interest in the shape of the first iron casting ever made in this State. It was made in 1850 to replace a broken part on one of the argonautic ships, and if it be viewed in connection with some of the massive casting now turned out from our foundries, one can get a good idea of the progress made in iron founding during the short industrial life of our State. Messrs. Hendry & Lennon also make a show of iron wheelbarrows which is interesting.

Adjoining the agricultural implement department, Mr. Jaimes, of Visalia, shows some of the mechanical appliances of his one-track railway, which is now attracting much attention among those who are considering the construction of cheap railways. He seems to secure a very effective and simple application of power to the work of propulsion, and we trust the value of his devices will soon be demonstrated by the construction of a working one-track line.

#### Other Machinery.

While examining the different exhibits spread out in the most attractive manner at the pavilion, there are certain ones which attract differently disposed people. The ponderous, noisy mining machinery, and the rattling of the agricultural implements, possesses a charm for many, while others prefer the quiet of the more innocent looking exhibits. The machinery is all placed on the right of the pavilion as you come in through the Mission-street entrance. Here are found the iron-lathe machine, engine, pumps, ore-crushers, amalgamators, blowers, type-foundry, threshers, reapers and mowers, corn shellers, and every variety of curious and heavy machinery, in full operation. In the midst stands the large Corliss engine, which furnishes power for the whole, and the Brush electro-dynamic generator, which assists in throwing light upon the subject. The displays of saws of every variety and form, and for every use, and the bright brass foundry work, are to the minds of many as beautiful an exhibit as is that of fine arts in the gallery. Many visitors watch the moving machinery as

if fascinated. The smaller and more modest displays are pleasant to look at, but the almost human intelligence exhibited in the workings of heavy and unwieldy metal is more satisfying to the imagination. The results of machinery, as seen in the iron and steel manufactures worked into shape as if of some plastic material, produces a feeling of content, and every visitor, long after the visit, retains a general impression of the various details, and convince him that he has learned something about the capacities of this coast.

### Fine Arts at the State Fair

The citizens of Sacramento are arranging to have an art exhibition during the coming State fair at that place. A large sum of money will be expended in its formation, and the gentlemen who compose the committee are a sufficient guarantee that business is meant. W. H. Mills, B. D. Kennedy, S. C. Densen, H. H. Pierson, George H. Redding and Norton Bush, form the executive committee, with Wm. F. Coleman of the State Board of Agriculture. A new art gallery connected with the pavilion at Sacramento will be erected, and no means left untried to make a success. The C. P. R. R. will forward all articles for exhibition free of charge.

Communications should be addressed to I. N. Hoag, Secretary of State Agricultural Society, Sacramento, and will receive prompt attention. The State fair opens on the 8th of September, and closes on the 13th, so that applications for space should be made at once.

We learn from the *Record-Union* that the art gallery being constructed on the balcony on the west side of the pavilion is almost completed. There will be 160 feet of wall space added to the space heretofore devoted to the display of pictures. Mr. Norton Bush, who has charge of the business on behalf of the committee, visited San Francisco and received positive assurances from Bradford, Perry, Brooks, Tavernier, Keith, Rix, Deakin, Tojetti, Strauss, Denny, Hahn, Williams and others that they will exhibit. Thomas Hill was out of the city, but arrangements will be made to have some of his work on exhibition. Of these, Bradford, Brooks, Tavernier, Keith, Rix, Tojetti, Strauss, and Williams never before exhibited at the fair. The exhibition of the coming State fair will far surpass any of its predecessors. The very best works of the artists named will be on exhibition.

**BERKSHIRE HOGS.**—Mr. Alfred Parker, of Bellota, San Joaquin county, is one of our oldest and best known Berkshire breeders, and his stock is of an unquestioned excellence. He has now a few choice animals for sale, as announced in his advertisement in another column of this issue.

**PRESSES AND DIES.**—Attention is called to the advertisement of F. A. Robbins, in this issue. Mr. Robbins has been long and well known as a model maker and die sinker and has earned his reputation by good work.

#### Books on Agriculture, Etc.

The following among other books will be sent post-paid on receipt of publishers' prices, annexed:—Tobacco, its culture, manufacture and use, 500 pages, \$3.50;—The Patrons of Husbandry, 500 pages, \$3.75;—The Women of the Bible, 77 engravings, \$4;—Wells' Every Man His Own Lawyer, 612 pages, \$2.75;—American Husbandry, 2 vols., \$1.50;—Gray's Agricultural Essays, \$1;—Langstroth's Honey Bee, \$1.50;—Randall's Sheep Husbandry, \$1.50;—Agricultural Engineering, \$1.50;—New Bee-keepers Text Book, \$1;—Pacific Rural Handbook, \$1;—Ropp's Easy Calculator, \$1;—U. S. Land Law, 50 Cts.;—Woodward's Grapes, Etc., \$1;—Sugar from Melons, 25 Cts.;—Strawberry Culture, 50 Cts.;—Layre's Belles Lettres, \$1;—Holt's Map of California and Nevada, to subscribers, \$1;—Back Volume PACIFIC RURAL PRESS (bound) \$5; unbound, \$3;—Picturesque Arizona, \$2. Address DEWEY & CO., Publishers, 202 Sansome St., S. F.

**PACIFIC RURAL HANDBOOK.**—By Chas. H. Shinn. Published by Dewey & Co., San Francisco, Cal. This little volume, priced at \$1 (post-paid), contains 122 pages of entertaining and instructive matter. It is written for local conditions and local use, but will afford many a hint to dwellers far from the western coast. The subjects are suggestively treated, and will be of evident service in building up amongst its readers that love of rural life and rural affairs which is so conducive to happy living and the pleasant home. It treats of laying out the grounds about the house, the improving of the soil, of irrigation, wind-breaks and hedges, fruit trees and small fruit, shade trees, shrubs, vegetables, flower gardens, propagation, window plants, etc., and contains several tables of desirable plants. This book well deserves its title; it is a rural handbook of horticulture and gardening, and we trust it will be one of a series.—*Scientific Farmer*, Boston, Mass.

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

REDDING, July 12th, 1879.

Messrs. DREW & Co.—Gentlemen:—Have received my letters patent for the bar roller to-day. I am very much obliged to you for your prompt service, and will recommend you to all who may want your assistance. I remain yours, etc., G. MEDINO.

**HOW TO STOP THIS PAPER.**—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

**SAMPLE COPIES.**—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate the copy sent.

**EXTRA COPIES** can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.



## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, August 20th, 1879.

There is rather more activity discernible in most lines of the Produce trade. Grain is arriving in large quantities and ships are loading quickly. Values do not fluctuate much from day to day. Foreign advices still bring reports of unfavorable weather for crops, both in Great Britain and on the Continent. The harvest will be very late, and therefore subject to a chance of many disasters. Foreign prices are still low, because of the large amounts of foreign grain on the way and arriving out.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the day of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday....	8s	6d	9s	6d	9s	5d	9s	10d
Friday.....	8s	6d	9s	6d	9s	5d	9s	10d
Saturday....	8s	6d	9s	6d	9s	5d	9s	10d
Sunday.....	8s	6d	9s	6d	9s	5d	9s	10d
Monday.....	8s	6d	9s	6d	9s	5d	9s	10d
Tuesday....	8s	6d	9s	6d	9s	5d	9s	10d
Wednesday..	8s	6d	9s	6d	9s	5d	9s	10d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1877.....	11s	11d	12s	3d	12s	2d	12s	10d
1878.....	10s	3d	10s	6d	10s	5d	10s	9d
1879.....	8s	6d	9s	6d	9s	5d	9s	10d

## The Foreign Review.

LONDON, August 10.—The *Mark Lane Express* says: A week of warm and sunny weather, although interrupted by an interval of incessant rain Sunday and Sunday night, has done wonders in maturing cereals. At the same time the previous damage cannot be obliterated. An examination of Wheat ears proves the plant to have been starved, not only in the ears, which are short and meager, but they are barren at the base and top. Neither Wheat nor Barley will be ready to cut much before the end of the month. Of Barley there will probably be a better crop if fine weather continues, as, despite gloomy anticipations, it promises by no means badly in some of the southern counties. Scotch advices of the condition of cereals are on the whole favorable, but the lateness of the season causes much anxiety. The smart advance in Wheat of a month ago seems to have quite expended the force, as the enormous shipments from America and very heavy arrivals have quite upset the London trade during the past week. Fine weather also no doubt had a marked effect in depressing prices. It was manifestly impossible to make headway against American shipments, and values consequently declined 1s per quarter for Red, and fully 2s for White on the year, has been of merely a retail nature. Feeding stuffs, however, have been active, especially Maize, which sold freely at rapidly advancing prices consequent upon moderate supplies both in Liverpool and London, and the deplorable condition of English Potatoes for which Maize will have to be used as a substitute. New mixed American Maize has risen 2s per quarter on the fortnight, with very little offering. Round Corn has risen almost equally. Barley, Oats, Beans and Peas have been in good request in London and provinces at 6d@1s per quarter advance on the fortnight. At ports of call during the week trade was quiet for Wheat off the coast at a decline of about 1s per quarter, with a fair demand, however, at the reduction. Arrivals were moderate. At the beginning of the week Maize advanced 3@6d per quarter, but since then it has been quieter and the improvement has been lost. Buyers have been reluctant to operate in forward Wheat in consequence of large shipments advised by cable from America, and the little business done has been at a decline of 6d per quarter. Maize for shipment shared the quieter feeling quoted for arrival cargoes. Barley improved 6d per quarter. Sales of English Wheat last week were 18,594 quarters at 49s 5d per quarter, against 26,234 quarters at 44s 2d per quarter for the same week last year. Imports into the United Kingdom for the week ending August 9th were 1,011,395 cwt. Wheat, and 181,179 cwt. Flour. With a continuance of fine weather in France there is reason to believe the total crop of Wheat will exceed that of last year and afford farmers a fair return. At Mark Lane Monday the supply of English Wheat was small and sales slow at about late rates. Foreign arrivals are excessive and declined 1s per quarter, with fair demand at the reduction. On the whole a good deal of steadiness was observable, as it was reported Sunday's rain had seriously laid crops in some districts. Flour and Barley are quiet. Maize declined 6d and Oats 3d per quarter.

## Freights and Charters.

The *Commercial News* says: Exporters have had no difficulty in obtaining supplies, and the ships loading receive quick dispatch. The transactions for the week show that the market is about the same as last week. Iron ships are asking \$2.10s to Cork, and wooden ships \$2.4s to Liverpool or Havre. Oregon has not drawn on us yet for tonnage, but will have to shortly. Outside business is very flat. We have now 37,878 tons in port loading wheat, and 37,140 tons disengaged. In 1878 at this time the disengaged tonnage footed up 71,236 tons, and the engaged 76,559 tons. The list on the way shows a total of 162,655 tons against 161,173 tons last at this time.

## Eastern Grain Markets.

NEW YORK, August 10.—The markets generally are quiet, yet there is a very fair business doing for the season and prices generally are well sustained. Flour is quiet, irregular and weak. Wheat is in fair export demand and steady. Pork is dull but steady. Lard is active.

CHICAGO, August 16.—The Grain markets have been steady and uninteresting during the week, closing with a tendency to depression in prices, but no marked decline. Sales of October Wheat at 84¢@85¢; Corn, 33¢@34¢; Oats, 23¢@24¢; Rye and Barley very dull, and nearly nominal. Provisions became strong, and at the close there was much excitement, with a strong advance, especially in Lard, rumor being current of a combination to put up prices. Sales of October Pork at 88¢@89¢; Lard, 85¢@86¢. The closing prices for cash were: Wheat, 84¢; Corn, 33¢; Oats, 24¢@25¢; Rye, 40¢; Pork, 83¢; Lard, 85¢@86¢.

## Eastern Wool Markets.

NEW YORK, August 16.—Wool, though quiet, is firmly held, and holders feel confident of the future, and some are asking an advance of 1c at the close. The sales include 120,000 lbs Spring California at 20¢@20½¢; 40 bales do, middle county, 25¢.

PHILADELPHIA, August 19.—Wool is firmer and there is an improved demand. Colorado, 20¢@25¢ for fine and medium; 35¢@37¢ for extra and merino pulled.

## New York Dried Fruit Markets.

NEW YORK, August 16.—Foreign Fruits are slow, except for Currants, which are firm at an advance, owing to cable advices quoting high prices for new crop.

## Eastern Crop Reports.

WASHINGTON, August 15.—The Cotton returns for August to the Department of Agriculture show a slight

decline from the condition in July. The average condition for the whole country is 91—a loss of 2% since July 1st.

The Spring Wheat August returns show that its condition was 82, against 75 in 1878. The northern part of New England and New York maintained their July condition. In the west and northwest there was a general decline, caused by drouth, rust and chinch bugs. The decline is most severely felt in Kansas, where the condition averages only 44. The condition of the whole country is 7% better than last year. The decline during July was only 10%, against 31% in 1878, with increased acreage. Especially in the unascertained territorial area a considerable addition may be expected to the yield of this branch of the Wheat crop.

Tobacco.—The severe drouth which prevailed in the large Tobacco-growing States of Virginia, North Carolina, Tennessee and Kentucky during June and July was a great injury to the crop. The average for the whole country is only 77, against 84 last year at the same date. The prospects are that the September returns will show a decided change for the better.

Oats.—August returns show the condition of the Oat crop at 91, against 100 in August, 1878. They show a slight improvement over the July condition, which averaged only 60. The decline in the Gulf States and in the trans Mississippi States nearly overbalance the improvement in the other sections.

NEW YORK, August 16.—A *Times* special from Winona, carefully written, estimates that the Minnesota Wheat crop will show an average yield per acre in the entire region south of the Mississippi river not to exceed 13 bushels, and the average grade of Wheat within the same limits will be No. 2. An average of 16 bushels per acre is a very liberal estimate for the entire Wheat-growing area of the northern portion of the State, including the most fertile fields of the Red River valley. There is no reason to believe in the slightest superiority this year in northern Wheat over that produced in long cultivated fields of Winona and the adjoining counties. The statisticians think the aggregate yield of Wheat in the entire State the present year will amount to 38,593,944 bushels. This computation will scarcely meet the views of those sanguine gentlemen who recently harvested with their lead pencils a crop of from 45,000,000 to 50,000,000; but with a reasonably brisk foreign demand and fair prices during the coming winter, such as there is every reason to expect, the farmers of Minnesota will be able, possibly, at least, to extricate themselves from the tight quarters into which the extensive failure of last year's crop forced them.

## Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon to-day as compared with the receipts of previous weeks:

ARTICLES.	WEEK. July 30.	WEEK. Aug. 6.	WEEK. Aug. 13.	WEEK. Aug. 20.
Flour, quartersacks..	38,010	35,135	15,343	34,423
Wheat, centals.....	28,630	207,095	234,114	232,446
Barley, centals.....	49,666	34,496	62,942	80,059
Beans, sacks.....	1,239	631	601	335
Corn, centals.....	2,032	2,357	1,304	2,061
Oats, centals.....	4,441	3,864	7,303	6,937
Potatoes, sacks.....	16,339	18,341	12,408	13,787
Onions, sacks.....	703	1,933	1,885	1,341
Wool, bales.....	2,218	1,092	1,223	1,346
Hope, bales.....	96	112	190	168
Hay, bales.....	1,753	1,707	1,585	2,567

BAGS.—The Grain Bag market has taken quite a turn downward, and is considerably demoralized. It seems that there were larger lots outside of the combination than was supposed, and these outsiders have become alarmed and desire to realize. Thus at auction sales during the week considerable lots were sold at \$9.05 per 100, and since then small parcels have been freely offered at 9@9½¢. The combination-makers say that they can stand it, as they bought their stock very low and can carry it over if they need. The advantage, however, for the time being is with those who desire to buy.

BARLEY.—Shipments of fine Chevalier for Liverpool and New York continue. Prices are not materially changed. We note sales of 200 tons choice Chevalier, alongside, for Liverpool, at \$1.70; 75 do choice Feed at 77¢; and 1,000 sds choice Coast do at 72¢.

BEANS.—Low rates still prevail. Bayos have advanced 5c per cwt for the best, but Red Beans have declined 20c per cwt. Sales are slow.

CORN.—The Corn trade is quiet and sales are few. We note sales of 150 sds Small Round Yellow at 85¢; and 500 and 150 do Large do at 82½¢ per cwt.

DAIRY PRODUCE.—Fresh Roll Butter is scarce and firmer at a sharp advance of about 5c per lb. Receivers regard the improvement as permanent, although the market will be ballasted down with the large amounts of pickled roll which is now being largely used. There is the danger, too, of imported New York Butter, for the price there is about 12½@15¢. However, the tide seems to have turned and fresh roll will doubtless command the situation until another season opens.

EGGS.—Eggs, too, have held to the up-grade, and some choice lots have reached 35¢, but 32½¢ has been the usual high mark so far.

FEED.—There is no change in Hay or Ground Feeds. Cargo sales on the wharf have been made at \$9.50 for Barley, \$8.50 for Oat, and \$8 for Wheat.

FRESH MEAT.—Prices are still at the low level. Supplies are abundant and the quality averages very high.

FRUIT.—Our list shows a general reduction of price, because of the supplies which are now coming from nearly all regions.

HOPS.—This week several lots held in the country have come in and have been mainly shipped Eastward by rail. Old Hops generally rule below 10c per lb; there is, however, one choice lot held at 12½¢ in this city. It is probably the best now in the State. Contracts for the new crop are now sometimes made as high as 21c, to arrive. The New York market is reported yesterday by telegraph as follows: "Hops are in good demand at full prices." Emmet Wells, in his report for the week ending August 8th, says of the New York trade:

Our market remains firm and prices strong. Fine qualities are taken up immediately on arrival at full prices. There is a noticeable increase of the common grades. Buyers prefer a good 77, for which they will pay more money. Several bales of the 1879 crop were received on the 7th and 8th; they are of fine quality, and are offered at 40¢, with no sales at time of going to press. A London letter says: The late adverse reports from the English plantations are now fully confirmed. The weather is still very unsettled, and the chances for a full crop are quite gone. Even if we have exceptionally fine weather now, the crop must be short. The market has gone very firm, and many holders have withdrawn their hops from sale.

OATS.—Ordinary grades are unchanged, but there is inquiry for choice Surprise Oats at a considerable advance. Sales of this variety have been made at \$1.60@1.65. We note sales: 62 sds choice Humboldt Feed at \$1.55, and 115 do good do, \$1.45 per cwt.

ONIONS.—The best White Onions do not now bring over 50c per cwt, and are in excess of demand. Red Onions are neglected.

POTATOES.—The prices fixed by the river growers, as described last week, still prevail. Sweet Potatoes are coming in in better quality, and are firm at 1½¢.

POULTRY AND GAME.—Prices are unchanged, and the trade devoid of news.

PROVISIONS.—The Provision market is unchanged, although the demand for Meat products is increasing and trade is more active.

VEGETABLES.—Green Peas are firm at 2c, and String Beans have advanced to 3½¢ for the best. Melons are now in by the cord and are low. A little Asparagus has arrived and sold at \$1.25@1.50 per box.

WHEAT.—The Produce Exchange committees are at work this week establishing the grades to be used in this year's sales and preparing the standard samples for dealers to measure by. Wheat is coming in freely, but sales are comparatively light. A lower range of prices has prevailed in some of this week's transactions, but the average is about the same as last week. We note sales of 100 tons choice Shipping at \$1.60; 700 sds fair Milling at \$1.62; 250 do Coast at \$1.57; 300 do do at \$1.55; 250 do do at \$1.53; and 400 do do at \$1.52 per cwt.

WOOL.—Considerable sales of Oregon Wool have been made at last week's figures. We hear of 200,000 lbs Oregon and Humboldt at 22@26c per lb. The market generally is a little steadier.

## DOMESTIC PRODUCE.

(WHOLESALE.)

WEDNESDAY M., August 20, 1879.

Beans, 100 lb.....	10 @ 20	Soft sh'l.....	16 @ 18
Butter, 100 lb.....	17 @ 20	Brazil.....	12 @ 13
Castor.....	3 @ 50	Peanuts.....	12 @ 14
Peas.....	1 @ 10	Peanuts.....	6 @ 8
Red.....	1 @ 10	Filberts.....	15 @ 16

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10
Almonds.....	1 @ 10	Onions.....	1 @ 10

## GENERAL MERCHANDISE.

(WHOLESALE.)

WEDNESDAY M., August 20, 1879.

Crystal Wax.....	17 @	Pacific Glue Co's	100 @ 90
Eagle.....	12 @	Nestfoot No 1	100 @ 90
Patent Spinn.....	30 @	Castor No 1	100 @ 90

Assorted Pie Fruits.....	2 @ 25	Baker's A No 1	100 @ 90
Table do.....	3 @ 50	Olive, Plagniol.....	25 @ 75
Jams and Jellies.....	3 @ 75	Possel.....	4 @ 75

Pickles, hf gal.....	3 @ 25	Palm, lb.....	9 @
Sardines, q box.....	1 @ 75	Linseed, Raw, bbl.....	78 @
Hf Boxes.....	2 @ 50	Boiled.....	80 @

Merry, Faul & Co's.....	1 @	Cocoanut.....	55 @
Preserved Beef.....	1 @	China nut.....	65 @
do Beef, 4 lb doz.....	3 @ 75	Sperm.....	40 @

Preserved Mutton.....	1 @	Coast Whales.....	32 @
do Beef, 4 lb doz.....	3 @ 75	Polar.....	35 @
Beef Tongue.....	6 @ 50	Lard.....	70 @



## Agricultural Articles.

## The Famous "Entero" 2."

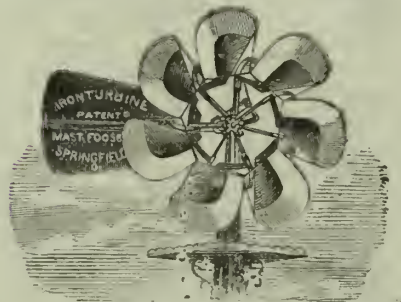
PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.



These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in habitted boxes. Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

**HORTON & KENNEDY,**  
GENERAL OFFICE AND SUPPLIES, LIVERMORE,  
ALAMEDA CO., CAL. Also, Best Feed Mills for sale.  
San Francisco Agency, LINFORTH, RICE  
& CO., 401 Market Street.

## Iron Turbine Wind Engine



## AND BUCKEYE FORCE PUMP.

This machine made of iron, wheel, vanes, etc., made of No. 24 sheet iron, bound and braced with best quality of wrought bar iron, gives more power than any other wheel of same diameter. No wood to swell, shrink, rattle or be destroyed by the wind. The most durable and the best Windmill ever invented. For particulars, price lists, etc., address

**D. E. GOLDSMITH, State Agent,**  
419 Sansome street, San Francisco.

## MATTESON &amp; WILLIAMSON'S



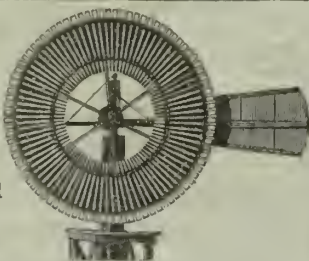
Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

**MATTESON & WILLIAMSON,**  
STOCKTON, CAL.

\$50.

The New  
**Worthington**  
Windmill



Manufactured  
by

**W. D. PARSON,**  
1364 San Pablo Avenue, Oakland, Cal.

Also, maker of the "Colorado Wind Engine," Wind Grist Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern of Deco Well and Artesian Lift Pump Cylinders. Circulars free.

## Anderson's Springs,

LAKE COUNTY, CAL.

Nineteen miles from Calistoga, five miles from Middletown, and ten miles from the Great Geysers; between which and Anderson's Springs there is a good stage road.

## HOT SULPHUR WATER

For Rheumatism, Paralysis, etc.; Cold Sulphur for Dyspepsia, Diseases of the Stomach and Bowels. Scenery unsurpassed. Climate mild and equable. Consumptives generally improve in health, and asthmatics are invariably relieved.

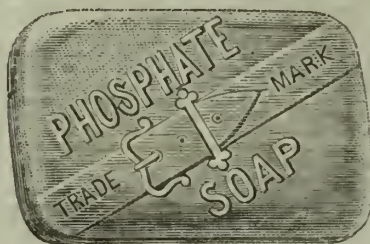
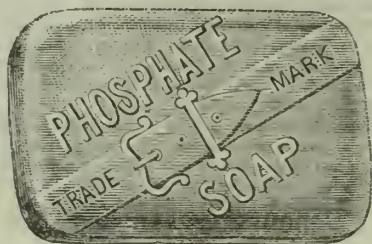
## TROUT FISHING ON THE GROUNDS.

Deer Hunting in the Immediate Vicinity.  
25¢ Accommodations and Cookery good. Board from \$10 to \$12 by the week.

**ANDERSON & PATRIQUIN, Prop's**

# THE BEST TOILET SOAP Ever Made.

## PHOSPHATE SOAP



A superb article for the toilet, beneficial to the skin, giving it a soft, velvety appearance, and leaving a soothing, pleasant sensation after use, imparting a healthy natural and lasting beauty to the complexion. It eradicates the poisonous effects of cosmetics; prevents skin diseases by acting as a constant purifier and disinfectant; if used constantly will cure skin diseases of long standing; is superior to any other article for bathing infants; cleansing and healing for all eruptions on the scalp or face of children; good for the teeth; produces a soft, creamy lather, nicely adapted to shaving or shampooing, removes dandruff, and gives health to the scalp without injuring the hair.

Phosphate Soap is a scientific preparation manufactured from the best toilet soap with potent medicinal agents, which unite chemically with other ingredients. It is cheap, because it wears longer and combines more cleansing, healing and soothing qualities than any other article in the market.

*Cheap toilet soaps, manufactured from rancid and refuse grease, injure the skin, and are really more expensive than PHOSPHATE SOAP, which retails for 25 cents per cake. One cake will last longer than three of cheap, inferior soaps.*

*Natural beauty surpasses anything which can be imparted by artificial means. PHOSPHATE SOAP gives health to the skin simply by removing impurities and eradicating the poisons which give rise to skin diseases.*

*Not only for daily use on the face and hands, but for bathing the entire body, there is nothing equal to PHOSPHATE SOAP. It is a thorough disinfectant and removes offensive odors of every kind.*

*Thousands of articles are palmed off on the public, which have no genuine merit, but PHOSPHATE SOAP is the result of modern discoveries of celebrated chemists.*

*PHOSPHATE SOAP costs no more than other good toilet soaps, while its medicinal qualities make it worth ten times its price to every man, woman and child.*

*For chapped hands, the constant use of PHOSPHATE SOAP will be recommended by all who give it one fair trial.*

*If you want a nice article of Toilet Soap and something that is beneficial to the skin, buy PHOSPHATE SOAP.*

*Sensible girls avoid cosmetics, but use PHOSPHATE SOAP for the toilet, because it is fragrant, pure and pleasant.*

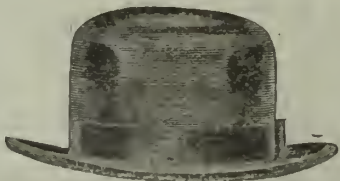
*Ladies who wish to make the skin look beautiful and natural, should use PHOSPHATE SOAP.*

It should be in every house. Sold by all dealers. One cake sent by mail on receipt of 30 cents in postage stamps. A neat box containing 3 cakes sent by mail, postpaid, on receipt of 80 cents. Manufactured by the

**STANDARD SOAP COMPANY,**  
204 Sacramento St., San Francisco.

**WELLS, RICHARDSON & CO'S PERFECTED BUTTER COLOR**  
Gives Butter the gilt-edge color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. **WELLS, RICHARDSON & CO.,** Proprietors, Burlington, Vt.

## HERRMANN'S HATS ARE THE BEST!



Try one and you will Wear no other.

Spring and Summer Styles,

— AT —

336 Kearny St., bet. Bush and Pine,

— AND —

910 Market St., above Stockton.

Send for Illustrated Spring Style Catalogue.

**Dewey & Co.** { 202 San- } Patent Ag'ts  
{ some St. }

Contents of Pamphlet on Public Lands of California, U. S. Land Laws, Map of California and Nevada, Etc.

Map of California and Nevada; The Public Lands; The Land Districts; Table of Rainfall in California; Counties and Their Products; Statistics of the State at Large.

Instructions of the U. S. Land Commissioners.—Different Classes of Public Lands; How Lands may be Acquired; Fees of Land Office at Location; Agricultural College Scrip; Pre-emption; Extending the Homestead Privilege; But One Homestead Allowed; Proof of Actual Settlement Necessary; Adjoining Farm Homesteads; Lands for Soldiers and Sailors; Lands for Indians; Fees of Land Office and Commissions; Laws to Promote Timber Culture; Concerning Appeals; Returns of the Register and Receiver; Concerning Mining Claims; Second Pre-emption Benefit.

Abstract from the U. S. Statutes.—The Law Concerning Pre-emption; Concerning Homesteads; Amendment Act Concerning Timber; Miscellaneous Provisions Additional Surveys; Land for Pre-emption; List of California Post Offices. Price, post paid, 50 cts.

Published and sold by **DEWEY & CO., S. F.**

YOUR NAME PRINTED ON Forty Mixed Cards for Ten Cents. **STEVENS BROS.,** Northford, Conn.

50 Perfumed, gilt edge & chromo Cards, elegant case, name in gold, 10c. **ATLANTIC CARD CO.,** E. Wallingford, Ct.

## Stock Notices.



## SPANISH MERINO SHEEP.

Choice stock of thoroughbred Bucks and Ewes, guaranteed free from disease. Purchasers are invited to examine. About 10 minutes' walk from the Railroad terminus, adjoining State University.

**E. W. WOOLSEY,**  
Berkeley, Alameda County, Cal.

## BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

**JOHN RIDER,**  
18th and A Streets, Sacramento City, Cal.

## ANGORAS AT THE FAIRS.

The undersigned would announce to those interested in ANGORA GOATS, and the public generally, that he will have a lot of

## Choice Angora Bucks

On Exhibition at the State and District Fairs

This fall, namely: At the State Fair at Sacramento, the Golden Gate Fair at Oakland, the Nevada State Fair at Reno, and the Oregon State Fair at Salem.

These Bucks will be sold at fair rates.

**JOHN S. HARRIS,**  
Hollister, San Benito Co., Cal.

## Thoroughbred Spanish Merino Sheep FOR SALE.

Wool Growers and Sheep Breeders desirous of improvement are invited to examine the *Banner* and *Premium* flock of the State. All 1st Premiums taken at State Fair in 1878, with strong competition. No sheep superior in the world. 100 head yearling and 20 head 2-year old Rams for sale, large sized carcasses free from wrinkles. Heavy shearers, long staple of white glossy wool. A few young Ewes also for sale. *Banner* All Sheep warranted free from Disease. Send for circular and price list or come and see us at once. **Laurel Ranch, Hayward, Alameda County, Cal.** One mile from depot on C. P. R. R.

**J. H. STROBRIDGE.**

## RAMS FOR SALE.

400 THOROUGHbred And Graded **SPANISH MERINO** Rams For Sale. Bred from the first importation of Spanish Merino Sheep to California, in 1859.

Prices to suit the times. Residence, one mile north of McConnell's Station, Western Pacific Division C. P. R. R. P. O. address, **MRS. E. McCONNELL-WILSON,** Elk Grove, Sacramento Co., Cal.

## JOHN ROGERS & SONS,

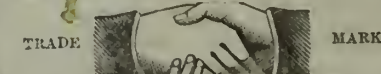
**GENERAL STOCK AND SALE YARD,**  
Corner Market and 9th Sts., San Francisco.

**HORSES and MILCH COWS** sold on commission. Also, dealers in **HAY and GRAIN.** Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

## THOROUGHbred JACK FOR SALE.

For sale, the fine thoroughbred Maltese Jack, "HENRY CLAY," six years old, fifteen hands high, weight about 1,000 pounds. For stock purposes, "HENRY CLAY" is one of the finest animals in California. For particulars, pedigree, etc., address

**J. C. HEDDIN,**  
Bernardo P. O., San Diego Co., Cal.

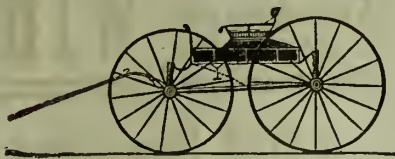


## LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price, \$2 per gallon. For directions and testimonials, apply to **FALKNER, BELL & CO.,** Sole Agents, 430 California Street, S. F.



H. J. HASKELL,



MANUFACTURER OF

CARRIAGES,  
BUGGIES,

— AND —

SPRING WAGONS,

At the Lowest Rates.

Corner of Alameda and White Streets,  
SAN JOSE, CAL.

[NEW ADVERTISEMENT.]

"The Principles of the Republican Party are  
not for a Day, but for All Time."Regular Republican  
STATE TICKET.

Election, Wednesday, September 3, 1879.

FOR GOVERNOR:

GEORGE C. PERKINS.....San Francisco.

FOR LIEUTENANT GOVERNOR:

GEN. JOHN MANSFIELD.....Los Angeles.

FOR SECRETARY OF STATE:

DANIEL M. BURNS.....Yolo.

FOR CONTROLLER:

DANIEL M. KENFIELD.....Tuolumne.

FOR TREASURER:

JOHN WEIL.....Sierra.

FOR ATTORNEY GENERAL:

AUGUSTUS L. HART.....Colusa.

FOR SURVEYOR GENERAL:

JOHN W. SHANKLIN.....Alameda.

FOR CLERK OF SUPREME COURT:

FRANK W. GROSS.....San Francisco

FOR SUPT PUBLIC INSTRUCTION:

FREDERICK M. CAMPBELL.....Alameda.

FOR CHIEF JUSTICE:

AUGUSTUS L. RHODES.....Santa Clara.

FOR ASSOCIATE JUSTICES:

A. P. CATLIN.....Sacramento.

ISAAC S. BELCHER.....Yuba.

JARRETT T. RICHARDS.....Santa Barbara.

JAMES E. HALE.....Placer.

MILTON H. MYRICK.....San Francisco.

E. D. WHEELER.....San Francisco.

STATE BOARD EQUALIZATION—(1st District):

JAMES L. KING.....San Francisco.

RAILROAD COMMISSIONER—(2nd District):

TIMOTHY G. PHELPS.....San Mateo.

FOR MEMBER OF CONGRESS—(1st District):

HORACE DAVIS.....San Francisco.

By order of the Republican State Central Committee.

M. D. BORUCK, Secretary.

W. W. MORROW, Chairman.

J. P. JONES, J. THOMPSON.

JONES &amp; THOMPSON.

Wholesale and Retail Dealers in

Hay, Grain and Feed.

Also, Store and Sell on Commission at

Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will  
receive prompt attention, and returns forwarded as soon  
as sales are made. For further particulars address as  
above,

1535 Mission St., San Francisco.

A Card to Grangers and Farmers.

HAY, GRAIN, HORSES and CATTLE.

The undersigned is now prepared to receive and sell Hay,  
Grain, Horses and Cattle that may be consigned to him at  
the Highest Market Rates, and will open a trade direct with  
the consumer without the intervention of middlemen. He  
also asks consumers of Hay and Grain and Stock buyers to  
co-operate with him, and thus have but one commission be-  
tween producer and buyer. Address S. H. DEPUY, Nos. 11  
and 13 Bluxome St., San Francisco.

ROOMS TO RENT.

Elegantly Furnished, and with Gas and  
Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

## BLACK POINT PACKING AND SLAUGHTER HOUSE.

MERRY, FAULL &amp; CO., Proprietors.

TO OWNERS OF LIVE STOCK!

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging mod-  
erately for killing, delivery and guarantee, and making advances to shippers on receipt at our  
Yards, which are supplied with every convenience. We assure our customers a

SQUARE DEAL and FULL MARKET PRICES

For their product, and invite their inspection of our facilities, which are the best on the Pacific  
Coast. We shall be pleased to give all information in our power as to Market Prices.  
Please address our

Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.

## Nathaniel Curry &amp; Bro.,

113 Sansome Street, San Francisco,



Sole Agents for the

Sharps Rifle Co., of Bridgeport, Co.

FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO.

Also Agents for W. W. GREENER'S Celebrated Wedgefast, Chokebore, Breech-loading DOUBLE GUNS; and  
all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America.  
AMMUNITION of all kinds in quantities to suit.

FOR SALE.

## COMPLETE THRESHING OUTFITS,

Consisting of HOADLEY'S STRAW-BURNING ENGINE, 15 horse power, JACKSON'S REMODELED PITT  
THRESHER, with Feeder, Elevator, Derrick, Forks and Water Wagon,

\$2,500 to \$3,000,

Fully Guaranteed to Equal the Best Improved Outfits in the Market.

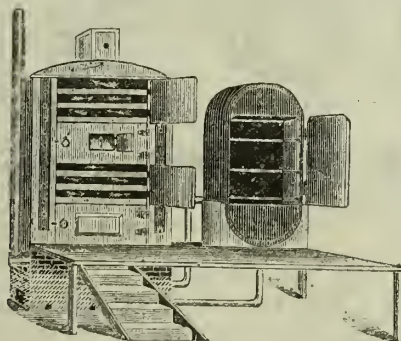
Also, one four-sided, six-inch SMITH'S MOLDING MACHINE, and one HOADLEY WOOD-BURNER 12 horse  
power, at a bargain. Also, new 3½-inch Thimble-Skein Wagons at \$75, and 10-foot WINDMILLS at \$80.

Machine Work and Castings of all Kinds to Order.

— FOR CIRCULARS ADDRESS —

Jackson Agricultural Works,

S. E. Corner of Sixth and Bluxome Streets, near S. P. R. R. Depot, San Francisco.



BUTTS'

IMPROVED ANTISEPTIC "CHALLENGE"

Fruit, Vegetable and Hop Drier  
AND CANNING APPARATUS.The cheapest, quickest and greatest labor-saving Drier ever  
introduced. Retains the quality, color and flavor of the fruit.  
The Canning Apparatus has a capacity of from 500 to 4,000  
cans per day. Machines varying from 500 lbs. to 10 tons capacity  
per day constantly on hand. For Circulars, prices, etc.,  
address

WM. BUTTS, Patentee,

S. E. Cor. Spear and Mission Sts., San Francisco.  
P. O. BOX 1,859.

State, County and Individual Rights for Sale.

In consequence of spurious imitations of

LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins  
have adopted A NEW LABEL, bearing their Signature  
thus,

which is placed on every bottle of WORCESTERSHIRE  
SAUCE, and without which none is genuine.Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper.  
Wholesale and for Export by the Proprietors, Worcester; Cross and Blackwell, London,  
&c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS &amp; CO., San Francisco.

## The New Beekeepers' Text Book.

By N. H. and H. A. KING. The latest work on the  
Apiculture, embodying accounts of all the newest methods  
and appliances. Fully illustrated. Sent by mail, post-  
paid, for \$1. DEWEY & CO., 202 Sansome Street, S. F.

Patents

OBTAINED IN U. S. AND FOREIGN  
COUNTRIES; trademarks, labels and copy-  
rights registered through DEWEY & CO.'S  
MINING AND SCIENTIFIC PRESS Patent  
Agency, San Francisco. Send for free circular

## MONEY TO LOAN

AT LOWEST RATES

On Country Real Estate and Grain in  
Warehouse.

McAFEE BROTHERS,

202 Sansome Street, San Francisco.

Pyrethrum Ciner iae Follum—A California  
Production.THE MOST WONDERFUL DISCOVERY OF THE  
NINETEENTH CENTURY.This wonderful Insect Powder will exterminate Flies,  
Weevils, Caterpillars, Mosquitoes, Midges, Crickets, Cock-  
roaches, Spiders, Tarantulas, Scorpions, Ants, Hawk-bugs,  
Phylloxera, Plant Lice, Moths, Beetles, Grasshoppers, Le-  
cists, Bed-bugs, Fleas, and every species of Insects.  
Remember that none is genuine unless my Trade-Mark  
is attached to every package.

\$100 WILL BE PAID IF IT FAILS TO KILL ANY INSECT.

Endorsed by Prof. F. W. Hilgard, of the University of  
California, and by Prof. C. V. Riley, Chief Entomological  
Commissioner at Washington, D. C., and pronounced super-  
ior to any imported article, and perfectly harmless to man  
and beast.

G. N. MILCO,

Patentee and Sole Manufacturer, Stockton, Cal.

CHARLES LANGLEY & CO., Wholesale  
Druggists, Sole Agents, S. F.

## ARITHMETIC MADE EASY

BY ROPPS

## EASY CALCULATOR.

This valuable work is used by thousands of farmers,  
mechanics and business men, and is highly recommended  
for its practical utility and convenience.It embodies an entirely new system of calculation, by  
which a vast amount of figures and mental labor—required  
by the ordinary methods—and fractions with their com-  
plexities, are absolutely avoided.It is so simple and easily comprehended that even the  
most illiterate is enabled, in a few minutes, to reckon  
with absolute accuracy and speed; while its original and  
rapid methods, benefit and delight the most scholarly.It shows at a glance the accurate value of wheat, corn,  
rye, oats, barley, cattle, hogs, hay, coal, lumber and mer-  
chandise, from one pound to a car load, and for any price  
the market is likely to reach.It gives the interest, simple and compound, on any sum,  
or any time, at six, seven, eight, and ten per cent.; the  
exact measurement of boards, scantlings, timbers, saw  
logs, cisterns, tanks, wells, granaries, bins, wagon beds,  
corn cribs, etc., the wages at various rates, for hours,  
days, weeks and months; besides numerous other impor-  
tant methods, rules and tables.It is printed on fine tinted paper, is well and elegantly  
bound in pocket-book shape, and accompanied by a sil-  
icate slate, pocket for papers, and memorandum, which  
can be replenished in the two latter styles.It answers the purpose of a pocket book and diary, and  
costs no more, although it was gotten up at great expense  
and labor, and is unquestionably one of the most useful  
publications ever issued from the press.

Price, bound in Fine English Cloth, \$1.00.

Sent direct from the Eastern publisher, postpaid, on  
receipt of price, by P. O. order, registered letter or  
receipted by express. Address

DEWEY &amp; CO., San Francisco.

## THE WILSON ADJUSTABLE CHAIR,

With 30 Changes of Position.

Patented in the United States and Foreign Countries.  
BEST CHAIR IN THE WORLD.

Parlor,	Combining
LIBRARY,	Beauty,
Invalid Chair	Lightness,
Rocker,	Strength,
BED or	Simplicity
LOUNGE.	and
	Comfort.

Same Chair in Cane Seating, very desirable for summer.  
Manufactured of the best of wrought iron and rivets.  
Customers made purposely for the Chair. Everything to an  
exact science. IT WILL LAST A LIFETIME.Has been awarded Medals, Prizes and Diplomas for its  
superiority and merit wherever it has been exhibited.Orders by mail promptly attended to. Goods shipped to  
any address, C. O. D. Send for Illustrated Circular.

Address the WILSON ADJUSTABLE CHAIR MFG CO.,

535 Washington St., Boston

M. COOKE. R. J. COOKE

## PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,

AND IN SHOOKS.

Communications Promptly Attended to.

COOKE &amp; SONS, Successors to COOK &amp; GREGORY.

## SEND FOR THE

\$1.50

## Homœopathic Medicine Case.

Containing 12 principal remedies, with directions for  
use. Also Veterinary cases and books. Send for cata-  
logue. AddressBOERICKE & TAFEL,  
Homœopathic Pharmacy, San Francisco.



**Commission Merchants.****DAVIS & SUTTON,**

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCE.—Traders' National Bank, N. Y.; Ellwanger &amp; Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk &amp; Co., San Francisco, Cal.

**BRYANT & COOK,****Commission Merchants,**

AND DEALERS IN

GRAIN, FLOUR, ETC.

No. 8 Davis St., near Market, San Francisco.

CHARLES NAUMAN.

FRANK NAUMAN.

**C. & F. NAUMAN & CO.,****Wholesale Commission Merchants**

— AND DEALERS IN —

GRAIN, POTATOES, FRUIT, BUTTER, POULTRY, EGGS, GAME, ETC.

227 &amp; 229 Washington St., San Francisco.

Consignments Solicited.

**A. GALLI & CO.,****General Commission Merchants,**

AND WHOLESALE DEALERS IN

Tropical, California and Oregon Fruits, Nuts, Produce Butter, Cheese, Poultry, Eggs, Honey, Hides, Potatoes, Grain, Wool, Etc.

516 and 518 Sansome St., San Francisco.

Cash can be drawn for immediately upon receipt of account of sales.

**THE TEMPLE !!**

THE TEMPLE is for SINGING CLASSES.

THE TEMPLE is for CONVENTIONS.

THE TEMPLE is for CHOIRS.

\$9.00 per dozen.

Single copy \$1.00

At this season, when music teachers, choir leaders, etc., are quietly making up their minds as to the best books for use during the coming musical season, it is a pleasure to introduce to their notice so fresh, good and useful a book, as this one by W. O. PERKINS, who now, by the act of Hamilton College, takes on the well-deserved title of Musical Doctor. From the elegant title to the last page, the space is most acceptably filled.

The Elementary Course is ample in quantity, and has numerous new tunes for practice, which practice, indeed, may extend over the whole book.

Abundance of good Sacred Music, in the form of Metrical Tunes and Anthems fills a large proportion of the book, and renders it a good Collection of Church Music. The numerous Glee and Harmonized songs add to the attraction, and make this an excellent work for Musical Societies and Conventions.

Specimen copies mailed, post free, for \$1.00.

**OLIVER DITSON & CO., BOSTON.**

C. H. Ditson &amp; Co., 843 Broadway, N. Y.

**BUY LAND**

Where you can get a crop every year; where you will make something every season; where you are sure of having a crop when prices are high; where you have a healthy place to live; where you can raise semi-tropical as well as other fruits; where you can raise a diversity of grain and vegetables and get a good price for them. Go and see the old Reading Grant (in the upper Sacramento Valley), and you will find such land for sale in sub-divisions to suit purchasers—at reasonable rates and on easy terms. Send stamp for map and circular to EDWARD FRISBIE, proprietor, (on the Grant), Anderson, Shasta Co., Cal.

60 Chromo, perfumed, Snowflake &amp; Lace cards, name on all 10c. Game Authors, 15c. Lyman &amp; Co., Clintouville, Ct.

50 Perfumed, Snowflakes, Chromo, Motto Cards, name in gold and jet 10c. G. A. SPRING, E. Wallingford, Ct.

Prompt Attention to Business.

AURORA, Nev., Dec. 7th, 1878.

Messrs. DEWEY & Co., S. F.—Dear Sirs:—I acknowledge the receipt of my patent per express this morning, and am obliged for same. I do not know what to say to you regarding your prompt attention to business, but will say to my friends what I cannot say to you. Many thanks is what you will get from Yours truly, C. W. LANE.

HICKSVILLE, June 29th, 1879.

Messrs. DEWEY & Co.—Gents:—We have the honor to acknowledge hereby the receipt of U. S. Patent No. 216, 089, on the 19th prox. With many thanks for the energy which you have displayed in handling the matter, we remain Yours most respectfully,

HERBERT &amp; HENRY.

Hicksville, Sacramento Co., Cal.

**PATRONIZE HOME INDUSTRY!****BEAUREGARD'S PATENT****Channel Iron Harrow.****"THE FARMERS' FRIEND."**

This Harrow is the most complete implement of the kind ever brought before the farmers of the Pacific Coast. It combines Strength, Lightness and Durability, and will last a lifetime. Every Farmer will need but to see one to be convinced that it cannot be surpassed by any other Harrow in the market.

Fig. 2.

Fig. 1.

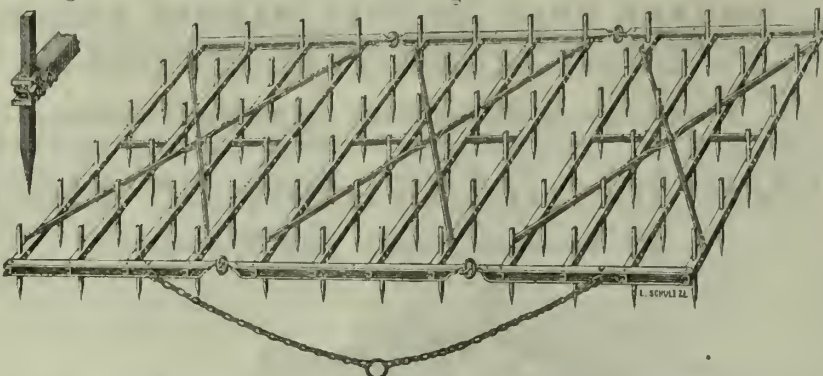


Fig. 3.

In the above engraving, Fig. 1, represents the "Farmers' Friend Harrow," made in three independent sections, with 24 steel teeth to each section. The sections are so hinged together so that they can accommodate themselves to the unevenness of the ground, and yet preserve the parallelism of the bars and relative position of the teeth. Each section can be unhinged by raising one section vertically, in which position the hinges easily separate from each other.

The chief advantage of my improved Harrow consists in the manner in which the teeth pass through the flanges and are secured to the bars. Fig. 2 represents a section of channel iron placed so that the open portion of the channel is on one side with the teeth passed through the two flanges and laying close to the bottom, in which two holes are made, one on each side of the tooth. The tooth is strapped to the bottom of the channel iron by means of a staple bolt, the two extremities of which pass through the holes and are secured to the outside by nuts as shown. In this manner, when the teeth become worn, they can be let down by loosening the nuts, or removed for shipment or sharpening, and can be replaced by any Farmer or ordinary workman. By strapping the teeth to the bottom of the channel iron, I obviate the difficulty heretofore encountered in metallic harrows, viz.: that of keeping the teeth tight. I make these Harrows of all number of teeth, in two, three and four independent sections, which can be used either separately or together. Farmers will find it to their advantage to examine my Harrow before buying.

I also make an improved harrow tooth, shown at Fig. 3 and 4, which is lighter than the ordinary square tooth, and fully as strong. Its great advantage is, that it will always keep its point sharp. This tooth is made of the same size as the ordinary square tooth, and has longitudinal grooves on its two wide sides; the point of the tooth can never present a larger surface than the thickness between the two grooves. The blunting of the tooth will therefore be greatly obviated. I will furnish my Improved Channel Iron Harrow, "The Farmers' Friend," with either the new style of grooved teeth or with the ordinary square tooth. Both kind of teeth are made of the best quality of steel, and manufactured expressly for this Harrow. Farmers will find that these teeth will wear better and last longer than any other harrow tooth now in use.

Farmers of the Pacific Coast, encourage home industry; buy the "Farmers' Friend Harrow," which is made entirely of material manufactured on the Pacific Coast. By giving me your patronage, you will help to develop the iron industry here, and secure a Harrow superior to any imported. My Improved Harrow is protected by Letters Patent of the United States. Farmers are hereby cautioned not to buy any kind of metallic harrow made of channel iron, having the teeth pass through the two flanges and secured as shown, also having grooved teeth as above described, as such are infringements of my patent rights. The "Farmers' Friend" will be on exhibition at the Mechanics' Institute Fair, in San Francisco, and at all the Agricultural Fairs on the Pacific Coast.

**J. SMITH & R. HOPPE,**

Manufacturers and General Agents for the Pacific Coast,

318 Pine Street, Nearly opposite San Francisco Stock Exchange.

Or address N. BEAUREGARD, Patentee, San Francisco, Cal.

AGENTS WANTED IN EVERY COUNTY.

**Celebrated Detrick "E W" 22x36 Grain Bag.**

CALCUTTA, DUNDEE and PACIFIC JUTE HAND-SEWED BAGS always on hand. OUR No. 1, No. 2 and No. 3 SECOND-HAND GRAIN BAGS selected and graded with care.

**TWINES.**

3, 4 and 5-ply for Grain Bags, 6 and 8-ply for Potato Gunnies, 3-ply EXTRA FINE for Flour Bags, made expressly for our trade and QUALITY GUARANTEED.

FLOUR BAGS Printed to Order WITHOUT EXTRA CHARGE. POTATO GUNNIES, Wool, Bean, Ore and Salt and Seamless Cotton Bags.

**Tents, Awnings and Hydraulic Hose.**

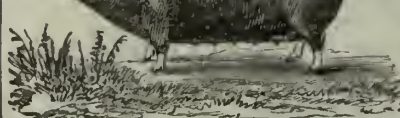
ORDERS PROMPTLY FILLED AT LOWEST MARKET RATES.

119, 121 and 123 Clay St., and 118 and 120 Commercial St., San Francisco.

**A BARGAIN IN BERKSHIRES.**

The undersigned offers for sale for the next 30 days a limited number of Pure Bred Berkshires, aged from 3 to 18 months. These pigs are all bred by myself from stock imported from some of the most noted breeders in the United States, and include several Boars fit for service, and a few choice Sows in farrow, to imported Boars. These pigs are not calls, but the choice pigs of their respective litters.

PRICE LOW FOR CASH.



Hesick, Sacramento; W. C. HOPPING, P. M., Sacramento.

Bellota, San Joaquin Co., Cal.

**TREES**

A large assortment of FRUIT, SHADE, ORNAMENTAL TREES and SHRUBS, ROSES, GREENHOUSE PLANTS, etc.; GREEN RASPBERRY, SNYDER BLACKBERRY, APPLE SEEDLINGS. New Fall Catalogue free. Established 1852. BAIRD & TUTTLE, Agents, Bloomington Nursery, Illinois.

20 Best Chromo Cards, no 2 alike, 10c, or 25 fancy mixed, 10c. name on all. J. B. Husted, Nassau, N. Y.

**RASPBERRY PLANTS Early Prolific and Reliance**

the best. All the newest and best in pots or strong layers. Stock pure and first class. Prices low. See new list. Address, GIBSON & BENNETT, Woodbury, N. J.

60 Elegant Perfumed Cards, Chromo, Motto, Lily, Etc., 15c. Gift with each pack. H. M. SMITH, Clintouville, Ct.

**Baling Fencing Telegraph Telephone Galvanized****WIRE****Barbed Fence Wire.**

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the Trademark.

**A. S. HALLIDIE**

Wire Mills.

Office, No. 6 California St.

SAN FRANCISCO.

**WIRE ROPE and CORDAGE**

Of every kind on hand or Made to Order.

**R. J. TRUMBULL & CO.,**

SUCCESSORS TO

**R. J. TRUMBULL,**

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS and BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

\*"Guide to the Vegetable and Flower Garden" will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

**R. J. TRUMBULL & CO.,**

419 and 421 Sansome Street, S. F.

**A New Forage Plant.****THE GREEN VALLEY GRASS.**

The WONDER of the NINETEENTH CENTURY, yields 10 to 14 tons of hay per acre, and from 3,000 to 4,000 bushels of roots, which far excels artichokes as feed for hogs.

Grows without Irrigation.

For price list of seed and roots, address

**ARTHUR TAYLOR,**

Watson, Atchison Co., Mo.

**CHEAPER YET!****Tension Sewing Machines!**

A large number of nearly new genuine SINGER, WHEELER & WILSON, HOWE, WOOD, WILSON, GROVER & BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

NO TENSION MACHINE.

**Wilcox & Gibbs' S. M. Co.,**

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.

**STEAM ENGINE.**

For sale, a second hand engine in perfect order, mounted on good wagon. Suitable for a shingle mill or a portable saw mill, or for mining purposes. It is the LARGEST PORTABLE ENGINE IN THE STATE, too large for threshing. Will be sold very cheap, with reasonable time for payment if properly secured. Call and see it at

RICE'S ENGINE WORKS.

56 Bluxome Street,

Near C. P. &amp; S. P. R. R. Offices.

**F. A. ROBBINS.**

MANUFACTURER OF

Canners and Soap Makers' Presses and Dies, JEWELERS' TOOLS.

**ELECTRICAL and MODEL MACHINERY.** No. 7 First St., San Francisco.

This paper is printed with ink furnished by Chas. Eneu Johnson & Co., 609 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 120 Sutter St., S. F.



# PACIFIC RURAL PRESS

Volume XVIII.]

SAN FRANCISCO, SATURDAY, AUGUST 30, 1879.

Number 9.

## The Victoria Regia.

The reigning queen of water lilies, shown in the engraving on this page, is of interest, both for its rank in the plant kingdom, and from the fact that it is now flourishing in California waters, having been successfully grown from the seed in the Golde Gate Park Conservatory in this city. A large artificial pond has been especially devoted to the fine plants secured, and they are now in vigorous growth of leaf and flower, the pride and admiration of San Franciscoans.

The Victoria Regia leaves are from six to eight feet in diameter, and the stem which bears them up is a hollow tube as large round as a stout woman's wrist. From the stem ribs shoot out which are two inches in depth and regular compartments are formed by intersecting ribs, resembling nothing so much as the frame work of a house. Spines project downward from the ribs, which are very sharp, necessitating wary handling. The leaf is green on the surface, and a purplish red beneath. The fleshy part is very thin and delicate, so much so, indeed, that the least impression will puncture it, while the leaves as a whole, thanks to the compartments underneath, which are filled with air, is very buoyant and capable of sustaining astonishing weight. A healthy baby 12 months old may be laid on one of them with security, and a plank stretched over two of them will bear up easily a full grown man. Its growth under the water is exceedingly interesting, as each day the leaves shoot out and make for the surface so fast as to create the delusion that one can see them moving or lengthening. Around each leaf, when fully developed, is a rim, which gives it the appearance of an immense floating dish. A niche or opening in this rim is a curious natural provision against disaster. Should the water at any time be disturbed, and the leaf be endangered by shipping too heavy a sea, this outlet happily proves a safety valve.

The flower of the great queen lily possesses many interesting features. It is from ten to twelve inches in diameter. It lasts in perfection only two days, but the rapidity with which they succeed each other on a healthy plant makes amends for their brief existence. They bloom only at night.

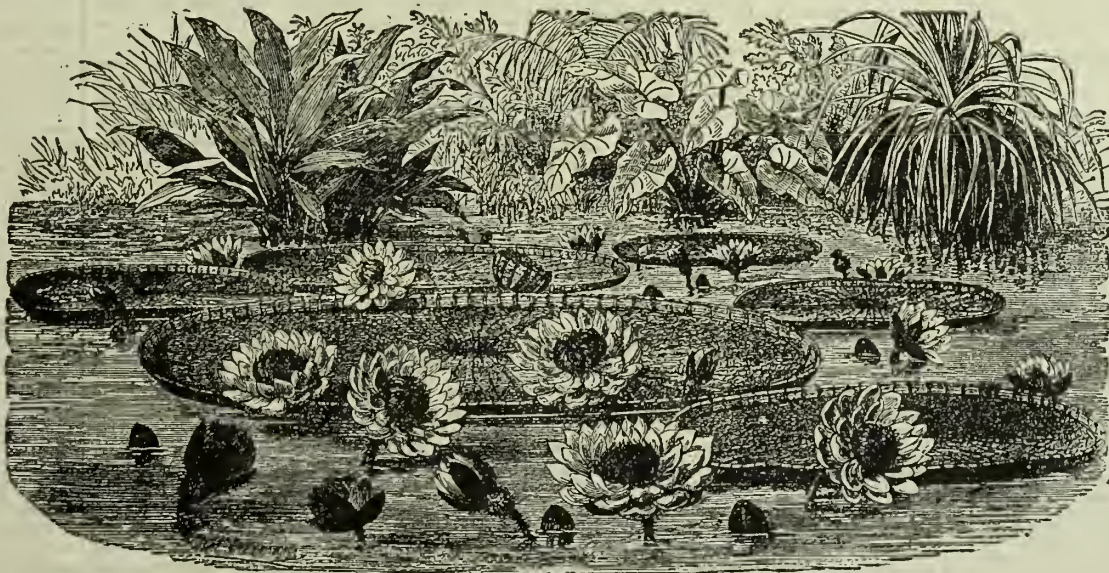
About twilight the petals open with a sudden jerking motion, one after the other, and close up promptly at daybreak. On the first day the flower is pure white, which changes on the second to an exquisite shade of rose pink. These flowers are very rare even in England, the country of their adoption, and £60, or \$300, is a moderate price for a fair specimen.

A lady of our city, Mrs. Anna Gettz Lucas, has made an especial study of the Victoria Regia, having ably reproduced the flower in wax. She has also compiled many interesting facts from the literature of the lily, and from her writings we shall take the following facts: The Victoria Regia, though indigenous to the climate of tropical America, growing in its magnificent beauty in the river Amazon and its tributary streams, is claimed as an English production, was named for its reigning Queen, and brought to the Royal Gardens at Kew; successfully cultivated also at Chatsworth by the Duke of Devonshire early during Victoria's reign. Its original discoverer was a German scientist named Henke, who found it growing in the marshes beside the Rio Mamore, a branch of the Amazon river, as early as the year 1801. Sir R. H. Schomburgk made a scientific visit to British Guiana, January 1st, 1837, and while sailing in a canoe up the river Berbice, he was astonished to see, for over a mile of water, that the whole basin of the river was overspread with huge, round, curiously margined leaves and hundreds of magnificent, white and rose-tinted flowers, each measuring over a foot in diameter, scenting the whole atmosphere with a rich perfume like the pineapple. The natives called it "Y'repa," or Wat-

ter Platter. The plants at Kew flowered in 1851, and between June and November produced 61 flowers.

The root is a large spindle-shaped tuber, with bundles of fibrous rootlets attached, which appear with every bud and leaf. The leaf is a bright green above, and a dull crimson below, with a rim several inches in width. The ribs are very prominent, almost an inch high and are eight in number, with similar ones branching off from them. The stem is in the center of the leaf, fully an inch in thickness, and has a brown, thorny appearance. The leaf is produced in a cycle of five. Twenty-five or 26 leaves appear before the flower bud. The leaf is from 10 to 13 feet in size; the flowers from 12 to 18 inches.

The flower stem is over an inch thick near the calyx, thickly studded with thorns about an inch long. The calyx is four-leaved, upwards of seven inches long and three inches broad, thick at the base, creamy white side, reddish brown and thorny outside, measuring from 12 to 17 inches in diameter. The pistils and stamens are numerous, the stamens growing like pointed scales around the pistils, the outside row, 30 in number, forming a crown around the rest. The color of the stamens is a brilliant yellow tipped in crimson. The flower petals



THE VICTORIA REGIA—NOW IN BLOOM AT GOLDEN GATE PARK, S. F.

are from 50 to 60 in number, or three distinct sets, each growing smaller near the stamens. The first row next the stamens are of a brilliant rose color, spotted and flecked with crimson. The fruit, when ripe, is half as large as a full-sized human head, and is full of seeds. The natives of South America call it "mayz de l'agua," for from its seeds a farina is produced from which a paste cake is made, which they consider a luxury.

The first flower raised in the United States was at Springbrook, the country house of Caleb Cope of Philadelphia. His plants were raised in 1851, and the same plants lived for several years. One of them flowered 200 times. The plant was exhibited in 1865, near the Central park, New York, and during that summer produced 70 flowers.

The plants now growing at the Golden Gate park, seems strong and vigorous, likely to produce magnificent flowers, the conditions of this climate being favorable to its growth. It is grown from seed raised in London.

Popular interest has been greatly increased in the plant from the fact that large leaves, cut from the Park stock, are now shown in a tank at the Mechanics' fair in this city, and attracted much attention. When the flowers are opening at the Park the conservatory is kept open until midnight and lighted so that the people can visit the lily queen. Her votaries have been many, and Victoria Regia may be proclaimed the belle of the hour.

LORD DUFFERIN will succeed Sir Edward Bulwer Lytton as Viceroy of India.

TESTING NEW VARIETIES OF WHEAT.—The Royal Agricultural Society of England has undertaken to test the various new varieties of wheat, and offers two prizes of \$125 and \$50 each for distinctly new varieties of wheat which shall combine the largest yield of grain and straw per acre, with approved form and size, smooth and thin skin, full and white kernel, and high specific gravity in the seed, and with bright, firm and stiff straw. The prizes will in respect of soil and climate. One sack must be awarded for the best varieties of the crop of 1880, thus cultivated under the Society's auspices, if in the opinion of the judges they possess qualities which entitle them to distinction. The produce of the experimental crop of 1880 will be the property of the Society, and will be offered first to the competitors who submitted the seed. The Society also offer prizes of \$125 and \$50 for newer and improved varieties of wheat upon the same conditions as those enumerated before, except that the sample sacks shall be delivered by October, 1882, thus giving time for the development of an uniform and permanent variety. It would be well if we had some such inducement to test wheat in this State, for tests must be under our conditions to be of direct value here. We have a good many

## Levee Pests and Plants.

The walling out of our fickle rivers by levees of earth is one of the problems which are presented not only to the river-side ranches but to several of our municipalities. The problem is being attacked therefore both by rural and urban wisdom, and the possessors of each may profit by the researches of the other. Therefore we would tell our agricultural readers of some investigations lately made by Mr. Basset, City Surveyor of Sacramento, and reported by him to the city fathers. He says he found all the levees in good condition, so far as injuries from the floods of previous years are concerned, there being no breaks or points that have sustained any injury by wash from the waves or currents that have not been fully repaired; but he found the north levee pretty generally covered with a thick growth of weeds, and in many places badly riddled with gopher holes. At these places these animals are burrowing and extending their holes into and through the levee in all directions, and placing the city in danger from a cause similar to that which caused the break at Lovedall's in Feb., 1878.

In view of these facts, which are doubtless found elsewhere than on the levees of Sacramento, it is interesting to read the method the surveyor recommends to remedy the evil. He advises that the levee be completely cleared of weeds as soon as possible, and a man placed there as long as may be necessary to poison and destroy, by every means, the gophers, both in the levee and in the land adjoining. After the gophers have been exterminated, and after the fall rains have set in so as to moisten the ground, these gopher holes should be dug out to a depth of three or four feet, and then tamped in with fresh earth.

The report of the surveyor furnishes another testimonial to the folly of sowing alfalfa on levees, which has often been remarked before. He found one levee sown to alfalfa, and the levee badly riddled by the gophers. He recommends that the alfalfa be killed out by cutting off the roots several inches below the surface of the ground, that the gophers be exterminated, and their burrows dug out and tamped with moist earth.

The use of Bermuda grass for levee planting, which was urged in the PRESS two years ago, seems to be well approved by Sacramento experience. The surveyor says: "The Bermuda grass which was started last spring is doing well, and will by the end of another season form a sod which I am satisfied will be capable of withstanding the wash of waves equal to those of the great wind storm of two years ago."

PANICUM SPECTABILE.—This plant which is now being tried in Fresno and Alameda counties by our correspondents, will doubtless declare its adaptations ere long in their reports to the PRESS of the season's experience. The same grass has been taken from New Zealand to Australia. A writer to the Adelaide Observer makes this allusion to it: Among grasses which should receive more attention than has already been given it, is that vigorous grower, *Panicum spectabile*. Although it dies down in the winter season, the roots, which penetrate deep into the soil are never injured in the Auckland district with the winter cold, and each spring they send out fresh and vigorous shoots, even when planted in comparatively poor soil. Throughout the summer its growth is most luxuriant; it flowers and ripens its seed freely, and may be regarded as thoroughly acclimatized. At the edges of streams and water-courses, where the soil is liable to be cut away with the running water, it will prove of great service, as, if planted there, in a short time it will make such a matted mass of roots as will go far to preserve the banks of creeks where it is planted.

experimenters in the improvement of wheat and other grains, but no way to draw out and compare their work. If our State Agricultural Society would undertake something of this kind, it would win the interest and approval of all practical grain growers.

HAY DRIERS AND FLAVORERS.—No more eloquent tributes could be paid the weather in England than some of the paragraphs we are now reading in our London exchanges. In one column is a detailed account of successful experiments with Mr. Gibbs "hay drying machinery," and in another column is a notice of Mr. Bowick's "hay flavorer," which is said to "find favor with those who have lost the natural flavor of their hay by continual washing in the field. They will find inferior fodder thus made palatable and good." English law is very sharp in pursuing adulterations in human food, and we certainly think a cow parliament should be summoned to take some action on this movement, which promises to doctor up worthless hay with spice and extracts until the wisest cow will dine on rubbish and imagine herself in newly mown meadows. But what can be expected of a country which has to dry hay by a system of machinery which draws the wet, musty stuff over a heated surface until the excessive water is expelled? Doubtless spiced hay is better than none, so far as the cows are concerned; but what of the profit in dairying which has to toast the grass and butter it before it is fit for use. Verily a dry country has many advantages.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds

### Alfalfa Growing.

How many acres will 100 pound of alfalfa seed sow? What is it sold at per pound? When shall I sow, autumn or spring? Give me general information, etc.—W. K. S., Frelsburg, Texas.

EDITORS PRESS:—The above questions were addressed to the Secretary of our Grange, and presented before a meeting for the purpose of drawing out general ideas on alfalfa—its growth and sowing. As some of our members make it a specialty, a review of their experience may be of general interest. Therefore I send the following notes of the discussion:

The question as how much seed to sow per acre: 20 pounds is considered sufficient for all general purposes—price per pound, 12½ cents, or at the rate of \$2.50 per acre. This amount with good sowing, in well prepared land, will stool sufficiently to cover the ground and bring a heavy crop.

The operation of sowing was set forth as follows: Plow to the depth of 7 to 10 inches; harrow smooth; sow the seed the same way of harrowing the last time—as many of the seed will fall in the depressions furrowed by the teeth. Cover the same with a brush harrow thickly matted—cross ways only.

As to the best mode of sowing, opinions differ. Some advocate sowing by hand, as they think one can spread it more evenly and not lay it too thick. Others preferred drilling and using the broadcast sowers.

The mixture of other seed was a help in scattering it more evenly, and sowing more easily. Some adopt the plan of sowing Chile wheat, well mixed, 100 pounds per acre. The advantage gained is by cutting a good growth of hay, and the wheat as a protection and shade for the young alfalfa during spring from frost.

As to the time of sowing, the general impression favored spring; in the month of March. Some prefer the fall, after the first rains. The difference is caused by quality and situation of soil.

What effect has overflowed water on the plant? What length of time will it stand without injury? The overflow of our rivers has tested the subject. Water lying or running on clay land from one to three feet for two weeks is known to kill the plant; but it will survive this in deep sandy loam. Fields lightly overflowed, when no sediment falls, is a real benefit, both increasing its growth, as well as killing off gophers and squirrels.

#### The Effect of Burning the Surface.

When land becomes foul with weeds, many cut the surface clean, rake in windrows, then burn. Other land has been burnt without cutting. In either case the result has been good. The latter may kill the unprotected eyes of the plant, still plenty are left to fill their places. It has been observed by one, that on the live of the burned windrows, the growth was larger and better than where the fire did not reach. In the other case the owner felt uneasy at first, supposed he had killed it; but it produced a far heavier crop than any previous one.

The question of cradicking alfalfa was touched, various methods were broached, and opinions and practical ideas were given. One contended that hogs were a good exterminator. Another advocated cutting deep down with a plow so as to cut off the crown entirely. One had tried both and failed, as there are multitudes of eyes with strong roots to appear again. His plan was first to plow the land during the heat of the summer, allowing it to dry as much as possible. In January he plowed again—still deeper; then work up the land in good order and sow wheat thickly. The stoolings of wheat and thickness of roots spread over the soil, takes up the nutriment, and gradually starves out the plant. It partly destroyed the growth the first year, and the second year with thorough plowing and thick seeding with wheat again, finished it entirely.

Sacramento, Cal. GEORGE RICH.

### Dodder and Alfalfa.

EDITORS PRESS:—In reference to Mr Dungan's complaint and your comments in the RURAL PRESS of August 16th, and his inquiry if there be no law to punish such deception as was practiced upon him, I must say that it surprises me that there should be any doubt on the subject. If the dealer knowingly and wilfully sold dodder for alfalfa he would be liable criminally; but even if sold innocently, if he believed that the alfalfa seed were pure and good, he is liable for damages in the case described by Mr. Dungan. The measure or amount of damages is the difference in value between the six acres of dodder and the same six acres if the seed had been pure and the land were covered with alfalfa.

Mr. Dungan has his remedy and can compel the vendor of the seed to pay him the amount or value there stated.

In one case where a farmer purchased from a seedsman seed alleged to be that of a peculiar variety of beet, and after planting and cultivating the crop proved to be an inferior and totally

different variety, the farmer recovered the difference in value between the crop of inferior beets actually raised and a crop of those beets the seed of which he had contracted for. If seedsmen were mulcted in damages for such sales, whether the sale were fraudulent or innocent on their part, it would soon cease to be profitable to sell any seed not true to name and as represented. Though I am a lawyer I have no desire to encourage litigation; but I am also a farmer, and when a farmer asks if he have no remedy in such a case as Mr. Dungan's, I answer that the law gives him a remedy complete and satisfactory.

M. EVRE.  
636 Clay street, S. F.

## HORTICULTURE.

### Orange Growth by Irrigation.

EDITORS PRESS:—In your very excellent journal of the 9th inst., Mr. J. C. Frisbie, of San Diego, inquires if orange, lemon or lime trees irrigated while in bloom drop their fruit. As the season of blooming for the trees mentioned is during the rainy season we here have had no experience except in some rare instances of blooming "out of season."

In the issue of the 16th inst., B. B. R., of San Francisco, propounds a number of questions, which I shall endeavor to answer *seriatim*:

"How often should an orchard of orange and lemon trees on mesa or plain lands with a rocky or clay subsoil in a climate where the rainfall averages 18 inches be irrigated?"

The lands described are in my opinion the very best and most desirable for orange culture. Such lands, if thoroughly and properly cultivated in due season, the soil kept thoroughly pulverized and free from weeds, will need but little if any irrigation whatever.

"How soon in the spring should this irrigation commence?"

Not until the trees present visible evidence that they are beginning to suffer for water, which an experienced horticulturist can detect at once by the general appearance of the tree; more particularly by the leaves shrinking and beginning to curl.

"When should irrigation cease?"

I would not advise irrigating after October and perhaps the last of September is late enough, in order that the last growth of the season may have ample time to ripen and harden up sufficient to withstand the frosts of the season.

"In what way should the system of irrigation differ if the land on which the orchard was planted was a deep sandy loam?"

Usually sandy or sandy loam lands require more irrigation than the quality of lands above described, because of the tendency to seepage generally experienced in sandy lands. However intelligent the observation of the condition of the trees at frequent intervals is the surest and best guide, no general rule can apply to the diversity and grades of soils in our State.

"How should irrigation differ as between young growing trees and trees that are bearing?"

Young trees require less water than bearing trees. The longer the tree, the more wood and fruit, the more moisture required to feed the tree to maintain its growth and the perfection of its fruit.

I hope the above notes may be of some value to those inexperienced in the culture of semi-tropical fruits.

You can put my name down as an earnest advocate of a State Horticultural Society, and say to Mr. Shinn that I heartily endorse his article on the subject in the PRESS of the 16th inst.

T. A. GAREY.

Los Angeles, Cal., Aug. 20th.

### Notes on Budding.

EDITORS PRESS:—Budding, which is a branch of propagation which, when I commenced to practice it in this country surprised me, as the style was somewhat different from what I learned in one of the highest, best English agricultural colleges, where the pupils were thoroughly, practically and theoretically instructed. Every alternate day we were drilled in the school room, and the next day we were given outdoor practice. The difference in the systems was the extracting of the wood from the bud, which is not done in this country, except to some few kinds of fruit trees, as the orange for example. Budding is far preferable to grafting for the improvement of trees. It is done at a less busy time and done more quickly, and your tree is not all cut down for it as for grafting. It may, if it fails the first time, be done several times at this time of the season.

Before you commence either on fruit, rose or any stock, by sure to procure a regular budding knife with ivory or bone handle made to open the incision when made in the bark in the shape of the letter T. Have a keen, good edge, and see the bark separates freely.

The best buds are generally about one-third of the way from the top of the branch, which should be cut and cast away. Keep your stock of buds in a wet cloth or sack handy to use.

I consider the best tying stuff is cheap calico,

about 10 yards for a dollar. Have this cut in strips tape-like.

After the careful insertion of the bud tie the seams well and closely together, and wrap it well over the cut leaving the eye of the bud free; examine in 10 days to two weeks, and, if a success, slack the tying a little when the bud is about an inch grown.

In tying I prefer beginning below and tie up, as this is shingle-like and keeps out wet, and seems to be the best method.

When budding is done late in the season the tying is left on the bud which remains dormant until spring. A dead or unsuccessful bud is easily seen, as it shrivels and dries out.

As soon as the bud is well forward cut back the upper part on which it is budded, and give the bud full scope. I recommend cutting it two buds above the inserted buds, in case the upper part should decay after cutting, until the bud and tree is in full vigor of growth; and your work is done—so far successfully.

WM. J. O'BYRNE.

Merced City.

A NEW OIL FRUIT.—Dr. Eugen Wildt publishes the results of some experiments in the cultivation of the *Lallemantia Iberia*, a plant of the labiate order, whose seeds are distinguished for their richness in fat, on account of which property they are used both for food and for lighting purposes in the northwestern districts of Persia. According to a translation in the *London Farmer*, the seeds cultivated by Dr. Wildt were obtained from the late Prof. Haberlandt, of Vienna. They are black externally, with a white eye, and much resemble sunflower seeds in size and shape. The sowing was carried out in April, and the 18 plants which germinated were transplanted on May 18th on to a plot of land four meters in length by half a meter in width. The liberal space thus allowed for their growth led to the formation of a great number of side shoots, which matured very irregularly, so that the fruit of the main stem was already fully ripe, while that of the subsidiary shoots was in the flower stage only, or at most still quite unripe. The crop was got in on September 7th, and yielded 225 grammes of seeds and 600 grammes of straw and husk. This having been grown upon two square meters of ground, is at the rate of 1,125 kilogrammes of seed and 3,000 kilogrammes of straw and chaff per hectare, which represents about the highest yield obtained from any other oil fruit. An analysis of the seeds showed their proportion of fat to be comparatively small, but that of protein substances to be much higher than in any other oil fruits known. The straw was distinguishable for the remarkable amount of albumen it contained. The proportion of mineral matters in both seeds and straw was particularly high, and this Dr. Wildt thinks may have been due to the large amount of easily soluble mineral matter in the soil upon which the crop was grown.

## THE FIELD.

### Uses of the Hop Plant.

The *London Farmer* translates from a German paper an account by Dr. Emil Pott of the many useful purposes for which various parts of the hop plant may be applied, over and above the mere production of the umbels employed in brewing, to which alone the growers' care appears to be given at the present time. To begin with, the tendrils furnish a good vegetable wax, and a juice from which a reddish-brown coloring matter can be extracted; further, their ashes are greatly valued in the manufacture of certain Bohemian glass wares. Of still greater importance is the fact that a pulp for paper-making can be prepared from them, and though the goods thus manufactured cannot be satisfactorily bleached, very serviceable unbleached papers and card-boards are got from this raw material. The fibers can also be used in the manufacture of textile fabrics. Experiments in this direction extend to a far-back date, and in Sweden yarn and linen making from hop fibers has long been an established branch of industry, which is constantly increasing in importance and extent. The separation of the fibers has hitherto presented considerable difficulties, but this appears to be effectually overcome by the process recently devised by Dr. Weiss, of Neutomischel, of steeping them for 24 hours in cold water, containing 5% of sulphuric acid, or for 20 minutes in boiling water to which 3% of the acid has been added. Other mineral acids, such, for instance, as muriatic, may be similarly employed. Nordlinger, of Stuttgart, also has patented a plan of rendering the fibers very flexible and tractable. This he effects by boiling them in closed vessels with soap and soda, and after thorough washing, treating them with diluted acetic acid, and then again washing in cold water. Another use to which hop twigs may be put is that of basket and wickerwork. Lastly, it must not be forgotten that the young shoots form a very palatable vegetable, not inferior to asparagus in delicacy of flavor, while the leaves, and the spent hops themselves, supply an excellent food for live stock generally, and especially for sheep. Dr. Pott contends that by due recognition of some or all of these numerous virtues of the plant, growers can always repay the cost of cultivation without reference to the hop itself, which of course will remain the chief object in view, and can render themselves more independent of the great fluctuations in the price of the latter to which they are at present subjected.

## ARBORICULTURE.

### Dry-rot in Timber.

This subject is of great importance to carpenters, ship-builders, lumbermen, and house-owners, and of curious scientific interest, has been thoroughly examined by Mr. T. A. Britton, an eminent English architect, who has exhausted nearly all source of information. He says, that to understand the nature and effects of dry-rot, we must inquire into the structure and properties of wood, which consists of a mass of slender, short fibers, with tapering ends, overlapping each other. These fibers are hollow at first, but are gradually filled by the deposition of solid matter from the sap within them.

This woody fiber, which pervades the tree from the tips of the roots to the extremities of the branches, is the chief organ of circulation. A current of sap passes upward through it, from the roots to the leaves, and another current, containing the products of leaf-action, passes back from the leaves, and is distributed for the uses of the tree. Wood grows darker as it grows older, owing to the deposit within the fibers, and reaching maturity no longer joins in the general circulation. The inner or heart wood, being fully matured and without sap is less liable to decay than the outer sap wood, sap being the agent of destruction. Sap being composed of water, sugar, albumen, gum, etc., ferments easily and rapidly, and is the most fatal cause of decay in wood. Wherever sap is the cause of decay it is termed ordinary rot or wet-rot. Dry-rot, although so termed, can no more occur without moisture than wet-rot. The former is one of the consequences of the latter, and begins after the fermentation of the sap begins, all of the conditions are then ripe for the inroads of dry-rot. Moisture favorable to natural decay and to the growth of plants is essential to its progress. The immediate agent of destruction in the case of dry-rot is of vegetable origin, belonging to the natural group of fungi, the best known representative of which is the common mushroom. If you examine the mold on which this plant is seen to grow, you will find it penetrated with delicate, whitish, interlacing filaments, which are the vegetative system of the plant. This part of the mushroom is called the *mycelium*, and from it arises the reproductive portion which grows above the ground. The umbrella-like cap above the ground bears the minute reproductive bodies of the fungi, called spores, analogous to the seeds of common plants. The mycelium, or thready interlacing portion which grows underground, and the minute microscopic spores, which are so small that thousands of them are required to form a body the size of a pin's head, are common to all fungi.

The mycelium is often so minute as to traverse living plants and the pores of solid wood. It grows rapidly and causes quick decay. Potato-rot, the yeast and vinegar-plants, mildews, rusts, and smuts of grain, and molds of all kinds, are part of this immense group of plants that lives upon decay and fills the air with its countless myriads of spores. These germinal particles are lodged everywhere. They are as light as vapor, and abound in air, in water, in sand, in dust, ready, when warmth and moisture favor, to burst into life. The dry-rot fungi flourish upon the products of wet-rot. Different stages of decay produce food of different qualities, adapted to different species of fungi. One species takes up the process where another leaves it, and carries it further and further forward.

Dry-rot may begin its ravages in the interior of timber as easily as upon the surface. As atmospheric dust is filled with the spores of fungi, they may be conveyed by rain into the earth, absorbed by the roots of vegetables, and diffused with the sap throughout the whole plant. It is not necessary to mention the great variety of fungi originating from these atoms or spores which exist everywhere, and produce many of our malarial diseases and diphtheria.

There are several species of fungi causing the destruction of timber, the principal being the *Merulius lachrymans* (often called the dry-rot), the most formidable enemy of timber. Wood affected by it, shows minute white threads of a cottony texture which sheds a red powder, which is the *Merulius*. Long before this appearance is manifested, the interior of the wood has perished, and when the cottony filaments are seen upon timber internally affected, we may be sure the apparently solid beam may be crumbled to dust between the fingers.

The first symptoms of dry-rot in timber are swelling, discoloration, moldiness, and a musty smell. As the disease advances the fibers shrink lengthwise and break, presenting many deep fissures across the wood; finally, the cohesion of the wood is utterly destroyed, and at the least disturbance crumbles into powder.

An indication of dry-rot in a damp pantry will be a coating of fine powder, like brick-dust upon the shelves and earthenware; those being the reddish spores shed by the dry-rot fungus.

The best protection against this rot, is careful seasoning. Ventilation is not of great use. Timber must be kept either entirely wet or entirely dry. Alternate dampness and dryness is fatal. Boiling and steaming is useful in getting rid of the spores and coagulating the albumen of the sap. Let the sap out, then do not permit the absorption of any moisture, and wood will not rot.



## THE APIARY.

## Bees and Fruit.

EDITORS PRESS:—Having seen several items in the RURAL lately in regard to bees destroying the fruit, especially peaches, and as I have over 50 strong swarms of Italian bees, and some fine varieties of peaches and other fruit, I have made it a business to notice particularly whether they destroyed the fruit or not. Some assert that bees cannot cut the skin of fruit. I do not doubt that they can, if so disposed, as the entrances to the hives (where they have been contracted) plainly show the marks of their jaws in trying to make their entrance larger. At times I have noticed bees on both peaches and grapes for the last several years that I have had bees, and on a close examination have invariably found the mark of birds' bills made by the quails on the grapes and the California canaries or linnets on the peaches. Situated as I am in the foothills, the timber having been mostly cut off, and some distance from grain fields, the common blackbird is almost a stranger; only a few visit us and do not stay. One can see only a few bees on my peaches, and only on those that have been previously pecked into by the birds. My bees and peaches are less than 50 feet apart.

Last fall some of my neighbors had their grapes caught by the early rains. The consequence was they got wet and their skins cracked, and the grapes got moldy and spoiled on the vines. The bees then covered them and sucked the juices, and filled their hives with a dark rich honey which resembled the grape syrup, a sample of which I have seen at the room of the editor of the RURAL PRESS. My neighbors found no fault with the bees, as they knew their grapes were spoiled before the bees touched them.

Another of my neighbors has a large orchard and the trees are breaking down with the weight of fruit, both apples and peaches. The bees from several hundred swarms fairly made the air hum with their buzzing, and one could hardly take hold of a peach without putting their hands on a bee, hut, even then, the bees did not touch any fruit that was perfect; the birds had been their first. This year, the weather being cool, fruit ripens slowly, and in trying to get good ripe fruit for market, I find that the birds are ahead; they spoil the fruit before it gets fairly eatable, then the bees come in to save the balance. If the bees were the rascals that some try to make out, surely I ought to find my trees literally covered with them, but anyone among my trees would hardly know there was one swarm instead of fifty, and Italians will get the sweets if they are to be got, as the state of my hives will show. I took off 90 pounds from one hive last week, all sealed over, every cell perfect, besides leaving a good supply to fall back on, and the hive full of bees.

## The Honey Season.

Bees have done well with me this season, and honey in this neighborhood is of good quality (I mean in the mountains). The valley honey is bitter this season, though very little better in the hills. The season has been cool and the bees have been slow to seal all over, making it necessary to leave it in the hive so long that the comb gets discolored by the bees traveling over it and steam and sweat of the bees in the hive. I made calculations for 100 pounds surplus to the hive this season, but will realize about 50 pounds average.

## Curing Robbing.

I have had some robbing, but have about stopped it by exchanging hives, after every other remedy had failed. For the benefit of the readers of the RURAL I will explain my mode of stopping it. I would go to a hive that was being robbed in the middle of the day and take all frames away except those having brood; put a division board close to the outside frames, after moving the balance to one side of the hive. Of course the bees on surplus frames have to be shook off in front of hive. I generally put something on the ground in front of hive to shake bees on to, close up hive so bees can get in comfortably at entrance. I put a rock on the hive to mark it, then look for a strong hive that appears to be quiet and orderly, mark that like the first. If more than one is getting robbed, do the same to that, and follow in the same manner for a mate. Then at dusk, after bees are through flying, with a good bellows smoker, I blow smoke in at the entrance and thump on hive until you hear a roaring, then go to the strong one, marked by the other rock, and do the same to that. Then while they are buzzing change their places and watch them the next day. The bees on flying out the following day and returning will return to their old stand, the strong one will strengthen the weak one, and, being loaded, will mix and not be perceived. The swarm is not in a state to resist, and the bees finding themselves in a strange hive are somewhat confused, and there will be old bees enough to protect the queen until the bees get at home in the hive, which will be in a day or so. The other swarm, after the old bees have left, will still have young bees enough to protect themselves, having never been discouraged, and robbing will be pretty effectually stopped. The exchange should be made after all bees have ceased flying;

otherwise the chances are that one or both queens might be killed, or the queen bled and queen cells started. At any rate, I think it necessary to examine, five or six days afterwards at farthest, to see if the queen is all right, and if so to cut out queen cells if necessary. I lost some queens at first by this process, but since I have put off changing until dusk have had better success; and at this season, honey being scarce in the flowers, hives, unless strong, should not be opened in the middle of the day and everything should be kept covered close as possible, to prevent robbers getting a start. Anyone having bees should have a good bellows smoker, as with one the bees can be thoroughly subdued and made quiet to handle, whereas by the old way the bees will boss the job in nine cases out of ten, at this season of the year especially.

## Note on Queens.

It has been very close work to keep over queens this season. The bees have been disposed to kill their queens and raise new ones. I have not more than five or six of last year's queens, and in some cases they have killed queens in hives full of bees, with plenty of room. I had two young queens raised in original hives this last week. I have only lost one swarm this season by swarming out; there must have been three swarms in the air at once, too. I saved and separated, but did not notice the third until they were missed a few days after. I have had very little trouble with bad mating.

J. D. ENAS.

Sunnyside, Napa Co., Cal.

## THE DAIRY.

## What New York Dairymen Get for Their Milk.

Now that the dairy business the country over has run down into the small fractions, it will be interesting to our dairymen to know what their Eastern brothers make when cheese is about 5 cents per pound. B. D. Gilbert, dairy editor of the *Utica Herald* lately visited a number of the central New York factories which stand well in the market. Of the figures he obtained by these visits he writes as follows:

From nine of these factories we obtained averages of the price paid to patrons for their milk during the present season, and upon making an average of these prices we find that it comes to 51 cents per hundred pounds of milk. It is sufficiently close for our purpose, therefore, to say that the milk has been paid for at the rate of  $\frac{1}{2}$  cent per pound; or, taking the standard weight of 8 $\frac{1}{2}$  pounds to the gallon, that the dairymen have got 4 $\frac{1}{2}$  cents per gallon for their milk. Allowing that the factory season extends over something like 200 days, let us see what cows that give 10, 12, 14, 16 and 18 quarts per day respectively would bring in.

Milk.	Cash per day.	Cash per season.
10 quarts.....	10 $\frac{1}{2}$ cents.....	\$21 25
12 quarts.....	12 $\frac{1}{2}$ cents.....	25 50
14 quarts.....	14 $\frac{1}{2}$ cents.....	29 75
16 quarts.....	16 $\frac{1}{2}$ cents.....	34 00
18 quarts.....	18 $\frac{1}{2}$ cents.....	38 25

Out of this must come the funds to pay for the hired help, and all the other attendant expenses of carrying on the dairy. If farm hands are paid \$15 per month, it would take the income of five cows at the first of the above figures to pay a single hand. At \$20 per month it would take the proceeds of six cows to pay him. But we will not pursue the comparison. The figures given will enable any dairyman to compute with ease the profits which he is making this year. It should be said, however, that 50 cents per hundred pounds of milk is an average which many farmers throughout the country have not been able to attain. Taking the season up to the present time, it is likely that 45 cents, or even lower, would come nearer to the general average.

## Prices of Making.

Never has there been such wholesale reduction by the factories of the price for making cheese, as during the present season. Throughout this region the factories started in at \$1.25 per hundred, which was a reduction of from 25 to 50 cents. But the early depression of the cheese market compelled them to reduce still further, and thus help the dairymen to bear their burdens. One dollar is now the general price in central New York, with here and there a factory above or below. This necessitates a reduction of wages to makers and assistants and a close economy all through the establishment. The large number of factories in operation creates a strong competition for dairies, and in some cases enables the dairymen to dictate their own terms. The best factories, however, have no trouble in obtaining all the milk they can handle, and remaining entirely independent.

KILLING RATS AROUND FARMS.—The following cheap and simple method of extermination is said to have been successfully employed by Baron Von Backhofen and his neighbors for some years past: "A mixture of two parts of well-bruised common squills and three parts of finely chopped bacon is made into a stiff mass, with as much meal as may be required, and then baked into small cakes, which are put down for the rats to eat. Several correspondents of the *German Agricultural Gazette* write to announce the complete extirpation of rats and mice from their cow-stalls and piggeries since the adoption of this simple plan.

## SHEEP AND WOOL.

## More Mutton Should be Eaten.

A leading butcher in a suburban city informs me that he sold but one sheep during the entire summer; in fact, he sold a portion of that. After keeping it in his ice-box for more than a month, he took it home and ate it in his own family. Notwithstanding the length of time he had it on hand, it was sweet and good, proving that mutton will keep as well, if not better, than any other meat. During this time he sold thousands of pounds of beef which had been brought on the cars hundreds of miles. In the autumn he sold hundreds of pounds of pork. To us there seems to be a want of wisdom in all this. His patrons refused to eat the cleanest, healthiest and most easily digested meat in the world, and without thought apparently or consideration followed fashion, or habit and ate beef more or less feverish and unhealthy, not knowing or caring where it came from, and pork which might have been reared in filth and might be reeking with disease. The farmers would be glad to furnish mutton in abundance, if there was only a demand.

It seems to be a universal practice with Americans to dislike mutton, or, at least, to eat scarcely any meat except beef and pork. They will pay twice as much for beef as mutton can be bought for. Chops always sell high, because every one wants them and nobody wants the rest of the carcass. Butchers say they must sell one-third of the sheep for enough to pay for the whole, as all the rest has to be sold below cost. Americans seem to be totally unused to mutton in any form as corned or salted meat. There is no better meat than corned mutton. It is excellent for soups and stews, or to boil. The hams may be corned and then boiled and eaten cold for any meal.

There is no other meat which the farmer can more economically use, while at the same time supplying his table with nutritious and wholesome food, as mutton will keep fresh longer than any other meat and may be safely cured in hot weather. A fat sheep will go a long way at the farmer's table and make twice as many meals as its cash value invested in beef. The beef must be purchased at retail, while the farmer could supply himself with more wholesome mutton at just what it cost him to raise it. A neighbor or two would share the carcass with him and in turn he could do the same with them; this would be an exchange which would benefit both. A small flock of sheep is the most profitable investment any farmer in the old States can make. No stock will bring in so much money in comparison with their cost, and, if he will try it, no stock will help him so well in providing a supply of wholesome food.—*Cor. Rural New Yorker.*

## The Way to Handle Sheep.

There is a right way and a wrong way, a hard way and an easy way, an awkward way and a skillful way, to catch and handle sheep. A great many men will catch the sheep by the wool on the back with both hands, and lift the animal clear from the ground by the wool only. Barbarous! Let some great giant grasp you by the hair of your head and lift you from the ground by the hair only! Would you not struggle and squirm worse than the mute sheep does when lifted by the wool? And would there not be a complaint of a sore head for a week or two? If you do not believe it, try the experiment. We have slaughtered a great many sheep in years past, and, when removing the pelt of such sheep as had been handled by the wool, we never failed to observe that beneath the skin, wherever the animal had been caught by the wool, blood had settled. In many instances, the skin had been separated from the body so that inflammation was apparent. We have known proprietors of sheep to be so strict in regard to handling them, that they would order a helper from the premises if he were to catch a sheep by the wool on any part of the body. Some owners of sheep direct their helpers thus: "When about to catch a sheep, move carefully toward the one to be taken, until you are sufficiently near to spring quickly and seize the beast by the neck with both hands, then pass one hand around the body, grasp the brisket, and lift the sheep clear from the ground. The wool must not be pulled. If a sheep is a heavy one, let one hand and wrist be put around the neck and the arm pressed against the leg." We have always handled sheep in the way alluded to. We never grasp the wool. Others seize the sheep by a hind leg, then throw one arm around the body and take hold of the brisket with one hand. But ewes with lambs should never be caught by the hind legs, unless they are handled with extreme care. When sheep are handled roughly, especially if their wool is pulled, the small bruises and injuries will render them more wild and difficult to handle.—*Drovers' Price Current.*

RAPID CLOTHES MAKING.—The Emperor of Austria, says the *Court Journal*, has been presented with a suit of clothes. The wool from which the garments were made was upon the sheep's backs eleven hours before the suit was completed. At 6.8 in the morning the sheep was sheared; at 6.11 the wool was washed; at 6.37 dyed; and 6.50 picked; at 7.34 the last carding process was finished; at 8 it was spun; at 8.15 spooled; at 8.37 the warp was in the

loom; at 8.43 the shuttles were ready; at 11.10 7 $\frac{3}{4}$  ells of cloth were completed; at 12.3 the cloth was fulled; at 12.14 washed; at 12.17 sprinkled; at 12.31 dried; at 12.45 sheared; at 1.7 napped; at 1.10 brushed; at 1.15 pressed and ready for the shears and needle. At 5 o'clock the suit, consisting of a hunting jacket, waistcoat and pantaloons, was finished. The same thing was done at Newbury, in Berks, last century, by Sir John Throgmorton, from his own sheep. He wore the coat at dinner in the evening of the day on which it was on the sheep's back.

## FLORICULTURE.

## Hints on Bouquet Making.

A bouquet seems an easy thing to make when all the flowers are so beautiful separately. Surely just to pick them up and put them in a vase is simple and easy enough; but, alas! nature possesses a subtle secret for blending colors which we poor mortals cannot wrest from her. The moment we transfer them from their garden home to our drawing-room their charm is gone. Then experience comes to our aid and gives us the following hints: Don't crowd your flowers. Flowers have their individualities and affinities, which we must recognize and respect. For example, a spike of brilliant scarlet gladiolus, with a feathery bunch of asparagus, and a gleam of white feverfew here and there, will light a shady corner like a torch; but smother your stately blossoms with phlox, verbenas, and most of floral beauties, and you will see at a glance how the effect is weakened. Again, petunias, with their stiff, sprangley stems and delicate blossoms, are very difficult to combine with any other flower; but give them a wide-mouthed vase, and no rivals, and they are positively graceful, while their delicate perfume fills the room with its fragrance.

Mass your colors. This is of great importance. Put your scarlets and crimsons and purples in separate bunches; use white to blend them, and you cannot fail of good effect. Yellow is the sunshine of a bouquet, but it must be used sparingly, or it will produce a glare. A wise choice of this color always lends cheerfulness.

In making saucer bouquets you can use flowers too choice to pick up in quantities, and those not adapted to other bouquets, like the balsam, stock, etc.

A fern-hed in some shady corner is a great help in giving lightness and relief to the solid flowers in this mode of arrangement. Rose geranium leaves alternating with fern tips make a beautiful edge about any shallow dish; next lay some stiff stem criss-cross on the water to prevent the blossoms sinking; then lay in balsam, pansies, a tea-rose, or any dainty blossom that you have, being careful to have sweet alyssum, or some white flowers, to blend, and you will be charmed with the result.

When stemless flowers are used, like a tuberose, or a single flower from a truss of geranium, stems can be made of matches, toothpicks, or coarse broom-splints, and the blossom tied or wired on.

A low flat dish filled with damp moss, edged with geranium leaves and filled in with sweet alyssum for a ground work, then pansies stemmed in the above manner and set star-like against the whiteness, makes the loveliest center-table ornament one can have. By saturating with fresh water, such a bouquet will keep its freshness much longer than ordinary bouquets. A large shell filled with damp sand or smilax, Kenilworth ivy, or any fine creeper falling over its edge, a few trusses of verbenas, some golden calliopsis, and a dash of white, will throw a glow of brightness from a bracket shelf.

In cutting flowers for bouquets, provide yourself with a tin basin having a little water in it. Cut your flowers, never break or pull them; it bruises the stems and hastens decay. Stand your flowers up in the dish, and put all of one color together carefully; then, when ready to begin combining, you can readily see what you have to work with, and make your selection without tumbling them over. The water prevents them from wilting. Flowers picked on a warm summer morning and carried closely in the hand while gathering will be so wilted that they will take a long time to revive. In choosing vases select delicate white, or some neutral tint; no gaudy colors, for the flowers should be the point of color, not the vase.—*Floral Cabinet.*

GIVING FLAX THE APPEARANCE OF SILK.—A Parisian has, it is said, succeeded in preparing from silk waste a liquid which will give flax yarn, chemically prepared, a silken coating. The new material has lost its resemblance to flax, and is in fineness, elasticity and gloss a perfect substitute for the more expensive article. The inventor prepared samples on the spot, and succeeded so well that 14 manufacturers, whose names are given, formed a limited company for the purchase of the invention at a cost of 3,000,000 francs. Two days afterwards the value of shares in the new company had risen 30%. Should the process prove a success, the entire silk industry and other textile branches will be revolutionized.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### At Home in the Grange.

Do we feel at home in the Grange? I fear not, but I think we should just as much as if we were in our own house, and by our own fireside. We should feel at liberty to talk and discuss questions without fear or trembling. But do we? I answer, no. What is the reason? Because we lack confidence in ourselves, or are afraid some one will laugh at us, or will not agree with us in our opinions. Well, if they do not see as we do, then we will agree to disagree, and be good friends as brothers and sisters of one family should be.

I should like to see better order in our Grange home. I think it is a duty, and should be a privilege for every member of the Grange to help keep the hall in order. When everything is out of place, help set it right, and by so doing it will be more pleasant for all. I believe we all enjoy a good, clean, orderly Grange hall, but are we willing to assist in making it so ourselves, or contribute a few cents to have it done. If we are not, then it falls on the few to do the work of many. It is not very hard for ten or a dozen to clean a hall, but for four or five it is. Money will hire our halls cleaned, but I think we should do it ourselves. I have always enjoyed myself well when I have helped clean our hall, and I am willing and glad that I can help, and hope that I may live to do so many years.

I think we do not have sufficient confidence in each other, and that harmony which is always essential to make home happy. We must have confidence in each other, and we must work together. "In union there is strength." God knows we are banded together for no evil purpose. Our principles are equal rights for all.

We should be cordial in our homes. A cool greeting I hate. I love the pleasant face and a hearty shake of the hand. It betokens a large heart. It makes me feel bad to see members of a Grange that will not speak. This is wrong. We must have a good deal of charity in our homes, or we cannot agree. We have all done wrong some time, and may again, if tempted. It is better to suffer than do wrong. I hope we will all try and work in our Granges. There is much to do. We must not think because we have a nice hall, that we can sit down and listen to what others have to say. Try and think of something that will interest or instruct others. Perhaps you may blunder on to some good ideas, and when written or spoken, will help mature other thoughts. I hardly know how I ever dared to write for a paper, but I lay it all to the Grange. I was very shy. I did not wish any one to know that I wrote for our paper, for we had a score of school-teachers in our Grange that could have written, but did not. Well, I did write, and they guessed every one but me, and I am glad of it, for I am such an old lady, with trembling hands and dimmed eyesight, and I thought they would laugh at me. But the spirit of the Grange was in me, and it must work out in some shape, so I thought I would write, and I did. Let us all think for the Grange and work for it, and then we shall be benefited by it.—*Aunt Kate, in Grange Visitor.*

### The Grange as an Educator.

Farmers for the most part, have been so busily engaged in the manual labors of the farm, that they have not kept themselves thoroughly familiar with many things, which they, nevertheless, have something continually to do. The Grange, in this respect, has taken a "new departure," in assuming and urging that the husbandman must be something more than a mere laborer—that he must be not only a toiler, but a thinker and observer, that he must understand the "why and wherefore" of every process on the farm in order to secure the best results with the least expense, and that while a man may secure this without certain elementary knowledge, still this elementary knowledge he ought to have, and he will be none the worse farmer for the having of it. Thus, a man may raise a maximum crop and yet know nothing of agricultural chemistry, but in the product of the crop he will do precisely from observation and experience what the learned agriculturist would enforce. He would have been none the worse farmer from knowing the nature of the elements, and the natural laws that govern their use. But there is another knowledge, back of all this, which is not necessary to go to hooks to learn, which farmers ought to know, and we suspect few do know. The point we are aiming at, is the precise knowledge as to varieties of grain, grasses, fruits, weeds and insects—things with which he comes in almost daily contact.

Let us take wheat for instance. We sow many kinds in almost every county of the State. Now these varieties have some distinguishing marks. What are they? How many farmers know as much about it as the miller or the warehouseman? How may the ordinary farmer know at sight, in the field or in the bin, one variety from another, and say with absolute certainty this is Fultz and that is Clawson? How may he know the grade to which his crop is entitled? These are questions which belong to the Grange. We do not propose to take up the question, but would suggest that each member furnish the best specimen of the varieties

raised by him, and that these be made matter of special study and illustration. Select the best, label the jar with the name of the variety and the producer, and give a premium to the man who can put in its place a better specimen. The Grange meeting and the Grange hall present the best means for the comparing of notes, and the acquisition of a knowledge that may be made available in the future.—*Grange Bulletin.*

**THE ROAD TO PROSPERITY.**—No, fellow Patrons, "there is no royal road to knowledge," no flowery pathway to national prosperity and happiness. The same old, dusty, rugged way up which the fathers trod in their pilgrimage to the heights upon which we stand to-day, lies before us, and the fair region to which we aspire can only be reached by climbing the rugged pathway of labor, cheered by the promise of the rich reward that follows well-doing, and the consciousness of having done something to aid and elevate the race. The remedy for the ills of the nation we apprehend is not to be found in calling upon a paternal government to come to the help of the struggling masses, not in vast schemes of public works to employ the idle and set in motion the wheels of business; not in giving every man \$500 to enable him to settle on the public domain; not, in short, in the numberless ways in which the sanguine theorists and hobby-riders of the day would save society—but the remedy is to be found in the industry, the intelligence, the virtue, the wisdom of the American people themselves, embodied in just laws founded on correct principles of free government, and a sound political economy impartially executed upon every class and individual in the republic. "The gods help them that help themselves."—*W. H. Lay, in Grange Visitor.*

**GRANGERS' MEETING AT MARTINEZ.**—In response to the announcement that a re-union of Patrons would be held at Martinez on Friday and Saturday of last week, quite a goodly number of members came forward from different parts of the State. Interesting and profitable discussions were held concerning the coming State Agricultural fair, farming matters, etc., which we shall report further hereafter. Alhambra Grange well entertained their visiting brothers and sisters.

**AT ALHAMBRA.**—We had an enjoyable visit at Dr. Strentzel's, Alhambra ranch (two miles from Martinez), last Sunday—being favored with the company of Bro. I. C. Steele, Bro. W. B. West and wife, Sister Landers and Bro. Rapp and wife. The Strentzels have much at Alhambra to be proud of and to enjoy—by themselves and by hosts of friends.

### Causes of Hard Times.—No. 3.

**EDITORS PRESS:**—The positions maintained in the two previous articles that 6% a year is all the interest farming and other honest industries will warrant, and that the \$80,000,000 to \$100,000,000 which have been paid by the farmer to the usurer during the past 10 years, in excess of 6%, is a cause quite sufficient to account for the hard times few will deny. The concentration of wealth in San Francisco, in fortunes so colossal as to astonish the Eastern States and the Old World, too, taken in connection with our oft-recurring dry years, has given the greedy capitalists of that city such power to form rings and corners, as will force the farmers to submit to the prices they dictate and to pay such rates of interest as their greed demands. They can ruin the State if they will. They have well nigh done it already. But in so doing they are likely "to hoist by their own petard." Honesty is the best policy; fair dealing is only another name for safe dealing. Money loaned at a "live and let live" rate is equally for the interest of both lender and borrower. The capitalist, in loaning at high rates, breaks down at length the borrower. At first, he breaks down his courage and hope when he sees himself year after year sinking deeper and deeper into debt, and no hope of relief. Then his conscience gives way, and he says, "I'll get even with that cruel man if I can." Then he waxes desperate, offers his stock and tools for sale cheap, tries to sell out and get some money into his hands. "Self-defence is the first law." If no purchaser appears, he is sold out under decree of foreclosure of mortgage. A new tramp is turned out upon the street. A beggared wife and children wander about for bread. What cares he, the man of one, one and one-half and two per cent.? Ah-ha! has he not a fine farm at half its worth? Blessed be the dry years! how they play into his hands! And blessed also low prices of products and poor crops! A few more such and he will have the whole country in his hands. And blessed, too, the heartless lawyers, who can prove that men have an inalienable right to combine to force up a rate of interest which shall bring financial ruin upon the industrial classes. Blessed, too, be the Iskeys, who, parrot-like, repeat their words, and whose sympathies are never with the oppressed and wronged, but with the oppressor every time. Yes! and did not the preacher, too, in advocating no restrictions on usury, show plain as day that it was a financial blunder in Moses (or rather in God) to discontinue usury in Israel and prohibit utterly the taking of interest from those of their own nationality?

But what shall he do with his lands, bid in under foreclosure? Ah! there is the rub! He cannot sell. High rates have absorbed all the money. Nobody wants to buy; all want to sell. Every year is growing worse. Prices of everything but money, fall. Each new farm thrown upon the market helps to depress prices, till you cannot sell at all; and now, at length, the short-sighted usurer finds he has plenty of lands, but no money. He is land-poor. What shall he do? Will he cultivate his acres? Not long. Poor crops, low prices, high taxes, and an occasional dry year will soon show that do the best he can, he cannot, through a series of years, bring out of his acres fair wages and 6% on a fair valuation. Well! he tries renting; he rents for cash. The farm is skimmed of its cream, improvements run down; every year it waxes worse, and becomes an eye-sore. He hates the sight of the once pleasant home. Or he rents for a portion of the crops. Alas! he gets nothing dry years, and very little when crops are poor. A shiftless renter now and then sows a forest of weeds to choke out the crops, and he only gets malva seeds for hay and mustard for grain.

Oh! this luxury of being "monarch of all he surveys!" He is thoroughly disgusted and impoverished; he is obliged to borrow money. At what rates? Ah! his chickens are now coming home to roost. He is obliged to submit to usurious rates, to pay taxes, to sign his name to those cruel stipulations in California mortgages. Will not the poor wretch, now bound fast in fetters, see at length that it had been better for him, if, in the days of his money loaning, he had exacted only 6%, or a rate by which the borrower could have lived, kept his home, and paid his interest too? Thus the greed for money blinds men to their true interest. We see this illustrated before our eyes to-day in bottom values falling out of real estate; farmers discouraged; improvements at a standstill, and debts and interest alike unpaid and uncollectable.

See now, Mr. Usurer, how in your hot haste to get another golden egg, you have broken down the back of the hen that laid it. Let me tell you, ye men of notes, mortgages and loans, if you don't want to break down the value of your securities, let your rates of interest be such as your customers can stand; otherwise, you will suffer in the end, and all the people will say, Amen!

It follows, therefore, that when the legislature shall pass a stringent usury law, limiting rates of interest at a rate at which borrower and lender can both live and prosper, such a law will be as much the friend of the lender as of the borrower. Such a law will also be one of the grandest things the State can do for its own great prosperity and tranquility.

Fellow farmers! are these things so? Is 6% a year all we can afford to pay? Have we been paying on an average, per man, interest on \$1,000 during the last 10 years? Is that estimate too high? Look around you and see. Is it not below, rather than above the truth? If I am right, then we, the 60,000 farmers of this State, have been paying interest on an aggregate debt of \$60,000,000; and if on that \$60,000,000 we have paid an average of 12% per year, then in 10 years we have paid in interest the enormous sum of \$126,349,800. If, on that debt, we had only paid 6%, our interest would have been \$47,448,000; but, having paid an average of 12%, we have paid in excessive interest \$78,901,800. But, as the interest has averaged over 12%, we have paid in excessive interest at least \$100,000,000. Hence the hard times; hence the wealth of a few capitalists and the poverty of 60,000 farmers. S. BRISTOL.  
San Buenaventura, Cal.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### KERN.

**CITRUS TREES AND FROST.**—*Southern Californian*, Aug. 23: The experience of some of our citizens who experimented in orange culture, is that the severe cold of last winter had no effect on trees that were protected on the south side, while those merely protected on the north side were seriously injured, if not totally destroyed. The cold, where the trees were allowed to thaw out without the sun shining on them, did no damage. Seedling appeared to stand the cold a great deal better than the budded varieties, and the lemons can stand cold very poorly. The lime tree fares worse than any of the citrus family.

#### LOS ANGELES.

**WHEAT.**—*Herald*, Aug. 23: Mr. E. B. Foster, of Centralia, threshed his wheat crop last week, and the yield was surprising, considering the season. From 20 acres he harvested 300 cents. Four acres of the 20 yielded 25 cents to the acre. The wheat was of the Odessa variety, and the berry is large and plump. Every one confirms our opinion that there will be a vast area sown in wheat next season, and with a fair amount of rainfall, the year 1880 will be a memorable one in the history of this county.

**WHITE SONORA WHEAT.**—*Express*, Aug. 23: Mr. H. H. Stevenson showed us this morning, a sample of White Sonora wheat which he raised on his ranch in the Rosecrans tract, which certainly proves that wheat raising can be made a great success here. The wheat did not rust a particle, is very plump, white and clean, and from appearances will mill easily. It

weighs 151 pounds to the sack, the average this year being about 140 pounds. The yield is seven cents to the acre. Mr. Nadeau pronounces it the best he has ever seen. Mr. Stevenson's neighbors intend to devote their lands largely to this wheat next year. Southern California is fortunate in the discovery that she can raise her own flour and save enormous freight bills.

#### MARIN.

**A DAIRYMAN'S REFLECTIONS.**—*Journal*, Aug. 21: The hard times are not wholly evil. The law of recompense will bear its fruit in time. We gathered this lesson from a Tomales dairyman: Said he, Yes, the times are very hard. And as low as butter is, it will be lower next year. But I shall make more of it. Where I have been content to milk 100 cows, I shall hereafter milk 150. I have never raised a pound of roots for my cows, never raised anything but the bare necessities of life. But this year I shall raise 200 tons of feed for my stock, and turn it all into milk, to compensate for the reduced price. We have seen the cream days of the farm and dairy in California; now, if we will thrive, we must come down to something like the standards of the Eastern States. We have been in the habit of wasting more than all the profits of our Eastern brethren. When we learn to economize as they do, and treat our land as fairly, we shall forget all about hard times. We thought he talked common sense. What do you think, reader?

#### MONTEREY.

**APIARY.**—*Castroville Argus*, Aug. 23: Mr. R. J. Adcock's apiary, containing 475 hives of bees, is situated in the San Miguel canyon, about seven miles of Castroville. He has at present on hand 80,000 pounds of honey which is of superior quality.

#### NAPA.

**GRAPES INJURED.**—*St. Helena Star*, Aug. 22: The Zinfandel vines are said to have suffered particularly by the late sun-burn.

**BLACKBERRY GROWING.**—*Register*, Aug. 23: The largest field of blackberries in the county, and one of the largest in the State, is that of Joseph and William A. Trubody, seven miles above this city. At the present time there are thirty acres planted in vines, twenty-five of which are bearing and yield abundantly. This extensive blackberry patch contains over 20,000 vines, planted in rows eight feet apart, and covered with a luxuriant growth of deep green foliage, under which large luscious berries are everywhere visible. The principal varieties cultivated are the Lawton and Dorchester, though several other kinds are found in the field. Six men were engaged five weeks last spring in cultivating the vines. Each vine is tied to a stake with bale rope, several tons of rope being used for the whole field, and about 700 pounds of new rope are purchased each year to replace that which becomes useless by decay. The vines receive a summer pruning, and are left about four feet high, the whole field looking almost as level as a floor. On the 10th of June the first berries from this place were sent to market. In about one week they will all have been picked and the season ended. Twelve men were engaged in picking at first, the force being increased as the fruit ripened. Seventy men were at one time employed in this work. The berries are placed in boxes containing five pounds each, and twenty of these drawers are put in chests ready for market. Over 300 chests are required for the season, containing 6,000 drawers. One will readily see that there is much expense connected with the business. At the close of the season about 70 tons of berries will have been sold—about one-half to San Francisco and other distant points, and one-half to the local trade. Estimated yield per acre, two and one-half tons. The first berries marketed sold for five cents, but the price soon dropped to three cents, the lowest figure ever reached. The price fluctuates year by year, six cents having been received four years ago. Great quantities of this fruit are received in San Francisco from San Jose, where large fields yield liberally, causing low prices in the market, though the fruit from that locality is not so sweet as from this field, owing to the vines being irrigated. The quantities of choice fruit sent from Napa valley is each year increasing, and in quality it cannot be surpassed by that raised in the most favored locality.

#### SACRAMENTO.

**BANANAS.**—*Folsom Telegraph*, Aug. 23: In the *Record-Union* of Aug. 16th, mention is made of a banana tree in the yard of J. C. Carroll, that was planted 18 months ago and that has within that time attained the height of 10 feet. Mr. Currier of this place has a banana tree that was planted early in May last, and is now nine feet high and is of great beauty. Mr. Currier being very desirous of keeping this beautiful tree, would be pleased to learn how Mr. Carroll protected and preserved his through last winter.

#### SAN JOAQUIN.

**HARVESTING.**—*Lodi Review*, Aug. 22: The grain in this valley is turning out more than the average yield. The fruit crop on the upland has nearly all been ruined by the few days of intensely hot weather which we experienced a week or so ago; but that grown on the low land bordering on the Mokelumne river is very fine.

**SOFT-SHELL ALMONDS.**—Mr. Charles Deady, of Woodbridge, brought us a sample of the largest soft-shell almonds we ever saw. They are not as thick through in proportion to their circumference as the common variety.



## SAN LUIS OBISPO.

THE FALL CLIP.—*Tribune*, Aug. 23: The fall clip is beginning to come in. Many of the largest producers have finished shearing. Owing to scarcity of feed the clip is light in some localities.

## SANTA CLARA.

GILROY CROPS.—*Advocate*, Aug. 23: Farmers are happy over the fact of making miscalculations on the number of sacks required to cover their grain. The cry of "more sacks wanted," is heard daily in the stores. The yield is 25% more than was generally anticipated, and this is the case throughout the Gilroy valley. The crops in the vicinity of the Twenty-one Mile House are very heavy, and the grain in quality cannot be surpassed. The same report reaches us from the other extreme points south, east and west. The advantages of deep plowing and early sowing were noticeable this harvest in the Hanna field. That portion of the field which was broken early and in which seed received the benefit of all the rainfall bore a crop from 25% to 50% heavier than that which was sown in the spring.

## SONOMA.

THE GRAPE CROP.—*Santa Rosa Democrat*, Aug. 23: Grapes in this section of the Sonoma valley are beginning to show what kind of a crop may be expected. The hot weather of a few weeks ago blighted the Flame Tokay and other tender and foreign varieties. We hear complaints of this to a considerable extent. The Zinfindels are going to yield splendidly, and the success of the first crop is assured, with everything in favor of the second crop. The Mission grape will come up to the usual standard; and taken all in all, competent judges inform us that the yield will about equal that of the last vintage. Mildew has been feared, and one or two persons tell us that it has injured certain varieties to a considerable extent, but most viniculturists say that they have seen no trace of it, and venture the opinion that what is considered mildew is mostly due to the hot weather mentioned above. The vintage will probably commence about September 20th.

## SUTTER.

WHEAT.—*Banner*, Aug. 22: We hear some of the farmers remark that their wheat turned out better than they had expected, but of course it is not a full crop. Very few are inclined to sell at present prices, but are hauling it away rapidly, and the grain from the Harkey ranch is being hauled at Weaver's landing on Feather river. Quite a preference is being shown to Proper and Pride of Butte wheat for next year's seed, the Club not having done well this season, and Mr. Proper, the originator of the famous Proper wheat, is doing a thriving business at cleaning and selling seed at \$1 per bushel.

## TULARE.

SWAMP ITEMS.—*Cor. Delta*, Aug. 22: The fall potato crop will be light—the stand is poor, and not as many planted as common. W. H. Gilstrap has planted 30 acres of Burbank potatoes, a new variety introduced here two years ago from the East by him. He raised some this season that yielded 10 tons per acre. The straggling hogs that gathered in here from the mountains this season are destroying a great deal of our crops. They hide in the brush through the day, and do their mischief in the night. One hog will break down more corn than 50 can eat.

## TUOLUMNE.

EDITORS PRESS:—The hot weather so much complained of, is replaced by a cool, moderate temperature. The feeling is as if fall was knocking for admittance. It is a breathing-spell for sweltering politicians, the crop of which seems to be unusually bountiful. The third of September will sicken three-fourths of the entire brigade. Pity the tax-ridden people. The victor is sure of the spoils; and we are now in their toils. The farmer is now marketing his grain; the fruits of his year's industry. Prices are moderate. But the markets opening up ensure a ready sale. Bodie is the principal, but Bridgeport and other new mountain towns are receiving many of their supplies from this county. One noticeable improvement among the farmers, is the substitution of the mule for the horse. Mr. Maxwell and Mr. Bishop have each a very handsome 10-mule team; the moderate size predominating. Young mules are found following teams in place of the horse-colt, as formerly. The advantages are many in favor of mules. They are easier kept, less liable to disease, steady in their movements, and docile after handling, for farm purposes. They are preferred, and will replace the horse as soon as the supply can be obtained. Orchardists are busy drying fruit. The warm weather ripened the fruit by a forced process, and some of it will be lost for the want of help. The pear crop will be very fine, and when dried in season will be of excellent quality. It would seem as if a fatality attended drying machines. Few, if any, have succeeded in making a profit or reputation. It is left for families and the sun's rays to utilize the extra fruit. Perhaps it is as well. This county will send large quantities of dried fruit to the San Francisco market, and that of the very best quality.—*JOHN TAYLOR*, Mt. Pleasant, Aug. 22d, 1879.

## YOLO.

GRAPES INJURED.—*Democrat*, Aug. 21: The grape crop in this county has been seriously injured by the continued hot weather. Our information comes from actual inspection in one case.

TULE CORN.—A stalk of corn 13 feet in

length, and which was raised on the ranch of Mr. Fowler on tule land east of Woodland, was exhibited at Porter & Co.'s store yesterday. The stalk was taken from a large field and is a fair sample of the entire crop.

## NEVADA.

EDITORS PRESS:—I see an article in the Press, copied from the *Reno Journal*, of a wonderful crop of oats, seven feet high, grown at Glendale, without irrigation or rain. It is pretty good for sage-brush land. I can report another pretty fair yield. From land in Paradise valley, Nev., on the ranch of B. F. Riley, there was cut this season ten tons of good hay (wheat and oats mixed) from two acres of land. It was grown without irrigation. Also, from the same kind of land, on the same ranch, there were threshed eighty bushels of good barley to the acre, raised without irrigation. Who next? HUMBOLDT, Paradise Valley, Nevada.

SHEEP.—*Reno Gazette*: Large flocks of sheep are being pastured near Reno. The Peavine country is all alive with them. In the vicinity of Verdi thousands are grazing. This year has been a good one for stock raisers. One drover informed us that his flock had nearly doubled in a year.

## OREGON.

RUST IN GRAIN.—*Willamette Farmer*: All the valley exchanges last week confirmed the worst reports as to the loss of crops from the prevalence of rust. The disaster is almost universal to the spring grain, with the exception that hill land suffers less than low land. An Albany correspondent writes: This is a terrible calamity that has befallen us. At present our spring crop is a total loss, and there are hundreds of farmers who will not have their seed for another year. The renters here have given up their crops to the landlord for rent. I think there will be no spring grain that will be marketable this year, and there has been but a very small proportion of winter wheat here; but what there is good. The general opinion here among the farmers is that it would be a good idea to set fire to the fields and burn them all over. I think this would be a benefit now. It would burn up all the weeds and wild oats, and cleanse the ground for fall plowing. Five weeks ago we had the finest prospect of the largest crop we have had for many years, but now we know for certain that the crop is lost. In some parts of Polk county the rust has destroyed a large proportion of the spring-sown wheat, especially of the variety known as the "Chile Club," which has been damaged much more by rust than other varieties. In the low lands between this place and the La Creole, the rust appears to be much worse than on higher grounds; and we learn from several observing farmers that wheat which was sown with a drill is much less affected than that sown broadcast. A friend who had been traveling over the county says that the rust has only damaged the grain in certain localities, confined chiefly to low ground. He says at the foothills and in the rolling ground there is scarcely any rust, but on our broad, open, flat prairies the rust in the spring grain is pretty general and that especially the Chile Club spring sowing will prove almost a failure. If his statements may be relied upon, it is probable that Linn county alone will fall short of her usual crop at least a half million of bushels. The fall wheat and oats are splendid, and upon these products must we mainly rely for our exports and revenue for the next year.

## Semi-Tropical Fruits Imported at New York.

The annual report of the Collector of Customs at the port of New York contains statistics of the trade in imported fruits for 1878, which will interest many of our growers as furnishing some idea of the Eastern money which goes abroad for fruits such as can be grown to perfection in this State. The following are the figures:

Varieties of fruit.	Duty.	Value.	Duty paid.
Oranges and lemons.....	20%	\$2,802,966	\$560,593.20
Grapes.....	20	232,204	46,440.80
Pineapples.....	20	87,666	17,533.20
Bananas.....	10	395,619	39,561.90
Limes.....	10	3,564	356.40
Grape fruit, shaddock, mangoes, plantains, etc.	10	15,711	1,571.10
Cocoanuts.....Free.		197,520	
Total, 1878.....		\$3,735,050	\$664,016.60
Total, 1877.....		\$3,148,902	\$564,140.30
Increase of value and duty for 1878.....		\$586,058	\$101,876.30

There was a large increase in the quantity of fruit imported from the West Indies, except in the case of oranges and pineapples. The falling off in pineapples is supposed to be due to the establishment of large canning factories in the West Indies. Of Mediterranean fruit, the importations of 1878 were lightly in excess of the preceding year. Of grapes, the number of packages was largely in excess of those of any previous year, namely 45,000 barrels and 12,000 half barrels. The pomegranates numbered 200 cases. The Mediterranean oranges and lemons number 1,254,802 boxes and cases. The average loss on oranges by decay was 36%, and on lemons 20%. From the West Indies, 12,942,675 oranges were imported, with an average loss of 45%. Of bananas there were 560,837 bunches imported—an increase of 157,916 bunches over 1877. Twenty-three per cent. of the 2,704,773 pineapples perished on the voyage. Nearly 10,000,000 cocoanuts were imported, with an average loss of 9%.

## Farm Wages in the United States.

Eastern newspapers contain dispatches from Washington outlining a report soon to be issued by the Commissioner of Agriculture concerning the rates paid for agricultural labor in the different States of the Union at the beginning and close of last year, together with the cost of living at each of the periods named. This inquiry is one of great importance to our producing interests, for, as we remarked in a recent issue, the depressed prices for produce forces farmers to examine all lines of expenditure to discover whether they are out of proportion to the results secured thereby. It is well in examining such questions to take as broad a view as possible, and therefore the effort of the Commissioner to show all the farmers of the country what they are paying for farm help is a praiseworthy one.

The first point laid down from a review of all the reports from the country, is that in all quarters of the Union (with the exception of Minnesota, California, Colorado, Oregon, New Mexico and Washington Territory) the average monthly rate of pay for farm laborers declined during the year ending last April from 3% to 15%. At the same time the expense of living in the majority of States declined in equal or greater proportion, so that the relative condition of the laborer really improved during the year.

The summaries of the reports for the different groups of States show that the average rate of pay in New England for farm laborers on yearly engagements, without board, averages \$20.31 per month, against \$22.60 at the beginning of the year, a decline of 10%. The average cost of living has fallen from \$9.13 to \$8.02 per month, a decline of more than 13%. In the Middle States the conditions were reversed; the ruling monthly pay of the farm laborer being \$19.69, a decline of 7%, while the average cost of living had declined only 4%. In New York alone farm laborers receive 8½% less than they did a year earlier, and pay 10% less for their living. The South Atlantic States reduced labor 15% and subsistence 16%, and in the Gulf States labor fell 5% and subsistence only 3%; the average pay in the former being \$11.19, and in the latter \$14.80 per month. In the nine inland States east of the Mississippi the monthly pay varies from \$15.50 per month south of the Ohio, to \$20.90 in the north, the rate of decline in wages being a fraction less than that of the cost of living; while in the six States west of the Mississippi the present average pay for farm labor is \$23.81 per month, a slight increase over that of a year earlier, and the price of subsistence falls off about 2%. West of the Mississippi the increase in the rate of wages is chiefly due to the extension of mining operations. In this region a large number of artisans have appropriated public lands and seek to pay for their claims by working a part of the time at their trades. Quite a number of farm laborers have done likewise, and they work a part of the time for wages on the farms of others. The large immigration has enlarged the stock of labor, but it is to a great extent somewhat inefficient in character. All who desire work can get it. No surplus is reported from any county in Colorado.

The reporters who have deduced these figures from the advance sheets of the report of the Commissioner, say that "in the two Pacific States the average monthly pay of farm laborers is \$23.22, against \$36.62 one year earlier, an increase of 43%, while the cost of living had increased fully 18%." This is certainly not true of California, for all things entering into the "cost of living" have undergone a steady reduction for some time past, and judging from the price of many articles of produce a man could live in this State on 18% less than last year, rather than that much more than last year.

The report goes on to say that in New Mexico, Dakota and Washington Territory there is a demand for skilled and unskilled American labor at remunerative wages. The Utah laborers receive \$28.87 per month, a decline of 7% during the year, and a surplus of labor is reported.

A statement of the average rate of wages paid to agricultural labor in several countries in Europe will be of interest as affording a basis of comparison between the condition of the American and the European farm laborer. From the tables prepared for the report of Secretary Evarts upon this subject the following information is gathered, the figures referring to the year 1878: Agricultural laborers in England receive, without board or lodging, an average per month of \$15.60; in Ireland, \$14.73; in Scotland, \$19.42; in Normandy, \$12.44; in Italy, \$15.19; in Spain, \$14.95; in France, \$13.65.

STATE FAIR RATES.—In reply to an inquiry made by the Secretary of the State Agricultural Society, T. H. Goodman, General Passenger Agent of the Central Pacific Railroad, writes that all agents of the company have been instructed to sell tickets to Sacramento and return during State fair week for two-thirds fare for the round trip. This will give one an opportunity to attend the fair at one-third less than the usual rates.

ANOTHER strike of 600 colliers is reported from London.

## News in Brief.

WHEAT is higher.  
FLOODS in England continue.  
THE Greeks are arming to fight.  
GOV. FREMONT has gone to Prescott.  
THE blockade of Innique, Peru, is suspended.  
PERSIA is threatened with a disastrous famine.

It has rained steadily at Victoria for five days.

THE revolution in Hayti has been brought to a close.

THE demand for U. S. bonds is increasing in London.

THE International Grain fair opened at Vienna August 25th.

YELLOW FEVER is said to be spreading at New Orleans.

THE plague has appeared on the Turko-Persian frontier.

GRAIN crops in France have been improved by fine weather.

DEPUTIES to the Prussian Diet will be voted for October 7th.

NIHILISTS are being arrested in Sweden by request of Russia.

THE Edison telephone is being set up in all the quarters of Paris.

THE State Teachers' Association of Oregon is in session at Portland.

DROUTH has made the maize harvest in Serbia very unpromising.

ROWLAND HILL founder of the penny postage system, is dying, aged 85.

EIGHT MILLION immigrants have arrived in this country since 1847.

STEAMER *France*, from Havre, brought \$800,000 in gold bars recently.

CAPT. WEBB has challenged Paul Boynton to another swimming match.

STATE SENATOR, J. S. PALMER, of Corvallis, Or., died suddenly Sunday.

THERE are 7,000 workmen out of employment in Quebec and vicinity.

ALMOST a famine prevails among the tenant farmers in the west of Ireland.

A NUMBER of Swiss, French and Belgian colonists have gone to New Guinea.

A TERRIFIC cyclone struck Orange, Texas, August 22d, doing great damage.

STORMS at Pittsburg during the past two days have caused considerable damage.

LORD GORDON (Edward Stratheam) one of the English Judges of Appeal is dead.

THE female Nihilists recently sentenced to exile in Siberia is only 15 years old.

SILVER in London, 51½; consols, 97 15-16; 5% U. S. bonds, 105½; 4s, 104½; 4½s, 108½.

THE Caledonia and Lady Bryan mining companies have levied assessments of 50 cents.

THE entire river front of Crittenden county, Arkansas, is quarantined against Memphis.

JOHN BALDWIN BUCKSTONE, the comedian and author, is dying in London, in destitution.

LUKE MONIHAN, a farmer, near Phoenix, Arizona, was murdered recently by John Keller.

ANOTHER important discovery of coal is reported to have been made near Victoria, B. C.

THERE was a demonstration at Glasgow, Scotland, August 21st, of 2,000 unemployed laborers.

SECRETARY SHERMAN makes a pledge that the silver dollar shall be in value equal to one dollar.

REGISTRAR KAPLAN has discovered attempts at wholesale frauds in registration at San Francisco.

At Liverpool wheat is quoted at 8s 6d@9s 6d for average California white, and 9s 5d@9s 10d for club.

J. F. GRAHAM, cashier of the Central Pacific railroad at Ogden, has been arrested for embezzlement.

MILTON FARROW, an American, gained the first three prizes at the great shooting contest at Versailles.

THE steamship *Victoria* has been fined at Victoria, B. C., \$400 for an infraction of the revenue laws.

THE Treasury Department shipped to different States during August \$511,500 in standard silver dollars.

It is rumored that Russia has ordered from American shipbuilders vessels to the value of 25,000,000 roubles.

MANY picknickers were poisoned August 22d at Muckwonago, Wis., by drinking lemonade made of tartar emetic.

W. R. BELL, cashier of an express company at Kansas City, Mo., is missing, together with \$10,000 of the company's funds.

THE Coroner's jury in the case of the Italians killed by a Sheriff's posse at Fish creek, Nev., justify the conduct of the officers.

A SHOCKING AFFAIR.—A tragedy occurred in this city on Saturday morning last which excited the people, and at one time led many to fear a public disturbance. Chas. DeYoung, proprietor of the S. F. Chronicle, shot Rev. I. S. Kalloch, Workingmen's candidate for Mayor, on Jessie street, near the Metropolitan Temple. DeYoung's paper had published a series of severe articles upon Kalloch's life and antecedents, and Kalloch retaliated by scoring the DeYoungs in a public speech on Friday evening. On Saturday morning DeYoung lay in wait for his victim, and shot him through the window of a cab in which he concealed himself for the purpose. Kalloch was severely wounded in breast and thigh, and though his death has been expected, he has lived, and has some show for recovery. DeYoung is in prison awaiting the result of his shooting.





### The Corn and the Lilies.

Said the corn to the lilies,  
"Press not near my feet.  
You are only idlers,  
Neither corn nor wheat.  
Does one earn a living  
Just by being sweet?"

Naught answered the lilies;  
Neither yea nor nay,  
Only they grew sweeter  
All the livelong day.  
And at last the Teacher  
Chanced to come that way.

While His tired disciples  
Rest at His feet,  
And the proud corn rustled  
Bidding them to eat,  
"Children," said the Teacher,  
"The life is more than meat."

"Consider the lilies,  
How beautiful they grow!  
Never king had such glory,  
Yet no toil they know.  
O happy were the lilies  
That he loved them so."  
—Emily A. Braddock, in *Sunday Afternoon*.

### A Household Tragedy.

[Written for the *RURAL PRESS* by the author of "Nettie's Fortune."]

They were not unhappily married. Either George Henley or his wife would have been quick to resent any hint of such a thing, and no one who knew them in their home-life would have thought of suggesting it. And yet that life was not one of unclouded sunshine, for George Henley was endowed with a peculiar temper, and the circumstances in which he had been placed had not tended to improve it.

Without adopting the bitter thought that love must necessarily fly out of the window when poverty comes in at the door, one is yet compelled to acknowledge that pecuniary troubles seldom conduce to domestic happiness. The constant worry of such petty trials rasps the nerves and irritates the temper of most men, and this man was no exception to the rule.

If some great calamity had fallen upon his household, if dangerous illness or death had entered there, he could have been devotedly tender and self-sacrificing; but when it was only the want of money that pressed upon him, he never thought of checking the sharp, impatient words which came so easily to his lips, nor did he care to weigh the pain they caused.

His wife was utterly unlike him in temperament; gentle and forbearing to a fault, and therefore all the more keenly alive to the suffering she bore so patiently. Patiently now at last, since she had learned to accept it as inevitable. It had not been always so. She had begun her married life with the firm belief that no shadow could ever fall upon the perfect love on which it was founded; and the first time that some unintentional mistake called forth a seathing rebuke from her husband, she felt as if an earthquake had uprooted everything, and gave way to a passion of grief. Not only once; many a time afterwards the same scene was re-enacted, for Rachel Henley had her faults, and some of them in the close companionship of married life proved particularly irritating to her husband. She really did try to overcome them, but she was not very young at the time of her marriage, and only those who have made the effort can understand how difficult it is to break through the habits of thought and action which have been growing upon one for years.

Now I would not have you think that George Henley was a brute; far from it. He was fond of his children, kind and affectionate to them and to his wife so long as all went well. The only trouble was he had no forbearance, no patience for the failings of other people; and it may well be asked how much of happiness is required to outweigh the pain which may be caused in a family by such a want in one of its members.

At the time of which I write Mrs. Henley had been absent from home for a week visiting her sister in the neighboring town of Chester. She had not been feeling well and her husband had suggested the little holiday in the hope of its doing her good. Her manner after her return would have been disappointing to anyone; to him it was simply exasperating, for she was strangely absent-minded and depressed, the traces of tears were often visible, and at times she seemed to see and hear nothing that was going on around her.

One day at dinner, he asked her a question, which he was obliged to repeat before she answered.

"I beg your pardon," she said, with a start, "but I was thinking of something else."

"It seems to me you are always thinking of something else," he said, sharply. "You must have left your mind and your memory behind you in Chester."

"Dear, I am very sorry," she said, gently. But the soft answer failed. He pushed his chair back and rose from the table.

"It is a poor compliment to your husband and children when coming home seems to be such a trial to you."

The children had risen too and left the room, for they were old enough now to know that such was the wiser course. Mary was 15, George two years younger. Passionately fond of their mother they had learned to spare her the added pain of their presence at such a time.

Left alone, she covered her face with her hands and the quick tears trickled through them.

"Oh, my darling, if you only knew," she said, half aloud. But in a moment another thought prevailed. "He does not know, he cannot; and he is right, and I am very selfish."

With a strong effort she controlled herself, and when her husband came in at tea-time, she met him at the door with a face resolutely bright. If there was an unshed tear in the eyes lifted to his, a little trembling of the lips, it was only enough to make him bend and kiss her as he said half playfully, "Well, wifey, have you got over your cross fit?"

So that shadow passed. She was very watchful for a few days and all went on happily, so happily that she almost forgot she had anything to fear, and wondered, if after all, her dear old doctor might not have been mistaken. For the shadow she had brought home with her was this, the knowledge that she had an affection of the heart, which might terminate fatally at any time.

"And yet," said the doctor, who in answer to her entreaties had told her the whole truth, "in such a life as yours, it may be you will overcome it. Agitation is the thing most to be dreaded, and from it you are safe."

So much he knew, though for many years an intimate friend of the family. And now it was within a few days of her birthday, and Mary and George were holding mysterious consultations to which they laughingly refused to admit their father, because he never could keep a secret. When suddenly he announced his intention of going into town on Tuesday or Wednesday. "Not on Wednesday, dear," pleaded his wife.

"Why not? Oh, yes, I remember; your birthday. Well I will go on Tuesday."

Mary's eyes sparkled. She had some money of her own, saved up for a long time to buy a certain black alpaca dress for her mother. Now she could write a note to her aunt, who would get it and send it out by her father. She was delighted. Monday came, and at noon Mr. Henley said to his wife:

"I wish you would take out those papers of Smith's and put them in the pocket of my overcoat. There are several people I must see to-morrow whose addresses are there."

"I will attend to it," she said; and she intended to go up stairs and look for them at once; but visitors came in, spent the afternoon and staid to tea, and all thought of the papers passed from her mind. Early the next morning her husband set off. An hour or two after something recalled his request; she gave a sudden start and turned deadly pale as a sharp pang shot through her.

Mary was terrified. "Mother, darling," she exclaimed, "what is the matter?"

The poor woman recovered herself with an effort.

"Only my wretched carelessness. I have let your father go without those papers. He will be so vexed."

"Perhaps we can send them," said Mary, too wise to treat it as a trifle. "Get them out and I will tell George to watch at the gate; some one may be passing who will take them."

It was the only thing to be done, and fortunately in a short time a kind neighbor appeared, who promised to take the package and deliver it at the office of Mr. Henley's brother-in-law, where her husband would be sure to go in the course of the day. After that she breathed freely again, trusting that all would be well. Meanwhile Mr. Henley had reached Chester, and transacted part of his business. He put his hand into his pocket for the papers which were to save him a good deal of time and trouble. They were not there; he looked in the other pocket with a like result. An angry scowl darkened his face as he realized that his wife had neglected to give them to him. "Confounded carelessness," he muttered. "Was there ever a woman so utterly untrustworthy!"

He took no blame to himself for not making sure that he had them before he left home. It was his wife's fault and he was thoroughly disgusted.

He had seen his brother-in-law in the morning and promised to go to lunch with him at noon, but now he was so much out of temper that he would not keep his engagement. "I have no time," he said as he turned in the opposite direction, while at that very moment there lay on the office-table waiting for him the fatal package of papers. A great deal of trouble he had in looking up the different persons he wished to see, and his temper did not improve as the afternoon wore on. It was with a sort of grim satisfaction that he saw the day beginning to close in, and knew it would be late before he could reach home. His wife would be anxious, but it would serve her right. The neighbor who had brought the parcel met him in the street.

"Going home Henley?" he inquired.

"No. I have been so annoyed and delayed that I don't know when I will get through my business."

"Any message for your folks as I pass?"

"You may tell my wife I have been all day

looking up those addresses, and shall not be done in time to get home to-night."

"And she won't miss much by your staying away with that temper," said good natured Mr. Curtis to himself as he rode on. "Looking for dresses! I suppose he is mad because his women folks ask him to do a little shopping for them."

Mary was standing by the gate as he drew near Mr. Henley's house, and he stopped to give the message.

"The dresses," she said in a puzzled tone. "Oh, yes, I know now. And did he get the papers, Mr. Curtis?"

"Yes; I left them as soon as I went in, and he got them at noon."

"Thank you very much," said Mary as she turned away, wondering how she could explain matters to her mother without betraying her secret, for she had jumped to the conclusion that her aunt must be away from home, and her father had undertaken to execute her commission and so he had been detained.

"Don't scold me, dear mother mine," she said playfully, as she knelt down and folded her arms on her mother's lap. "I have done something very naughty, but I did not mean it."

"What is it, dear?" said the mother, who had always been the gentlest of judges.

"Well, I am afraid I am the cause of father's not coming home. He sent word by Mr. Curtis that he could not find something I wanted in time to get back to-night. There, now, don't ask me what it is till to-morrow; and say you forgive me."

"I suppose I must under the circumstances, Mamie; but did he get the papers in time?"

"Oh, yes, quite early in the day."

Mrs. Henley gave a sigh of relief.

"I am so glad—"

"Come, then, and let us be happy; it's all right now. We will have a nice quiet talk to-night, and to-morrow you shall know the great secret."

A nice quiet talk with her mother was Mary Henley's greatest enjoyment; and she never forgot the one that followed, when tea was over and George had gone to bed and they sat over the fire till the clock struck ten. The mother had made a friend and companion of her daughter, and the love and confidence that existed between them were as perfect as they were beautiful.

When they parted for the night, Mary said: "We have had such a pleasant evening that I had almost forgotten to be sorry for having kept father in town all night."

"Never mind, darling," said her mother, "it is next best to his being with me to think of the loving cause that detains him. I am not too old yet to enjoy the pleasant mystery you are to unfold to-morrow. It was very good of him to stay for your sake and mine."

But with Mr. Henley the evening had passed very differently. His business finished, he had gone to the house of his brother-in-law to spend the night. Now Mrs. Henley's sister was one of those women who must tell everything to their husbands, and she could not imagine such a thing as a wife keeping a sorrowful secret locked up in her own heart for weeks. So, as soon as the children were sent to bed and there was time for a little quiet conversation, she said: "How does Rachel seem to be now?"

"Quite well," Mr. Henley answered indifferently.

"Does she keep up her spirits?"

"Generally—but what do you mean?"

"Why, I can't help thinking it was rather unwise of Dr. Phillips to tell her so plainly—"

"Tell her what?" exclaimed George Henley, now thoroughly aroused.

"About her heart—surely she has told you."

"She has told me nothing. For God's sake, Mary, tell me what you are talking of—"

It was impossible to draw back, and the sad story was soon told, though the narrator was grieved and frightened at the effect of her own words. All the man's dormant love for his wife was awakened now, and he walked up and down the room in an agony of grief and fear. If he could only go to her—but he did not dare to do it; it would be midnight before he could reach home, and she would be alarmed by being aroused at that hour; he must wait for the morning. Through the long night he never closed his eyes; he lived over again all the years since he had known her, recalled her patient love and devotion, and vowed within himself to guard and cherish her for the future with a tenderness that should never be weary. "My wife, my wife! how could I live without you!" he said again and again as the terrible thought pressed upon him that it might even now be too late to hold her by the night of any human love. Too late!

With the first glimmer of the dawn he was on his homeward way, a nameless dread filling all his heart, so filling it that it seemed as though he knew beforehand what was to meet him ere his journey was ended. Far down the road there hastened towards him the figure of a boy on horseback; his heart stood still as he recognized his own son.

"George!" he gasped.

The boy threw himself from the saddle.

"Oh, father, father; we cannot wake her, she will not speak to us;" and then he burst into a passion of tears and sobs.

He never knew how he reached the house and found his way to the room where she lay asleep. Asleep! but with such a look of perfect peace, such a smile of ineffable rapture on the calm, still face as never comes to the sleeper who is to awaken to this life again.

He sank upon his knees and groaned in the

anguish of his heart. The memory of the message he had sent her yesterday, his last message to his wife, came back to him then, and he felt that he had murdered her. The weeping children clung to him, but he had no tear to shed; their love and sorrow might find relief in expression; his had turned into remorse, and hour after hour he sat speechless and still as though the shock had paralyzed him.

Later in the day Mary came to him. "Dear father," she said, "I would like to tell you how happy she was last evening. I think it would comfort you; though I can never forgive myself for your being away."

He looked up at her in blank amazement. What did she mean?

The simple explanation came out in the story of all that had occurred on the preceding day. She had hoped to rouse him, but she was scarcely prepared for the result when she had repeated her mother's last words. He caught her in his arms with a sudden burst of tears.

"My darling child, may God forever bless you!"

Afterwards he told her that Mr. Curtis had misunderstood his message; that she had not been responsible for his absence; but nothing more; the bitter memory which was to overshadow all his life he could not reveal to anyone.

Unspeakingly thankful that his harsh words had never reached the gentle heart he had intended to wound, he yet realized that they must dwell in his remembrance forever.

He is an old man now, and he knows that a few years only can remain to him on earth; but as he looks forward to the meeting with his wife in the eternal home above, he feels that the Divine forgiveness through which he hopes to enter there will make even the happiness of heaven complete until he shall have asked of the earthly love, which blessed him here, pardon for every hasty word so long and so bitterly repented.

### How to Get a Lover.

In Lancashire, if the inquirer wishes to know the abode of a lover, an apple-pippin is taken between the thumb and finger, and while moving round, squeezed out, when it is supposed to fly in the direction of the lover's house. These words are said at the same time.

"Pippin, pippin, paradise,  
Tell me where my true love lies;  
East, west, north, or south,  
Pilling Brig or Cocker-mouth."

Halliwel, in his "Popular Rhymes" (1849), says that girls formerly practiced divination with a "St. Thomas's onion," which they peeled wrapped in a clean handkerchief, and laid under their heads, saying the following rhyme:

"Good St. Thomas, do me right,  
And see my true love come to-night,  
That I may see him in the face,  
And him in my kind arms embrace."

In Shropshire, to find one's future partner, the blade-bone of a lamp must be procured, which is to be pricked at midnight with a pen-knife, and these words repeated:

"Tis not this bone I mean to pick,  
But my love's heart I wish to prick;  
If he comes not and speaks to-night,  
I'll prick and prick till it be light."

In Derbyshire they have a method which it would take a bold heart to perform. The young woman, to find out her future husband, runs round the church at midnight, as the clock strikes 12, repeating the following:

"I sow hemp seed, hemp seed I sow,  
He that loves me best  
Come, and after me now."

After which her destined partner is believed to follow her.—*All the Year Round*.

"BE A GOOD MAN, PAPA."—A poet, many years ago, wrote that a babe in a house is a well-spring of pleasure. The influence of a dear little child over the heart of a father, it is impossible to estimate. The editor of *The Christian* expresses it in the following incident: Leaving home this morning for the office, we kissed our little four-year old good-bye, saying to him, "Be a good boy." He somewhat surprised us by replying "I will. Be a good man, papa." Sure enough, we thought, we need the exhortation more than he. And who could give it more effectually than this guileless prattler? The words of the little preacher have been ringing in our ears all day, and whether we wrote letters or editorials, pacified an irate correspondent whose effusions we could not publish, or pruned down a too lengthy report, we seemed to hear the sweet child-voice saying, "Be a good man, papa." If the exhortation had been by Paul or Peter, would it have had more force than coming from this little apostle of innocence? We think not, at least to our heart. Oh! how many little children, if not in words, yet by the helplessness of their lives, and the trustfulness of their little hearts, are pleading most eloquently, "Papa, be a good man!" May their tender admonition be blessed of God to the rescuing of many precious souls from the wreck and ruin of sinful lives.

In a jovial company each asked a question. If it was answered, the questioner had to pay a forfeit; or, if he could not answer it himself, he paid a forfeit. An Irishman's question was, "How does the little ground squirrel dig his hole without showing any dirt about the entrance?" When all the rest gave it up, Pat said, "Sure do you see, he begins at the other end of the hole." One of the rest exclaimed, "But how does he get there?" "Ah," said Pat, "that's your question; you can answer it yourself?"



## Chaff.

PERSPIRATION is the cheapest luxury of the pore.

THERE are springs in California so full of iron that horses drinking the water need never be shod.

MAN is a machine, sometimes a thrasher, frequently a gas-generator, more often a beer barrel.

CHICAGO thinks a fur-lined linen duster would supply the most pressing necessity of this country.

AVOID a dog that curls its tail to the left, it is a dog of low degree. The curl right is the aristocratic brand.

SOME men's noses are so red that a fly lighting on any of them is obliged to lie down in some corner and sleep off the effects.

MAMMA—"Now, Arthur, be a good boy and take your medicine, or mamma will be very angry." Arthur (after mature deliberation)—"I would rather mamma was very angry."

TO BE TRUSTED.—One grocer asked another: "Is Col. — a man to be trusted?" "I think you'll find him so," was the reply. "If you trust him once you'll trust him forever. He never pays."

"WHY, Freddie," said mamma, "you ought not to make such a fuss. I don't fuss and cry when my hair is combed." "Yes," replied Freddie, "but your hair ain't hitched to your head, as mine is."

A rural apple-thief was caught by the owner crawling under the fence into the orchard. "Where are you going, sir?" inquired the farmer in his most decisive tones. "I am going back," was the response, as the culprit disappeared on the other side of the fence.

MATTERS OF CONSCIENCE.—The Rev. Dr. Macleod, father of Dr. Norman Macleod, passing through the crowd gathered before the doors of a new church he was about to open, was stopped by an elderly man with, "Doctor, if you please, I wish to speak to you." Asked if he could not wait until after worship, he replied that it was a matter upon his conscience. "Oh, since it is a matter of conscience, Duncan," said the good-natured minister, "I will hear what it is." "Well, Doctor," said Duncan, "the matter is this. Ye see the clock yonder on the new church. Now there is really no clock there, only the face of one; there is no truth there, only once in 12 hours; and in my mind it is wrong, very wrong, and quite against the conscience that there should be a lie on the face of the house of the Lord." The Doctor promised to consider the matter. "But," said he, "I'm glad to see ye looking so well, man. Ye're not young. I remember you for years; but you have a fine head of hair still." "Oh, Doctor," exclaimed the unsuspecting Duncan, "now ye're joking; it's long since I had my hair." Dr. Macleod looked shocked, and answered in a tone of reproach: "Oh, Duncan, Duncan, are you going into the house of the Lord with a lie on your head?" He heard no more of the lie on the face of the church.—*Chamber's Journal*.

VIEWS ON EDUCATION.—Learn first to be a man with sympathy; then how to be one without it. Cultivate a habit of punctuality, system, order, responsibility and precision; be fortified with habits of application, energy and accuracy. It is of more importance than superficial book-learning. Cultivate a desire for reading; discriminate carefully between true and false desire. Flimsy readers, who fly from foolish book to foolish book and get good of none and mischief of all, mistake their superficial, false desire for the real appetite of which even they are not destitute. To live well we should learn to work sportively and play earnestly; it is drudgery that wears—every stroke must be done with pleasure. And as we look back on our finished task we feel an honest pride and a good conscience, and enjoy life.—A. M. D., Rough and Ready.

ITALIAN GIRLS.—The girls of Italy do many things our young ladies would not think of doing, and they leave unlearned certain accomplishments which only the very poorest American fair ones pass by. The Italian bride makes her own outfit, and as the trousseau consists of six dozen of everything, being intended to last 25 years, and all must be embroidered and frilled, the task is not an easy one. But they take their time to it, occupying two years in getting it in shape, and all the while the work goes on the lovers are courting. The husband gives the dresses, shawls, everything, in fact, but the underclothing. Italian girls do not learn to sing, draw and play the piano. These are left to people who earn their living by them. But they are taught how to sew, cook and iron.—*Forney's Progress*.

HOW HE GOT A LIFT.—When Abraham Lincoln was a poor lawyer, he found himself one cold day at a village some distance from Springfield, and with no means of conveyance. Seeing a gentleman driving along the Springfield road in a carriage, he ran up to him and politely said, "Sir, will you have the goodness to take my overcoat to town for me?" "With pleasure," answered the gentleman, "but how will you get it again?" "Oh, very easily," answered Mr. Lincoln, "as I intend to remain in it!" "Jump in," said the gentleman, laughing; and the future President had a pleasant ride.

## Young Folks' Column.

## Little Susie and Bennie.

"Are you asleep, Susie?" whispered a half sobbing voice, coming from a sorrowful looking little boy, as he bent over his sister's bed.

"No, Benny; what's the matter; does it hurt you yet where he whipped you?"

"Yes, awfully; and I'm so hungry. He wouldn't give me any supper. I'll tell you, I won't stand it; I'm going to run away."

"And leave me, Bennie? I should die in this old poorhouse alone," and Sue raised herself in the bed, and looked mournfully out of the large window.

"Let's run away together! Would it not be nice if it was summer? Then we could go away off in the woods, where nobody could find us, and pick berries and nuts to eat, and have a splendid time."

"Hush, Bennie; talk low, or you will wake up some of the others. You know it isn't summer, and we would freeze and starve to death, if we left here now!"

"I'd rather freeze to death than to be treated as I am; and I am about starved now," replied Bennie, half crying.

"I'll tell you, Bennie. My teacher told us last Sunday that everything belonged to God; and she told us once, if we prayed real earnest, He would answer our prayers."

"Don't you think, Susie," interrupted Bennie, looking wistfully out at the clear blue sky, lighted by myriads of bright stars, "that that big dipper up there is where God keeps all His good things, like nice cakes, and pies, and honey?"

"Oh, no! of course He don't; but I think He keeps His money in it; and perhaps, if we pray to Him very hard He will just drop us down some. Then we could do just what we wanted to, and have everything we pleased. I should have lots of dolls, and little carriages, and dishes, and you a dog, and some tools, and a sled, and—O, Benny, let's kneel right down and pray this minute!"

Down went four little knees, clasped were four little hands, closed were four little eyes, and earnestly moved four little lips. I think God must have smiled tenderly over those innocent children as He listened to their petition, and He answered it in His own wise way.

After their prayer was said they crept softly to the window and looked anxiously up at the great dipper in the sky. Suddenly they clasped each other's hands, and Susie whispered joyfully, "He did hear us! He did hear us! I saw something bright fall right on that big stone house over there."

"I guess he didn't drop it 'xactly straight, or else the wind blew it away a little," said Benny. "How shall we ever get it?"

"We'll have to wait till morning, and sly off some way and just tell the folks that live there all about it, and ask them to let us go up and get it. We must go to bed now, though we can get up real early; and I'll tell you, Benny, maybe we won't ever sleep in this old poorhouse again," said Susie, as she kissed him good-night.

Mr. Herman Rock, the owner of the big stone house, was a soured, desolate old man. Once he had been different, when his sweet wife and child were alive, but since their death, he had grown crusty and miserly. So people were rather afraid of him, and left him mostly to himself and his maiden sister, who kept house for him, and was his only friend and companion. On the morning following the beginning of this story, as Mr. Rock and his sister Celia were taking their morning meal in their great clean kitchen, there came a timid knock at the door, and on opening it who should appear before them but little Susie and Benny from the poorhouse! The children both seemed very much frightened at first, but soon Susie summoned up courage and related her story, about their lonely condition—how they were abused, their prayer, and the bright thing they saw fall on the house, and then asked permission to take a ladder and climb up and get their treasure. She told her story so simply and innocently that the two listeners' faces first wore an amused expression, which soon softened into one of pity, and the icy fetters that had long bound Celia Rock's heart soon melted away in a flood of tears, as she took the little ones in her arms and lavished on them many kind words and fond caresses.

"Give them some breakfast, then come into the sitting-room," commanded Mr. Rock in a hoarse voice, as he left the room.

Celia Rock knew by the changed look and excited appearance of her brother that something uncommon was about to occur, but she was not prepared for what happened when she came before him.

"Celia Rock," said he, walking hurriedly across the room, "you and I have shut out the sunlight from our lives long enough, we have locked up our talents long enough; we have hid away our gold long enough. Let us now undo the shutters and let in the sunlight—unfasten the rusty bolts that bar in our talents, and improve them; dig up our gold and make use of it, that we may be as dippers, full of good things, in God's hands, to drop blessings and comforts to His little children."

So Susie and Benny did find the gift God sent them—not a bundle of gold on the top of Mr. Rock's house, as they had expected, but in a pleasant home inside.—*Northwestern Advocate*.

## Good Health.

## Poisoning by Strychnine.

A recent case of poisoning by strychnine in San Francisco, where the patient was well and rational for a long time after the reception of the deadly drug, and conversed pleasantly with his physician, recalls a remedy which is said to be so well known and successful that where life remains the effect of the strychnine may be entirely obliterated and its deadly action destroyed. We allude to chloroform. The effect of strychnine on the system is to produce a contraction of the great nerve centers, or ganglia, and bring about paralysis. Aiming directly for these points, it reaches the brain and destroys its vitality by its enormous contractile power upon the system. In case of poisoning by so doing, the contraction is made manifest by the "twitching" of the muscles, the mouth is drawn in different shapes, and the patient then has generally been said to be so effectually under the influence of the drug that he cannot be saved. It is agreed, however, that there need never be a fatal case of poisoning by this death-producing element, and that as long as any signs of life remain a cure can be effected.

Chloroform is administered in sufficient quantities to keep the patient under its influence. This anesthetic attacks the nerve centers with the same vim as strychnine, but produces a contrary effect, in that it causes a relaxation, and fights the strychnine on its own ground. By allowing the patient to recover from the effect of the chloroform, the "twitchings" of the muscles will be resumed if the strychnine has not been effectually counteracted. In this case, chloroform must be applied again without delay, and kept up as long as the nervous or spasmodic contractions appear. The remarkable effect of the chloroform is apparent as soon as administered. The contractions and twitchings of the mouth, etc., immediately cease, and do not return as long as the patient is under its influence.

ACTIVITY, NOT ENERGY.—The *Christian Union* thus defines the difference between activity and energy, and suggests wherein a large class of industrious people lack that element which produces success. There are some men whose failure to succeed in life is a problem to others as well as to themselves. They are industrious, prudent, and economical; yet, after a long life of striving, old age finds them still poor. They complain of ill luck. They say that fate is always against them. But the fact is that they miscarry, because they have mistaken mere activity for energy. Confounding two things essentially different, they have supposed that if they were always busy they would be certain to be advancing their fortunes. They have forgotten that misdirected labor is but waste of activity. The person who would succeed is like a marksman firing at a target; if his shots miss the mark they are a waste of powder. So in the great game of life, what a man does must be made to count, or might almost as well have been left undone. Everybody knows some one in his circle of friends, who, though always active, has this want of energy. The distemper, if we may call it such, exhibits itself in various ways. In some cases the man has merely an executive capacity when he should have a directive one—in other language, he makes a capital clerk of himself when he ought to do the thinking of the business.

MAN'S OCCUPATIONS AND MORTALITY.—The statistics of mortality in Massachusetts since 1843 teach some instructive lessons in regard to the influence of man's occupation on his chances of longevity. We extract a few data showing the average duration of life of various occupations: Gentlemen of leisure, 68 years; farmers, 66; judges, 64; light-house keepers, 63; female nurses, 62; basket makers, 61; pilots, 60; sextons, ship carpenters, bankers and clergymen, 59; professors of colleges, 57; lawyers, 56; physicians, 55; clock and watch makers, sheriffs and policemen, 53; wharfingers and butchers, 51; editors of political papers, 47; peddlers, 46; artists, 44; dress makers, 43; druggists and dentists, 42; musicians and music teachers, 41; saloon keepers, tobaccoists, printers, railroad agents and conductors, 40; milliners, factory girls and domestics, 39; glass-blowers and powder-mill employees, 38; clerks and book-keepers, 36; plumbers and carvers, 35; female school teachers, 32; telegraph operators, 28; brakemen on railroads, 26.—*Manufacturer and Builder*.

GOOD NEWS FOR DYSPEPTICS.—We have seen, says one of large experience, dyspeptics who suffered untold torments with almost every kind of food; no liquid could be taken without suffering; bread became a burning acid; meat and milk were solid liquid fires, and we have seen their torments pass away and their hunger relieved by living on the whites of eggs which had been boiled in bubbling water for 30 minutes. At the end of the week we have given the half yolk of the egg with the white, and upon this diet alone, without fluid of any kind, we have seen them begin to gain flesh and strength, and quiet, refreshing sleep. After weeks of this treatment they have been able, with care, to begin other food. And all this without taking medicine. Hard-boiled eggs are not half so bad as half-boiled ones, and 10 times as easy to digest as raw eggs, even in egg-nog.

## Domestic Economy.

SNOW-RAISED BREAD.—A writer in an English journal relates a circumstance which seems to show that snow, when incorporated with dough, performs the same office as baking powder or yeast, which may be a useful hint to some of our readers who live near the snow line up on the Sierras. The cake which he ate was made as follows: A large tablespoonful of fine, dry, clean snow was intimately stirred with a spoon into dry flour; to this was added a little butter and salt, and sufficient cold water to make the proper consistency of dough. It was then simply stirred with a spoon (not kneaded) and put immediately into a quick oven. The result was a light, palatable loaf. The reason assigned is that the light mass of interlaced snow crystals hold imprisoned a large quantity of atmospheric air, which, when the snow is warmed by thawing very rapidly in the dough, expands enormously and acts the part of the carbonic acid in either baking powder or yeast. The precise action is held not to be due in any way to the snow itself, but simply to the expansion of the fixed air lodged between the interstices of the snow crystals by application of heat.

PICKLING GREEN ENGLISH WALNUTS.—A lady of great experience in such matters, gives the *Germantown Telegraph* the following recipe for pickling walnuts: "Gather them dry, prick them through with a large pin two or three times, put them into salt and water, shift them every three days for a fortnight, put them into a sieve, and let them stand in the air, and then put them into an earthen jar. Boil as much vinegar as will cover them well, pour it boiling hot over them; let them stand three days, then put them into a sieve, and let them stand in the air another day; then take to every quart of fresh vinegar that may be wanted, half an ounce of black mustard seed, half ounce of horseradish cut into slices, a quarter of an ounce of long pepper, three cloves of garlic, a dozen cloves, four or five pieces of raw ginger, and a few eschalots; boil these 10 minutes, and pour it boiling hot over your walnuts; let stand a fortnight, then put them into bottles corked close, and cover the corks with resin. They will keep for years."

SPICED CANTELOUPE.—We prefer the rough skin, firm fruit, though ripe. Take out the seed, cut and pare, then cover the whole quantity with good cider vinegar. We use a large earthen crock and let it stand over night. Next morning measure the vinegar and throw away half of it. Then to every quart that is left add three pounds of sugar, and put it on the stove with the fruit and let it simmer until you think it done. I think we did ours over two hours. Don't forget to cook with it half an ounce of cloves and one ounce of cinnamon. I suppose that amount of spice to every quart of juice is the right way, but I only put that quantity to five pints of juice or vinegar. I also use white vinegar, and think it cheap as any. I know a good cook who does the most of her spicing and preserving in tin pans, and I followed her example and had no trouble; there is more danger of burning preserves.—*Cor. Germantown Telegraph*.

FROZEN BANANAS.—An English cook says: "I take six good bananas and put them aside, being careful not to handle them too much, and not to remove the skins until the very last moment, otherwise the fruit will blacken. For six bananas I use a quart of cream, and a third of a pound of powdered sugar; I sweeten my cream; then I peel the bananas, cut them, rub them up very quickly with a potato-masher, and put the cream on them, and without a moment's delay I freeze them." This will be the hard part of making the dish in this State. Even last winter, the coldest known since the State was settled, bananas grew out of doors without freezing, and it will be hard to freeze them in the house. However the recipe can be kept until artificial ice becomes so cheap that all can use it.

WALNUT KETCHUP.—Take three hundred young walnuts (they are generally in a fit state early in August), pound them small, adding, as you pound, one pound of salt; then put them into a quart of vinegar for four days, press all well through a hair bag, add to each quart of the liquor extracted one drachm of cloves, one drachm of mace, one drachm of cayenne, half a pound of anchovies, and one clove of garlic, and boil all for three quarters of an hour; skim it till clear, then add half a pint of port wine to each quart, simmer a few minutes longer, let it stand till cold, then pour off the ketchup quite clear; or you can add the mace and cloves to it as you bottle it off.

PICKLE FOR BEEF, PORK AND TONGUES.—Put two gallons of cold water into a large stewpan with three pounds of bay salt, one-half pound of good, moist sugar, and two ounces of salt-peter. Bring it to a boil, skim carefully, and let it boil for 20 minutes. Turn it into a deep pan, and when it is quite cold it is ready for the meat. Meat may be kept in this pickle for three weeks in mild weather, though it may be used in five or six days. The liquid in which it is boiled will not be found too salt to use for soup. The pickle may be used repeatedly. Add one pound of common salt, or one-half pound of bay salt, and a pint of water every time the pickle is boiled.





DEWEY &amp; CO., Publishers.

A. T. DEWEY. W. B. EWER.  
Office, 202 Sansome St., N. E. Corner Pine. St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line..... .25 .80 \$2.00 \$ 5.00  
Half inch (1 square)..... \$1.00 \$3.00 7.50 24.00  
One inch..... 2.00 5.00 14.00 40.00

Quack Advertising positively declined.

Our latest forms go to press Wednesday evening.

The Scientific Press Patent Agency.

DEWEY &amp; CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. G. H. STRONG

SAN FRANCISCO:

Saturday, August 30, 1879.

## TABLE OF CONTENTS.

**EDITORIALS.**—The Victoria Regia; Testing New Varieties of Wheat; Levee Pests and Plants, 129. Farm Wages in the United States, 133. The Week; A Lay Sermon; Firing Beef at Long Range; The Food Value of Straw, 136. Prescott, Arizona, 137.

**ILLUSTRATIONS.**—The Victoria Regia—Now in Bloom at Golden Gate Park, S. F., 129. City of Prescott, Arizona, 137.

**QUERIES AND REPLIES.**—Melon Sugar; Tar on Fruit Trees; Pearl Millet; Food-value of Squash; Chemical Compound from Canada; Diseased Grapes; New Tomatoes; Van Camp Seedling Peach, 137.

**CORRESPONDENCE.**—Alfalfa Growing; Dodder and Alfalfa, 130. Causes of Hard Times.—No. 3, 132.

**HORTICULTURE.**—Orange Growth by Irrigation; Notes on Budding; A New Oil Fruit, 130.

**THE FIELD.**—Uses of the Hop Plant, 130.

**ARBORETCULTURE.**—Dry-rot in Timber, 131.

**THE APIARY.**—Bees and Fruit, 131.

**THE DAIRY.**—What New York Dairymen Get for Their Milk; Killing Rats Around Farms, 131.

**SHEEP AND WOOL.**—More Mutton Should be Eaten; The Way to Handle Sheep; Rapid Clothes Making, 131.

**FLORICULTURE.**—Hints on Bouquet Making, 131.

**PATRONS OF HUSBANDRY.**—At Home in the Grange; The Grange as an Educator; The Road to Prosperity, 132.

**AGRICULTURAL NOTES** from the various counties of California, Nevada and Oregon, 132-133.

**NEWS IN BRIEF**—on page 133 and other pages.

**HOME CIRCLE.**—The Corn and the Lilies (poetry); A Household Tragedy; How to Get a Lover; "Be a Good Man, Papa;" Chaff; Views on Education; Italian Girls; How He Got a Lift, 135.

**YOUNG FOLKS' COLUMN.**—Little Susie and Bessie, 135.

**GOOD HEALTH.**—Poisoning by Strychnine; Activity, not Energy; Man's Occupation and Morality; Good News for Dyspeptics, 135.

**DOMESTIC ECONOMY.**—Snow-Raised Bread; Pickling Green English Walnuts; Spiced Cantaloupe; Frozen Bananas; Walnut Ketchup; Pickle for Beef, Pork and Tongue, 135.

**MISCELLANEOUS.**—Concrete as a Substitute for Stone in California, 138.

## Business Announcements.

Phylloxera-Resisting Vines, Bush & Son & Meissner, Bushberg, Jefferson Co., Mo.  
Agricultural Implements, Baker & Hamilton, S. F.  
Rosecomb Leghorns, P. E. Monaghan, Alcatraz Is. Cal.  
Strawberries, Wm. Parry, Cinnaminson, N. J.  
Pianos, Kohler & Chase, S. F.

## The Week.

The incoming of the fall clip of wool, the grapes, the equipping of the wine presses, the spread of the raisin trays, the less frequent cry of the steam thrasher, the terribly "cut up" condition of the country roads—all tell that the year approaches its third quarter. Although the seasons are not nearly so marked in California as in other climes, and though a man may do all kinds of "unseasonable" things, such as picking strawberries in the winter, and sowing wheat at one end of a field, while a thrasher is at work on the other, still there are some signs of the season's work, and the observer is not wholly restricted to sun risings and settings to fix the approach of winter. What will the season be is already the question, and soon the prognostications will be plenty. Already a solitary duck floating beside the Oakland wharf, calmly meditating the encroachment made upon her feeding ground by the acres of earth which the railroad is dropping into the bay, has been credited with being a harbinger of early and abundant rains; so it would be well to look out for dried fruit shelters and hurry the dry-sowing. Such important hints, at least, we may risk upon the indications for the day.

Peace reigns in spite of dread anticipations on the part of many. The city has lived through a most exciting period in the last few days, and it is a subject of congratulation that the people can curb their deepest indignation and wait for the law to deal with law breakers. Fortunately but a week remains of this most peculiar political campaign, and then for another period of earnest attention to industry, which has been for many months neglected by many of our citizens.

## A Lay Sermon.

There are now and then wrongs so glaring that even inanimate nature has been invoked to witness them and visit condign punishment upon the doers. There have been evils so intense that man has distrusted his ability to condemn, and has conceived that even the very stones of the earth cry out against them in eloquent rebuke. Not twice in a lifetime do such abominations come, and it is little wonder that human words, most used in denunciations, seem but empty sounds when the crowning iniquity bursts forth to view. What says the record of the day?

A newspaper without a conscience, without a character, without a decent regard for purity not its own, fills its columns from day to day with vile detail of filthy deeds, which, even though they were susceptible of proof as mathematics, should never find sound in whispered speech, much less insult the eye in glaring type. Charges which should palsy the gossip's tongue, or bring a blush of shame to the most depraved listener, are boldly proclaimed in the guise of political discussion, and thus gain access to many households, carrying a moral poison the virulence of which no mind can measure.

A candidate, maligned, bespattered with grime, charged with a life of treachery and lust which even utterly abandoned souls would shrink from, so far forgets the respect due to manhood that he, in retaliation, dives deep in the dark and slimy pool whence his accusers draw the venom to tip their shafts, and hurls back upon them the same polluting stream of calumny, and cries aloud of deeds which should never be voiced in public ear, clothing his charges in a language which verges close on blasphemy. This candidate, made by his office a custodian of the highest thoughts which come to human mind, turns quickly from this lofty place and plunges into the gulf of shame, and hurls billingsgate and bile with the art of an accomplished bawler.

The responsible head of the shameless newspaper, beaten at his own game of soulless slander, unwilling to receive in his own breast the deadly darts which he so unceasingly poured into the bosom of his fellow-man, arranges an ambush on a public highway and beckons his unwary victim to approach his lair. Then when his victim, with uncovered head, with every mark of politeness and respect for the unknown person who would speak with him, draws near the hidden trap, he pierces him with bullets—shoots him as a fearful man might shoot a rabid cur. And why did he shoot? His plea of justification is his wounded honor. When he was railing what did he think of honor? Why should he arrogate to himself an honor which his printed words belie? Why should he constitute himself an avenger of virtue who talks so glibly of its loss; and by the very words suggests thoughts and deeds which pure minds would never conceive without his prompting. There is sometimes impudence which is sublime.

But what signify these allusions to groveling deeds? Why not consign them to the silence and darkness which they desire? Only this: the actors occupy the positions of public teachers, and are also just now prominent in political affairs. What can be expected of a people which accepts such mentors? What can be expected of our children if they are permitted to study over details of vice in public prints, which we would shudder to mention in their hearing? Would we not kick from our doorsteps anyone who should come bringing conversation to our home circle like that which depraved writers thrust in under the guise of current news? Has not this evil run its deadly length? Is it not time that the people should warn journalists that it is not the gossip of brothels which should occupy their type; that it is not the deadly fascination of vice which should give zest to literature. It is the duty of every man to do his part to arrest the evil. It is in the people's power to determine whether journalism shall be held true to its lofty mission in defense of truth, in promotion of virtue, in advancement of a higher civilization and enlightenment, or whether it shall be prostituted to serve the sisterhood of vices which would fill our homes with shame, our lives with bitterness, and crowd perdition with ruined souls.

**PERSONAL.**—We had a call on Tuesday from P. P. Mast, Esq., of the firm of P. P. Mast & Co., of Springfield, Ohio, one of the largest Eastern firms manufacturing agricultural implements and machinery. Their name is perhaps best known through the wide use of their seed drill in all parts of the country. Mr. Mast has spent two months in visiting different parts of our State studying our resources and systems of developing them and becoming acquainted with our industrial population. His trip was primarily for the benefit of his health, but being of active business habits he has gone about with his eyes open and will return, we doubt not, with a good idea of our country, its troubles and its advantages.

A STEAMER left New York lately for San Francisco with a fair cargo of bags, tobacco, machinery, oil-milk, currants, nails, horseshoes, and sheet iron. Another sailed on the 27th.

## Firing Beef at Long Range.

Australian pluck is admirable. The stock growers of the island continent have for a year or two been enjoying gilded prospects of arriving at some process by which their beef can be preserved in a fresh state and laid down on the butchers blocks of London, and although their hopes have not yet been realized they are still guided by them.

The managers of the Sydney exhibition are so charged with the desire to send "home" fresh chops and juicy roasts, that they have offered a gold medal and diploma for any refrigerating process best suited to reach the ends desired. A gold disk and a piece of parchment will not serve as a poultice on inventors' energies so well as a few thousand dollars cash, because an inventor cannot live nor build working models with medals and prepared pelts; but as the Australians offer such as they have, in good faith, to all the inventors of the world, we cannot deny the announcement to our readers in case any of them wish to compete for the glittering pan-cake and the engrossed hide. Briefly then the commission of the Sydney show give notice as follows: "In view of the importance to the comfort and health of the people of a cheap process of producing artificial cold, as also in view of the pressing necessity which exists for some practical method of enabling the surplus animal products of Australasia to be conveyed by means of a low artificial temperature to those countries where the supply is deficient, the commission will decree, irrespective of country, the following special awards: 1. For the machine capable on land of producing artificial cold at the least cost—gold medal and certificate. 2. For the machine best adapted for maintaining a low artificial temperature on board ship at sea, and best suited to the economical preservation of a cargo of fresh meat during a voyage to Europe, together with least liability to derangement of machinery—a gold medal and certificate. Should any refrigerating machine combine both series of merits, it will receive the double award; and stamped as it will be by the reports of competent judges, the inventor, whilst conferring on the world great benefits, will secure for himself high renown and much profit. The better to enable the inventive faculties of the world to compete for these two prizes, the commission have determined to extend the time for entering and erecting the competing refrigerating apparatus to February 1st, 1880."

But this is not all. The hopes of the Australians will not die even if their offer of "high renown and much profit" should not induce the longed-for process. If beef cannot be shot overseas from Australia to England, it is proposed to fire it from Australia to this coast and then drawing back the cattle-pult again, pitch it from here to the Atlantic coast; there knock off hide, horns and hoofs, and then subject it to Atlantic storms in a condition of bareness, distressing to contemplate. This reads not unlike one of Jules Verne's recipes, but it is honestly set forth, for a correspondent writes to the *Queenslander* as follows: "It is immaterial to us whether England gets our meat first or second hand, so long as we have an assured market. If an 800-pound beast worth £5 here, fetches £10 to £12 in America, and we can deliver it there at 1d. per pound, we really get £7 per head. Certainly the margin of profit is much greater exporting to England live stock or carcass, but the difficulties are at present insurmountable. I think we cannot do better than supply England through the States."

This proposition is at the same time sublime and amusing. Modern contrivances for transmitting information are child's toys compared with this system of sending butchers' carts around the world. It is so beautiful an idea that we hesitate to remark that probably it would cost more to get an Australian steer across the United States than he would be worth in England, not to mention the cost of getting to our coasts and away from them. We are sorry to dispel drovers' dreams, but truth is a hard master and disobedience is dangerous. Therefore, whatever be the risk, we do declare that the time has not yet come when Australian oxen can be reckoned among the overland tourists.

**CALIFORNIA QUINCES AT THE EAST.**—The *Germantown Telegraph* speaks of the excellence of our quinces as sent to Philadelphia overland, and then gives a note on growing which is interesting, although we have not heard of the trouble mentioned, as existing on this coast. Our exchange says: "The quince, of the fine old orange variety, is making its appearance in our markets from California, and commands a good price. Their cultivation has been generally abandoned in this region, owing to the depredations of the worms in the roots. As the roots are at the very surface of the ground it is difficult to protect them by covering, as we have suggested the dwarf pear tree should be, the stock of which is quince. There is no other way to dislodge the worm than by ferreting them out twice a year with a wire. The only other way to get quinces is to let the worm alone in its operations, and always have a fresh lot of trees coming on. They will bear about six years before requiring renewal."

## The Food Value of Straw.

Discussions of the food value of straw is again in order, as the material is now in good amount on our grain farms. We have heretofore alluded to various sides of the straw question and the advantage of getting the substances it contains back again into the soil as plant food, wherever it is possible to do so. At this time we propose to present some considerations concerning the food value of straw from different grains, that their comparative worth may be determined. This subject has just been reviewed by Bernard Dyer, an English agricultural chemist of good repute, and his studies have been reported for the *Agricultural Economist* of London. Therefrom we shall draw leading points.

It is evident that the quality of straw will be much affected by the time of cutting. In fact, the chief difference in this State between hay and straw is occasioned by time of cutting. In order to test the qualities of straw from different grains, it is necessary that all should be cut at the same state of maturity, else all calculations would obviously be liable to error. It is customary to cut oats greener than wheat and wheat greener than barley, because the grains seem to reach their several uses better when cut in that order of comparative ripeness. Now we are ready for Mr. Dyer's conclusions:

Wheat straw, in an average condition, neither under nor over ripe, was found on analysis by Dr. Voelcker to contain between 1% to 2% of fatty matter, from 2% to 3% of nitrogenous compounds, about 4% to 6% of sugar and extractive and mucilaginous matter soluble in water, and about 20% of cellulose (or fiber) in a sufficiently soft state to yield to the action of digestive liquids. Oat straw is somewhat similar in composition, as far as the proportions of oil and nitrogenous compounds are concerned, but it contains more sugar and extractive matter, and a much larger proportion of digestible fiber. While in the case of wheat straw rather more than one-fourth of the total cellulose or fiber is digestible, in the case of oat straw considerably more than one-half of the fiber is soluble in dilute acid and alkaline solutions approximately corresponding in strength to the gastric juices. Oat straw is, therefore, as a rule, superior in feeding value to wheat straw, inasmuch as it contains a much larger proportion of digestible carbonaceous, or fat-forming and heat-producing principles. Barley straw contains more nitrogenous matter than either wheat or oat straw, but in the ripe state, in which it is most often harvested, it was found by Dr. Voelcker to contain but a very small proportion of sugar and other assimilable carbonaceous products, more than nine-tenths of the fiber it contains being in a perfectly indigestible form. When less ripe, however, barley straw is of a much more digestible nature, and on account of its superior value as a flesh former, it must, in that case, be considered as better fodder than wheat straw. It is probably, however, very rarely that barley straw is harvested in such a condition as to be equal in feeding value to good oat straw.

It is interesting to consider side by side with the straw of the cereals, the so-called "straw," or more properly speaking, the haulm of the leguminous plants, peas and beans. Pea straw contains from 6% to 9% of nitrogenous compounds and about 2% of oil, about 8% of sugar and soluble extractive matters, and about 60% of fiber, of which nearly one-third may be regarded as digestible. Its composition more nearly resembles that of hay than does that of any of the common cereal straws, and it is a justly prized article of food for both sheep and cattle. Bean straw, on the other hand, contains only 3% or 4% of nitrogenous constituents, 1%, or less, of oil, about 4% of soluble carbonaceous principles and about 68% of fiber, of which less than 3% is digestible, the remainder being hard indigestible woody fiber of no nutritive value. These figures represent the composition of bean straw without the pods. The pods are much more nutritious and digestible than the stalk, and therefore add very considerably to the value of the bean straw if they are chaffed together with it.

The results of an examination into the composition of the various straws led Dr. Voelcker, a number of years ago, to classify them for feeding purposes in the following order: Pea haulm, oat straw, bean straw with pods, barley straw, wheat straw, bean straw without pods. This classification, however, as already pointed out, can only be considered as a provisional one, seeing that the value is in each case dependent upon maturity. One sample of wheat straw harvested young may sometimes be altogether superior to another of oat straw harvested ripe, and the same remark applies in other cases. Such a classification, however, holds fairly good for equal conditions of ripeness.

JUDGE POTTER, of the N. Y. Supreme Court, has decided against the Pacific Mail Co. for taxes amounting to \$186,000 on personal property, levied in 1874.

IN New York Government bonds are quoted at 100½ for 4s of 1907; 101½ for 5s of 1881; 105½ for 4½s; sterling, \$4 82¢ 4.84; silver bars, 112½; silver coin, ½@1 discount.



## QUERIES AND REPLIES.

### Melon Sugar.

EDITORS PRESS:—As I have read so many answers to questions of interest and value to farmers in your valuable paper, I thought I would ask one that would be of great value to the farmers of this section of country. Every one of them summer-fallows more or less every season, and the land has to be plowed twice after the first deep plowing so as to keep the weeds down, and there are no returns for that season. The work is all done that the ground be in condition for the next crop. This same ground could be planted in watermelons, and will produce tons of them to the acre, which cannot be equaled in quality or quantity in this State, not even on the bottom lands. There are some 500 acres of watermelons in this vicinity at the present time, and all they do with them is to ship them to San Francisco and other places some two months in the season, July and August. From that time on until the frost comes they are left to rot on the ground, thousands of tons of them. The question I want to ask is, could you suggest some way to make them profitable to the growers? As I think sugar and syrup could be made from them instead of letting them waste on the ground. And if any one wants to engage in that business they can get all the ground they want free of rent, as farmers are anxious to have the ground cultivated in that way.—GRANGER, Lodi, San Joaquin Co., Cal.

EDS. PRESS: Melon sugar, and especially syrup, is produced in Italy, Hungary, and other warm countries of the temperate zone. Some years ago a company was formed in California for the manufacture of sugar from melons. The intended works for this purpose were to be at Isleton, on the Sacramento river, half way between San Francisco and Sacramento. It is not known that sugar was ever produced from melons by this company. For some reason, best known to themselves, the company gave up the project of manufacturing melon sugar, and tried their hands at beet sugar, in which they did not succeed either. The whole undertaking, from beginning to end, was a failure, though many people call it a great deal harder names. Had the company paid half as much attention to sugar making as they did to law suits, life would have been made sweeter to themselves and to those who had dealings with them. The formation of this company drew the attention of the sugar-manufacturers' association of Germany to the subject of melon sugar. The chief of the chemical station of this association was requested to inquire into the subject of melon sugar, and report through the journal of the society. Melons procured from different quarters were analyzed and experimented with, but the proportion of grape sugar was considered too high to make the production of crystallized sugar from the melon profitable. In giving all the figures obtained by these experiments at the chemical station, the chief of the same concludes his report to the association with the remark that there is no immediate danger that the beet-sugar industry in Europe will be superseded or even interfered with by the melon-sugar production.

Whatever the result has been in examining the relative proportion of cane sugar and grape sugar in the melons grown in Europe (the exact figures are not at my disposal), this result is immaterial and of no importance, as it has nothing to do with melons grown in California. The fact though that melon juice is almost a pure solution of cane and grape sugar in water is of great importance, as it makes the manufacture of syrup and sugar an easy matter, which can be done on a small scale, while the manufacture of sugar from beets cannot be done on a small scale, but requires a large variety of very complicated machinery.

The answer to the question, "Can melons be made profitable to the grower by manufacturing sugar and syrup therefrom?" can only be given through a scientific investigation, and as we are in the light of the melon season in California, nothing is easier than to make these investigations and lay them before the farming community. The only point of importance is the relative proportion of cane and grape sugar or of crystallizable and uncrystallizable sugar in melons grown in California. The best authority to make these investigation and inform the public would be Prof. E. W. Hilgard, of the University of California. The results obtained by him would carry conviction to every mind, and would therefore be conclusive. I have no doubt if the question was brought in the proper way to the Professor's notice he would take the matter in hand. But as the question is of great practical importance in affecting the sugar supply of the world, I will also investigate the same; ascertain the proportion of cane and grape sugar in the different varieties of melons grown in California, as far as I can procure them, and lay the result before the public through the columns of the RURAL PRESS.

The immense quantities of melons rotting on the ground, as our friend "Granger" informs us, could undoubtedly be made profitable to the grower, but certainly not by any one engaging in the melon-sugar business, with the expectation of getting the ground to grow the melons on free of rent.

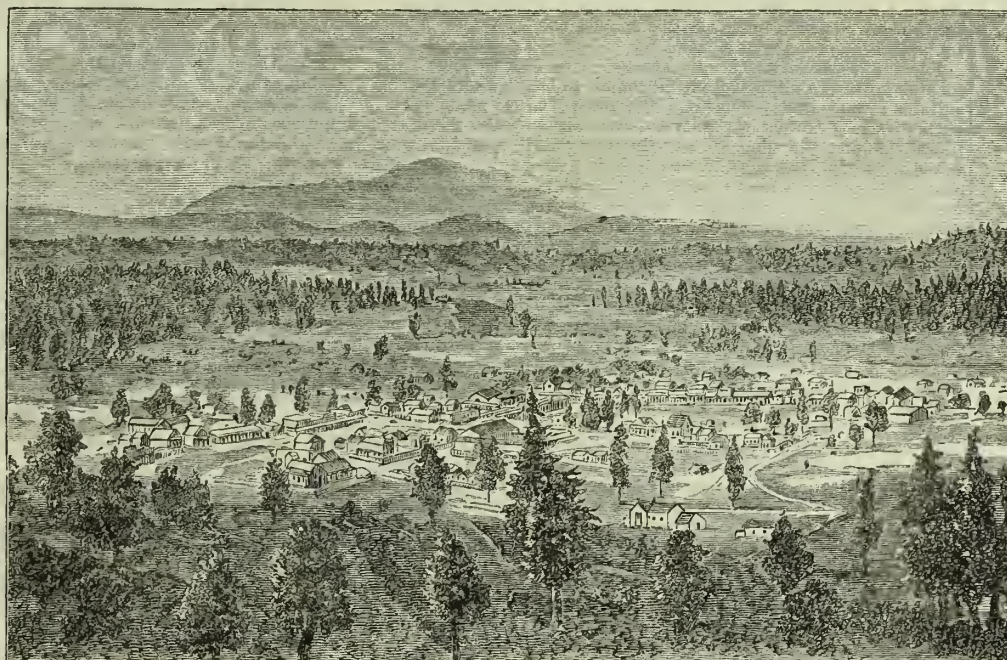
Not until the sugar business like any other legitimate business is carried on in California on strictly honorable business principles, will it ever amount to anything or be profitable to those engaged in it. The raw product should be produced by the farmer, the manufactured should be made by an expert sugar manufacturer, and the profits (if any) should be fairly divided. To start sugar companies with a mil-

lion capital (on paper), pay in a trifle and trust to the wits for everything else, may be profitable to the originator, it certainly will prove disastrous to the farmer. The fact that melon sugar can be produced on a small scale (if at all), and requires comparatively little machinery, will enable it to be extended from year to year and thus give it a great advantage over beet sugar.

I have not the slightest doubt that the oil manufactured from the melon seed, which is a valuable article for table use, almost as good as olive oil, and superior to either sunflower or poppy oil, would nearly pay the cost of raising the melons, and the oil-cake together with the pulp would form a most excellent cattle feed. But the important point to be settled is the one, will the juice of the melons grown in California when properly treated and concentrated readily crystallize? If the crystallizable sugar is not in it, it is useless to try to take it out. On the other hand, if it is there it can easily be obtained, and I will give to the readers of the RURAL, in some later communication, with the result of my analysis, some hints how to go to work and obtain the sugar.—ERNEST TH. GENERT, Alvarado, Cal.

### Tar on Fruit Trees.

EDITORS PRESS:—Seeing your inquiry as to the effect of tar on fruit trees, I send you the result of an extensive trial by W. Souther on the Livermore ranch two or three years ago. He used tar from the springs if I am rightly informed, to keep rats from barking the trees; he covered the trunk from the roots to the lowest limbs, the result was that in two or three weeks he found his trees were dying, and when I was there his men were busy scraping and washing the coal tar off, but not in time to save the trees, at least a large part of them never recovered. Rags wrapped around the trees



CITY OF PRESCOTT, ARIZONA.

answer every purpose and protect them from the borer.

### Pearl Millet.

I tried pearl millet, a half acre, where corn would make a good crop without irrigation, but the millet did no good; perhaps it will not stand so much alkali as corn. Alkali land is good for grapes if plenty of water can be had to start them the first year, and the fruit is not injured, perhaps rather improved by it.—J. B. RUMFORD, Bakersfield, Kern county, Cal.

### Food-value of Squash.

EDITORS PRESS:—As you say in the table of relative food value, it was rather hard to make a comparison from the data given. Let me alter the form of things a little. I'll presume that in 100 pounds of squash there will be one pound of seed, nine pounds of rind, and 90 pounds of flesh and seed envelope. According to Prof. Storer's table we shall then have in our 100 pounds of squash:

	Albumenoids. (Pounds.)	Carbohydrates. (Pounds.)
1 lb Seed.....	.0575	.1572
9 lbs Rind.....	.2529	.6471
90 lbs Flesh.....	.864	6.723
Total.....	1.1744	7.5273

Then to compare with your second table of August 9th, the following table is made:

	Albumenoids.	Carbohydrates.
Mangolds.....	1.10	10.0
Green corn fodder..	.07	7.4
Turnips.....	1.10	6.1
Squashes.....	1.17	7.5

I think on this showing the squash appears to better advantage, if my figures be correct.

### Dodder and Alfalfa.

Having had an experience of the same kind as your late correspondent. I advise him to plow up his dodder at once. If his land is at all moist the first plowing even won't kill it. When it once gets a good hold on the alfalfa, as long as the alfalfa retains any sap, even though buried under the ground, the dodder retains its deadly grip, and will reappear with the new shoots from the alfalfa roots.—ED. BERWICK, Monterey, Cal.

### Chemical Compound from Canada.

EDITORS PRESS:—An agent came this way some time ago selling "Holgate & Tupper's Chemical Preservative Compound from Canada." Halliday, Keenan & Co. sole agents for the Pacific coast; office, 922 Folsom street, San Francisco. Now, I would like to know if the above is a "bilk." Do you know anything of the agents or of the compound? As the agent had a regular professional outfit, it is probable that he visited many of your readers. I invested in some of the article, but am loth to risk spoiling good fruit with it. Please answer through the Press.—JOHN J. BODKIN, Savannah, Cal.

We are certainly very suspicious of this from various external evidence, one point being that diligent search in the locality named in this city failed to disclose the parties named. The number, 922 Folsom street, is a private residence, in which dwells a lady who told our reporter that she had resided there nine years and did not know of anybody like "Halliday, Keenan & Co." We had it in mind to find the parties, buy a bottle and analyze the contents, but we find it not. If our correspondent wishes to aid in the matter further he can send us the "compound," and we can then determine its nature. We should not risk any good fruit with any such "compound" without a better backing than this one seems to have.

### Diseased Grapes.

EDITORS PRESS:—I send you a bunch of diseased California grapes. I have sulphured my vines three times, the first time when the branches were six or seven inches long. These diseased grapes were taken from a branch that had fine, healthy bunches on. Please let me know what this disease is, or if the sulphur caused it.—J. B. BRADFORD, Franklin, Cal.

We received these specimens some little time ago, and examined them as time permitted. We failed to find in the grapes themselves anything which would account for the trouble, as there were no apparent signs either of fungus or insect work. Possibly some of our readers have met similar manifestations and have assigned a cause. Hence we describe the berries as they came to us: They were about half-

### Prescott, Arizona.

We give a picture of Prescott, the capital of Arizona, taken some years ago, more for the purpose of showing the general features of the surroundings than to delineate the city as it is. The growth of the city is quite rapid, and this fact must be borne in mind when examining the illustration. Col. Hinton, in his "Handbook of Arizona," gives a description of the town and vicinity, from which we shall take leading points: Prescott was thus named in honor of the eminent American writer, and standard authority upon Aztec and Spanish-American history. The site thus selected is near the intersection of the 34th parallel of latitude with the 112th of longitude. Its broad streets reach out from a central plaza, giving ample space, and avoiding that density of structure and population which so jeopardize the sanitary condition of many of our large cities. The buildings are of stone, brick, and pine.

The vicinity of Prescott offers ample facilities for grazing purposes. The hill and mountain sides, far up to the pine and cedar belt, are covered with the bunch grass—quayotto or black grama. The soil is more moist than to the south or north. It is arid and desolate in both directions to some extent. Sheep do better in the vicinity of the Bill Williams mountains, portions of the Rio Colorado-Chiquito, the famous San Francisco mountains and the vicinity of Mineral Park and the Hualapais than in the immediate vicinity of Prescott. Thereabouts the cattle ranges are good and ranches are quite plenty. Timber—pine in plenty, cedar and dwarf oak to some extent—is found everywhere. This portion of Arizona and north of it will be the chief source of timber supply.

On the northern spur of the Bradshaw or Silver range, one of the best metalliferous formations of northern Arizona, Prescott sits in pleasant security, expecting prosperity, and believing herself the favored town of this wonderful Territory. Its altitude is 6,318 feet above the sea level, and a stranger soon appreciates the fact. The landscape is marked. Towards the north the little plain or plateau on which Prescott nestles opens into a broad sweep of plain, on which Fort Whipple is located, and across which the vision takes in on the east the saw-like summits of the Prieta range, with the bold outlines of Granite peak to the west thereof, while still further to the south and west are blue outlines of the St. Marie mountains, from the midst of which Hope Peak lifts its bold head in the hazy distance. To the north and east again the eye glancing over Prescott plains rests on the sweeping lines of the Black Hills, whose southern extremity comes down almost to the town limits on the east. Overtopping these and at least seventy miles distant, in a direct line, can be seen the San Francisco mountains, snow-covered for several months in the year. To the south the view is almost a closed one, as the Bradshaw range rises boldly in that direction. Looking down over the town, as if protectingly, towers a singularly bold peak or rock formation known as Thumb Butte. It takes its name from a huge pile of rock on its northern end, which, looking down on the village below, appears to be a gigantic hand doubled close, and on the top of this closed hand there appears to be a huge thumb, slightly bent, the end of which lies toward the town. Behind this peculiar formation there is a small table land, across the south end of which are unmistakable evidences of a wall, used, without doubt, for the purposes of defence. There are some appearances left of approaches up this rock and of cave-dwellings on the top. As to the east and south of the town, a line of defense works, so irregular and broken as hardly to be followed, has been made out, it would seem certain that the sight of Prescott was also that of a town or post, once occupied by the people who cultivated adjacent valleys, leaving as proofs of their industry and skill the evidences of old towns at the Casa Grande and near the Tempe and Phoenix, on the Salt river, as well as many other signs of their extent and character.

The flora and timber of the neighborhood are decidedly those of the temperate zone. As befits the altitude, there is a clear, cold, gray tone in the atmosphere, which lends a peculiar charm of its own to the surrounding landscape. The great pines which clothe the mountain sides almost to their tops fill the still night with that low, soothing wind-music that has such an indescribable though melancholy charm. The sunrise and sunset, especially the latter, drape the tall ridges and high peaks in a variety of striking hues, while the deep, serrated sides of the range lend deep shadows wherewith to tone the picture. In the midst of them, close to the ground, broods the peaceful town.

In San Francisco half dollars are quoted at 99½ buying, 99¾ selling; trade dollars, 97 buying, 98 selling; Mexican dollars, 98 buying, 98½ selling.

At Memphis new cases are occurring every day. Howard Association expenses are \$1,000 per day. All who can leave have fled.

grown. Upon the berries were patches of dried skin very much the color of a raisin, while the rest of the surface was a natural green. The impression was as though the grapes were turning to raisins without ripening, thus suffering from insufficient nutrition to perfect them. If any of our readers have been troubled this way and can assign a cause for it, we shall be glad to hear from them.

### New Tomatoes.

EDITORS PRESS:—I send you a sample of tomatoes of the kinds concerning which you reprinted a note from the Record-Union—you will find each kind labeled. The samples are not as large as those I had two weeks ago. The "Sacramento Favorite" is my own production. It is fine for table, canning, and a good shipper. It ripens close up to the stem, and has no green core like the "Trophy." I send you also "Bacon's Triumph," fine for table and shipping, and for catsup. The "Favorite" and "Livingston's Acme," are troubled very little by worms and other insects.—GEO. T. BACON, Sacramento, Cal.

The good words concerning these tomatoes, which we quoted from our Sacramento exchange in the RURAL of Aug. 16th, are well merited. Both the "Triumph" and the "Favorite" belong to the improved, smooth-skin family of tomatoes, and several of the samples sent of each were fully four inches in diameter. The color of the "Favorite" is clearer and brighter than that of the "Triumph." The structure of each is very satisfactory, being well fleshed, and the flesh tender and of excellent flavor. We have seen no superior tomatoes among all the newer varieties.

### Van Camp Seedling Peach.

EDITORS PRESS:—I send you a small box of the Van Camp Seedling peach which originated here; the samples I send are not more than average, as the tree has borne several weighing 14 and 15 ounces.—ISAAC H. THOMAS, Visalia, Cal.

This is evidently a noticeable fruit. The samples sent us measured 11 inches in circumference; rich golden color with a deep red blush; suture very shallow and apex within the circle of the circumference. Thus it is seen to be a very round peach, or as Downing would say, "gobular." The stone is free, and quite large. The flesh is rather coarse grained but very juicy, high and yet well flavored. Such peaches would command the top of this market.



## MISCELLANEOUS.

## Concrete as a Substitute for Stone in California.

EDITORS PRESS:—Artificial stone, or concrete, has been more or less used for ages, and the committee appointed by one of the scientific societies of London to examine the pyramids of Egypt, made so thorough an examination of the material composing those remarkable preservations of stone, that no doubt was left in their minds of the fact that they were concrete, or artificial productions; and the strongest proof of their being artificial was the fact that analysis showed them to be a silicate of lime, quite uncommon in that country, and finding large deposits of amorphous silicate, was forced to the conclusion that the obelisks that had stood the devouring tooth of time for so many centuries, was a silicate of lime produced by the association of the materials indigenous to that country. Through Mexico and Central America can be found the strongest evidences of the artificial production of stone built by a prehistoric race, and an examination of some of the ruins give unmistakable evidences of having been formed from a plastic state; and if we reason from analogy, the proofs are conclusive that artificial stone can be made more durable than that which nature furnishes, for we know that the lofty mountain crumbles beneath the elements, and the reason is obvious: The natural stone, being more porous, admits the moisture and this subtle element insinuates itself into the body of the material, and particle after particle drops from the mass and the "mountain comes down to the valley." But not so with artificial stone; it is far more compact and less porous, presenting to the elements almost, if not quite, a perfect surface; for a good concrete is, or should be, quite impervious to water.

In the old country we now have vast aqueducts, bridges, viaducts, sea-walls and depots constructed of this material, and the strength and durability are beyond question, while their beauty and artistic finish are not equaled by any cut stone of the finest design.

Much experimenting has been done in the way of manufacturing a building stone, but did not prove a perfect success until the introduction of the Portland cement; but with the use of that, stones of any and all kinds have been made so successfully that the wonder is that they are not more extensively used.

After the great fire of Chicago several companies were organized and many buildings were erected that have proven to be not only permanent, but superior to the best brick. I find many of your sidewalks artistically laid with artificial stone, fitting accurately to all the irregularities of the location. A notable illustration can be seen around Gov. Stanford's residence. Although there are many places where it has proved quite as convenient and lasting, my purpose in writing this article is to call attention to the fact that no country in the world could use it to better advantage than our own State of California, as good material is abundant and the best cement in the world made at your very doors by the California Portland Cement Co., whose works are at Santa Cruz, and who can furnish any amount at the same price the imported article can be had for, and which will be found superior to the imported article. And as there is no freezing and thawing in this country to affect the stone until it becomes perfectly hard, it must necessarily be permanent, and experience has proved that in a uniform climate like that of California, the induration continues for a few years, until a perfect silicate of lime is formed; then the stone remains permanent, as the surface upon examination is found to be entirely free from pores, and consequently waterproof.

The writer has seen and examined a variety of articles at Chicago, that were so perfect in form and hardness that we were much surprised at the success attained in window caps and sills, doorsteps, brackets, cornices, eave-troughs, conductors, coping stone and fence foundations, cemetery ornaments of the most beautiful and artistic design, and so much cheaper than cut stone.

New methods of uniting sand, gravel and other materials into building blocks were freely explained and the result was more than satisfactory to those who have used them, and when the community becomes educated to the value of this mode of stone work it will be universally adopted at a great saving of expense and a more beautiful and permanent system of building.

One objection urged against brick or stone edifices in this city is the amount of moisture in the atmosphere arising from the fogs that come up from the ocean, rendering the houses damp and uncomfortable. This difficulty arises from the porosity of the material used in building, and continued dampness of the atmosphere at certain seasons of the year; and as solid walls are built, the moisture penetrates through the wall, making the house damp, but if concrete brick are used, such as are used in the Eastern States, that are made hollow, and properly laid up they form a double wall, having an air space throughout the entire center, thus breaking up the effects of capillary attraction and leaving the inside wall always dry. In addition to this advantage the concrete is indurating from month to month and the sanitary condition of the building constantly improving, so that a perfect building could be secured by the use of this kind of material.

The crude material for making concrete is more abundant in this country than any that has ever come under the observation of the writer, and now that this important factor has been taken hold of and can be supplied in any quantity at a fair price (we mean California Portland cement), it is to be hoped that parties contemplating the erection of a fine residence will not lose sight of this cheap and substantial mode of building, for they will certainly secure a residence that will give a more uniform temperature than any other building that can be erected, and that will stand the climatic changes for centuries, for the writer has seen many evidences of the durability of this kind of material.

Its application need not be confined to the erection of buildings, but fence posts, hitching posts, stone steps, etc.; and in speaking of stone steps, we once saw a hollow stone step, the upper surface, where the largest amount of wear would be found, was two inches thick, while the rest of the block was only one inch and could be handled by two men easily; they had been in use for over four years, and their hardness was much greater than any native stone. The same party exhibited two gate posts that had been made on the ground and in position by forming them in a board mold, and quite a long line of fence posts after a similar manner, all in a perfect condition.

The enterprising gentleman had taken his formula from Musprat's Chemistry (so he told me) and had made some improvements that were not only lasting, but ornamental at a cheap rate. Others can imitate and be largely benefited. The following proportions will give good results: For pavements and curb stones, 30 parts of Portland cement; 50 parts of sharp, clean sand; 50 parts of gravel or finely broken stone, such as granite, bay salt or crystallized limestone—should be broken to the size of a pea; 50 parts of pulverized brick. The whole should be thoroughly mixed before adding the cement; and in the selection of the cement, ask for the slow-setting cement, as this enables you to make a larger batch at a time.

For fine work, such as fence posts and ornamental work, the following will be found to be suitable: 30 parts of cement (Portland); 50 parts of sand; 80 parts pulverized crystallized limestone, and the liner it is pulverized the smoother will be the work, as it has been demonstrated that the fine particles settle on the outside, making the work very smooth. If the posts are formed in position, as I have seen them done, then coarse fragments of stone can be pushed into the mold, care being taken not to allow the rough parts to project.

The above formula makes a fine chimney-top and can be colored to taste by a small percentage of ochre added to the mass while being mixed, and ochre containing oxide of iron, is beneficial in producing hardness and smoother surface. For the erection of houses a much coarser kind of material may be used, such as spare stone from the quarry, broken bricks, cobble stones, etc., and are used by making the cement mixture a little thinner and forcing the fragments into the mass while the form is still in position on the wall. And in a country where sand and stone can be had for hauling, the only ingredient to be bought will be the cement, and under these circumstances it is cheaper than wood at very common prices, and any person of ordinary skill can build his own house. In traveling through your State, I have seen locations where lumber was very high and stone on the ground in abundance, with a board shanty that would not keep the rain out cost five times as much as a comfortable house made of the material on the ground. And I lay these facts before your numerous readers that they may profit by it, for in hundreds of locations a few barrels of cement and a few days' work will insure any man a comfortable house to live in, and, in the hot weather of California, will be found to be always cool, and in wet weather always dry. Other formulas for specific work are common property and within the reach of any that desire to investigate it or put it into practical use.

It is a matter worthy the attention of any one contemplating a permanent improvement, and the writer will be pleased to give any further information to those who may desire to look into it, for having seen the most substantial benefits from its use in many ways, has no other purpose in view than laying it before the public as one of the improvements that science has clearly demonstrated for our economy and usefulness.

Experiments tried with the California Portland cement by the U. S. Engineer, Calvin Brown, Esq., and Governor Purdy, gave a result superior to anything attained by the imported article, and I refer to the fact because it reflects credit on our own citizens for taking up a matter like this and producing an article superior to any in the world; for all such enterprises should be publicly admitted and acknowledged, as they are a golden link in the prosperity of the State. J. T. D.

[We are acquainted with the writer of the foregoing communication, and any inquiry concerning the matter may be directed to this office.—EDS. PRESS.]

BEST SILKWORM TO REAR.—Dr. Wallace, an authority on silkworm culture, said at a recent meeting of the London Entomological Society, that he had experimented with nearly every kind of silkworm which had been introduced into Europe, and that he had come to the conclusion that the only one which would pay to cultivate in England, was the *Bombyx mori*. He claims that the product of *Bombyx mori* is a superior article to any other.

## DEWEY &amp; CO.

## American &amp; Foreign Patent Agents,

OFFICE, 202 SANSOME ST., N. E. COR. PINN. S. F.

PATENTS obtained promptly; Caveats filed expeditiously; Patent Reissues taken out Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences Prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Agency Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons; and our success and business are constantly increasing.

The shrewdest and most experienced Inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

## Foreign Patents.

In addition to American Patents, we secure, with the assistance of co-operative agents, claims in all foreign countries which grant Patents, including Great Britain, France, Belgium, Prussia, Austria, Baden, Peru, Russia, Spain, British India, Saxony, British Columbia, Canada, Norway, Sweden, Mexico, Victoria, Brazil, Bavaria, Holland, Denmark, Italy, Portugal, Cuba, Roman States, Wurtemberg, New Zealand, New South Wales, Queensland, Tasmania, Brazil, New Granada, Chile, Argentine Republic, AND EVERY COUNTRY IN THE WORLD where Patents are obtainable.

No models are required in European countries, but the drawings and specifications should be prepared with thoroughness, by able persons who are familiar with the requirements and changes of foreign patent laws—agents who are reliable and permanently established.

Our schedule price for obtaining foreign patents, in all cases, will always be as low, and in some instances lower, than those of any other responsible agency.

We can and do get foreign patents for inventors in the Pacific States from two to six months (according to the location of the country) sooner than any other agents.

The principal portion of the patent business of this coast has been done, and is still being done, through our agency. We are familiar with, and have full records, of all former cases, and can more correctly judge of the value and patentability of inventions discovered here than any other agents.

Situated so remote from the seat of government, delays are even more dangerous to the inventors of the Pacific Coast than to applicants in the Eastern States. Valuable patents may be lost by extra time consumed in transmitting specifications from Eastern agencies back to this coast for the signature of the inventor.

## Confidential.

We take great pains to preserve secrecy in all confidential matters, and applicants for patents can rest assured that their communications and business transactions will be held strictly confidential by us. Circulars free.

## Home Counsel.

Our long experience in obtaining patents for Inventors on this Coast has familiarized us with the character of most of the inventions already patented; hence we are frequently able to save our patrons the cost of a fruitless application by pointing to them the same thing already covered by a patent. We are always free to advise applicants of any knowledge we have of previous applicants which will interfere with their obtaining a patent.

We invite the acquaintance of all parties connected with inventions and patent right business, believing that the mutual conference of legitimate business and professional men is mutual gain. Parties in doubt in regard to their rights as assignees of patents or purchasers of patented articles, can often receive advice of importance to them from a short call at our office.

Remittances of money, made by individual inventors to the Government, sometimes miscarry, and it has repeatedly happened that applicants have not only lost their money, but their inventions also, from this cause and consequent delay. We hold ourselves responsible for all fees entrusted to our agency.

## Engravings.

We have superior artists in our own office, and all facilities for producing fine and satisfactory illustrations of inventions and machinery, for newspaper, book, circular and other printed illustrations, and are always ready to assist patrons in bringing their valuable discoveries into practical and profitable use.

## DEWEY &amp; CO.

United States and Foreign Patent Agents, publishers Mining and Scientific Press and the Pacific Rural Press, 202 Sansome St., N. E. corner Pine, S. F.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

PETER SAXE & SON, 520 Bush St., S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

## SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

## POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magpie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Doves, etc. Eggs for batching. Send for price list.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine. Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Thoroughbred Berkshire and Poland-China Swine. Light Brahma and Black Cochon Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

## BEES.

JOS. D. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$2,500,000,

In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

## OFFICERS:

PRESIDENT.....G. W. COLBY.

MANAGER AND CASHIER,

ALBERT MONTELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

## Grangers' Co-operative Business Association, of Sacramento Valley.

Location: K &amp; 10th Sts., Sacramento, Cal

Dealers in GENERAL PRODUCE, RETAIL GROCERIES, and sale of FRUITS. Desire the co-operation and trade of farmers in general. Pay the highest market rates for all produce, and sell for the smallest profit. Our orders are cash on delivery. Goods shipped; marked C. O. D. W. H. HEVENER, Manager.

## GENERAL INSURANCE

— AND —

## Commission Agent.

## FERDINAND K. RULE,

310 Pine Street, Room 31, San Francisco.

Special attention to Fire, Marine and Life Insurance business.

Insurance placed in none but first-class Companies.

## AGENTS, READ THIS

We will pay Agents a salary of \$100 per month and expenses, or allow a large commission, to sell our new and wonderful inventions. We mean what we say. Free. Address SHERMAN & CO., Marshall, Mich.

## Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.

50 CHROMO, Gold Border, etc., 10c., no 2 alike, or 30 Cupid Cards, 10c. J. B. HUSTED, Nassau, N. Y.



## Lands for Sale and to Let.

### Farm For Sale.

Yields an Income of \$4,000 a Year.

Price, \$10,500.



My Farm and Poultry Business yield over \$4,000 a year. The place—116 acres—with orchard, vineyard and improvements, has cost me \$15,000. The good will of the business is worth fully \$6,000. I will sell the business and farm for \$10,500, half cash, or exchange for San Francisco property. It is a bargain such as is seldom offered.

M. EYRE, Napa, Cal.

Law Office in San Francisco, No. 636 Clay St., Room 25.  
I am in Napa each Saturday and Sunday; other days in San Francisco.

### FOR SALE.

700 Acres. The Finest Stock and Grain Farm in Northern California.

Price, \$25,000, including Farming implements. The whole under fence.

The Stock upon this farm, all thoroughbred and graded, embracing some of the finest in the State, will be sold at private sale. Among the stock is some that has been awarded different premiums at State and County Fairs. This is one of the finest opportunities for a man of means in the State. For full particulars apply to

D. B. HAYS,

Real Estate Agent, Oroville, Cal.

**C. C. RODGERS,**  
CALIFORNIA LAND AGENCY,  
Office, 276 First St., San Jose, Cal.

GENERAL LAND, REAL ESTATE, U. S. PENSION AND BOUNTY AGENT.

Will buy and sell Land Warrants; Locate and Survey Public Government Land, Pre-emption Homesteads, Soldier's and Sailor's Homesteads, Timber and Wood Lands, Desert Lands, Etc.

## FARMING LAND

For Sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

**LAND** Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

### Educational.

## Washington College.

The Fifteenth Semi-Annual Term of this Institution will commence on

Thursday, July 31st, 1879.

Catalogues can be had at Bancroft & Co.'s Bookstore, San Francisco, and at Hardy's Bookstore, Oakland.

For further information address

S. S. HARMON,

Washington, Alameda County, Cal.

## HEALD'S

BUSINESS COLLEGE,  
24 Post Street,  
Near Kearny,  
San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

E. CHAMBERLAIN, JR.

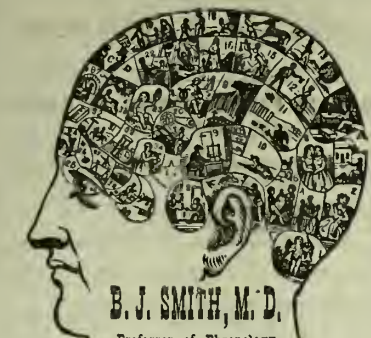
THOS. A. ROBINSON

**PACIFIC**  
Business College,  
320 POST ST.  
SAN FRANCISCO.

SEND FOR CIRCULAR.

## Patents

OBTAINED IN U. S. AND FOREIGN COUNTRIES; trademarks, labels and copyrights registered through DEWEY & CO.'S MINING AND SCIENTIFIC PRESS Patent Agency, San Francisco. Send for free circular.



B. J. SMITH, M. D.

Professor of Phrenology

### MENTAL HYGIENE.

Proprietor of the Hygienic Medical and Phrenological Institute, 633 California Street, above Kearny.

This Institute has of late been entirely refitted, and is now far more healthful and conveniently arranged for the reception of patients and boarders than ever before, and by combining medical hygiene with the various Water Cure treatments and the most powerful Electrized Horseshoe Magnet in the world, claims to cure speedily and permanently all forms of acute or chronic nervous derangements, Brain, Spinal and Heart diseases, St. Vitus Dance, Palsy, Epilepsy and all Rheumatic, Liver and Kidney troubles. The Institution has for the past 20 years made a specialty of treating all forms of weaknesses and diseases peculiar to males and females. By the use of hygienic remedies and electro-motopathy the worst forms of impotency and seminal weakness in males and sterility in females are speedily and permanently overcome. Hygienic board, with or without rooms. Terms moderate. Electro-thermal, Russo-Turkish and Medicated Baths given daily. Mrs. Dr. Smith as Matron has charge of the female bathing department.

Dr. SMITH has practiced Phrenology the past 30 years, and during the last 20 years has been constantly using the science connected with Physiology, in examining or diagnosing disease in this city, and claims to have made discoveries in the SCIENCE of Phrenology that enables him, by an examination of the head, even hidfolded, to determine the disease to which the person is constitutionally subject, or whether the disease at the time afflicting the person, is the result of accident or hereditary weakness; whether CONSUMPTIVE, DYSPEPTIC, RHEUMATIC, APOPLECTIC, NEURALGIC, LEUCORRHOIC, or SEMINAL. Especially does the form of the head indicate the strength of the uterine, genital or reproductive system. The head is also an index of the natural strength of the lungs, heart, stomach, liver, kidneys, spleen, back or vertebra, and it determines the power of the system in warding off and overcoming disease of all kinds.

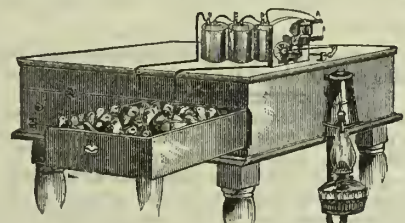
Ladies or gentlemen, desirous of obtaining a thorough and correct Phrenological examination with Fowler and Wells' charts, will meet with a respectful reception at his consulting rooms. Parties can depend upon a reliable delineation of the character of their intimate, male or female friends, by presenting a clearly defined photograph.

Phrenological or Physiognomical examinations without charts, \$1.50; with charts, from \$2 to \$3.

### INVITATION TO INVALIDS

And all persons who are in any way out of health, who desire to know the nature and causes of their disease, may avail themselves of an examination through phrenology in regard to health free of charge, between the hours of 9 A. M. and 8 P. M. Sundays from 9 A. M. to 12 M.

## MONEY in CHICKENS



If You Want to Make Money

By raising any number of Chickens at any season of the year without setting hens, look for the

### ECLIPSE INCUBATOR

(E. A. SAMUEL'S Patent)

Which will be on exhibition at the MECHANICS' FAIR in this city, STATE FAIR, at Sacramento, SANTA CLARA VALLEY FAIR, at San Jose.

The Incubator will be shown in operation, and its method of working fully explained.

H. W. CALDWELL,

Manufacturer, Waltham, Mass.

G. G. WICKSON, 349 Market Street, S. F.

Agent for the Pacific Coast.

### THE WILSON ADJUSTABLE CHAIR,

With 30 Changes of Position.

Patented in the United States and Foreign Countries. BEST CHAIR IN THE WORLD.

Parlor,

Combining

LIBRARY,

Beauty,

Invalid Chair

Lightness,

Rocker,

Strength,

BED or

Simplicity

LOUNGE.

and

READING POSITION. Comfort.

Same Chair in Cane Seating, very desirable for summer. Manufactured of the best of wrought iron and rivets. Castors made purposely for the Chair. Everything to an exact science. WILL LAST A LIFE-TIME.

Has been awarded Medals, Prizes and Diplomas for its superiority and merit wherever it has been exhibited.

Orders by mail promptly attended to. Circulars shipped to any address. C. O. D. Send for Illustrated Circular.

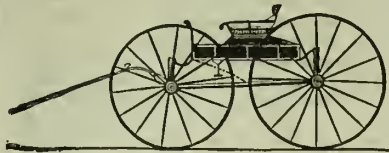
Address the WILSON ADJUSTABLE CHAIR MFG CO.,

535 Washington St., Boston

## California Inventors

Should consult DEWEY & CO., AMERICAN AND FOREIGN PATENT SOLICITORS. Established in 1860. Their long experience as journalists and large practice as patent attorneys enables them to offer Pacific Coast inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS, No. 202 Sansome St., San Francisco.

## H. J. HASKELL,



MANUFACTURER OF

## CARRIAGES, BUGGIES,

— AND —

## SPRING WAGONS,

At the Lowest Rates.

Corner of Alameda and White Streets,

SAN JOSE, CAL.



Pyrethrum Ciner ia Folium—A California Production.

THE MOST WONDERFUL DISCOVERY OF THE NINETEENTH CENTURY.

This wonderful Insect Powder will exterminate Flies, Weevils, Caterpillars, Mosquitoes, Midges, Crickets, Cockroaches, Spiders, Tarantulas, Scorpions, Ants, Hawk-bugs, Phylloxera, Plant Lice, Moths, Beetles, Grasshoppers, Locusts, Bed-bugs, Fleas, and every species of Insects.

Remember that none is genuine unless my Trade-Mark is attached to every package.

\$100 WILL BE PAID IF IT FAILS TO KILL ANY INSECT.

Endorsed by Prof. E. W. Hilgard, of the University of California, and by Prof. C. V. Riley, Chief Entomological Commissioner at Washington, D. C., and pronounced superior to any imported article, and perfectly harmless to man and beast.

G. N. MILCO.

Patentee and Sole Manufacturer, Stockton, Cal.

CHARLES LANGLEY & CO., Wholesale Druggists, Solo Agents, S. F.

### PLEASANT SUMMER READING.

#### THE NEW PENELOPE

— AND —

### Stories of California Life.

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. For sale by

### A. L. BANCROFT & CO.

PRICE, \$2 00.

J. P. JONES.

J. THOMPSON.

### JONES & THOMPSON.

Wholesale and Retail Dealers in

### Hay, Grain and Feed.

Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,

1535 Mission St., San Francisco.

M. COOKE.

R. J. COOKE

### PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,

AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOK & GREGORY.

## Seedsman.

### SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco



B. K. BLISS & SONS,

Importers, Growers and dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address

B. K. BLISS & SONS, 34 Barclay Street, N. Y.

### FENCING—CHAPPARAL SEED.

Parties wishing to experiment in the cultivation of Chapparal as an economical and valuable substitute for fencing, can obtain the seed in 50 Cts. and \$1 packages, at W. R. STRONG'S, Sacramento. Sent by mail.

### EXOTIC GARDENS.

F. A. MILLER & CO., Mission St., opposite Woodward's Gardens. Send for Catalogue and Price List.

## Nurserymen.

### A New Forage Plant.

#### THE GREEN VALLEY GRASS.

The WONDER of the NINETEENTH CENTURY, yields 10 to 14 tons of hay per acre, and from 3,000 to 4,000 bushels of roots, which far excels artichokes as feed for hogs.

Grows without Irrigation.

For price list of seed and roots, address

ARTHUR TAYLOR,

Watson, Atchison Co., Mo.

## STRAWBERRIES

Newest and Best Varieties,

INCLUDING

### "SHARPLESS"

Grown in Pots and ready for shipment now. New descriptive printed catalogue and a colored plate of Sharpless FREE. Address

ELLWANGER & BARRY,  
Rochester, N. Y.

### RASPBERRY PLANTS Early Prolific and Reliance

the best. All the STRAWBERRY PLANTS now in pots or strong layers. Stock pure and first class. Prices low. See new list. Address, GIBSON & BENNETT, Woodbury, N. J.

## THE TEMPLE !!

THE TEMPLE is for SINGING CLASSES.

THE TEMPLE is for CONVENTIONS.

THE TEMPLE is for CHOIRS.

\$3.00 per dozen.

Single copy \$1.00

At this season, when music teachers, choir leaders, etc., are quietly making up their minds as to the best books for use during the coming musical season, it is a pleasure to introduce to their notice so fresh, good and useful a book, as this one by W. O. PERKINS, who now, by the act of Hamilton College, takes on the well-deserved title of Musical Doctor. From the elegant title to the last page, the space is most acceptably filled.

The Elementary Course is ample in quantity, and has numerous new tunes for practice, which practice, indeed, may extend over the whole book.

Abundance of good Sacred Music, in the form of Metrical Hymns and Anthems fills a large proportion of the book, and renders it a good Collection of Church Music. The numerous Glee and Harmonized songs add to the attraction, and make this an excellent work for Musical Societies and Conventions.

Specimen copies mailed, post free, for \$1.00.

OLIVER DITSON & CO., BOSTON.

O. H. Ditson & Co., 843 Broadway, N. Y.

60 Elegant Perfumed Cards, Chromo, Motto, Lilly, Etc., 15c. Gift with each pack. H. M. SMITH, Clintonville, Ct.



Boston, August 23.—The Wool market maintains the improvement noted last week, with a good demand from manufacturers, and very firm prices. A good business was done, and transactions would have been much larger, but many holders are not disposed to accept current rates. It is estimated that manufacturers in this market during the past fourteen weeks have taken 11,000,000 pounds more Wool than in the corresponding period of last year. Combing and delaine fleeces are more sought after and firmer, except for coarse grades, which are dull and neglected. Transactions in unwashed Wool were quite large, comprising 688,000 pounds for the week, the prices being firm, and medium grades a shade higher. Sales of Ohio and Pennsylvania fleeces, XXX and No. 1, at 36¢; Michigan X and No. 1, at 35¢; Wisconsin X, 35¢; New Hampshire, 30¢; combed and delaine, 35¢; unwashed combing and delaine, 28¢; Georgia, 33¢; Oregon, Eastern and Valley, 25¢; Missouri, 24¢.



Territory, 25@32c; Lake, 32c; tub washed, 40c; Super and X pulled, 33@45c; scoured, 50@55c; California Spring, 25@32c.

PHILADELPHIA, August 26.—Wool is steady, firm, and in good demand, with a tendency slightly upward. Colorado, 15@25c for washed, 17@19c for unwashed, 33@36c for pulled and Merino.

New York Dried Fruit Markets.

New York, August 23.—Foreign Fruits are quiet, but prices are very firm, notably for Turkish Prunes, at 6 1/2 @ 6 3/4 c. Currants, 14@14 1/2 c.

Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon to-day as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Aug. 6.	WEEK. Aug. 13.	WEEK. Aug. 20.	WEEK. Aug. 27.
Flour, quarters sacks...	35,135	15,343	34,423	30,569
Wheat, centals...	207,095	234,114	232,446	236,080
Barley, centals...	34,490	62,942	80,059	71,542
Beans, sacks...	631	601	335	2,038
Corn, centals...	2,357	1,304	2,061	982
Oats, centals...	3,804	7,393	6,937	8,349
Potatoes, sacks...	18,341	12,408	13,787	17,417
Onions, sacks...	1,993	1,855	1,341	1,320
Wool, bales...	1,032	1,223	1,346	2,672
Hops, bales...	112	190	168	127
Hay, bales...	1,707	1,585	2,567	2,352

BAGS.—The Bag market is still depressed and rates lower than a week ago. This is owing to auction sales of stock outside the combination, and it transpires that there is far more of this outside stock than the ring-makers thought; hence their confusion. Some of the large lots by auction sold at 8 1/2 c. The jobbing rates are now 9@9 1/2 c, and there is a fair trade doing.

BEANS.—Beans are coming in in still larger quantities. Prices are unchanged, excepting Butter Beans, which are lower, as shown in our table of prices.

CORN.—There is no change.

DAIRY PRODUCE.—The improved prices have drawn in an increased supply of fresh roll, and the trade is for the moment cloyed a little. Fancy dairies still bring 30c, but this point is not quite as easily attained as a week ago. As good Butter as the "fancy" sells for about 27 1/2 c. Cheese is unchanged.

EGGS.—Eggs have advanced again; 32 1/2 @ 35c are now the rates for strictly choice California Eggs.

FEED.—There is no change in Ground Feeds. Hay is very dull and takes a lower range, \$10 per ton being about the top rate at present.

FRESH MEAT.—Supplies are large and prices low. Wholesale and retail butchers are both complaining of the unsatisfactory condition of the trade, "little selling and no money in it" is the talk with them. The only change we have to make in prices is a reduction in live Hogs and Veal.

FRUIT.—Choice Fruit is selling at about last week's prices, and poor stuff is being pitched at buyers' rates. Peaches are slackening in amount, and the choice mountain shipments are beginning.

HOPS.—Choice old Hops are now quotable at 8@12c; sales of new to arrive are still being made at 20@22c. Emmet Wells says:

There is no new feature to report in the New York trade. A steady demand continues, both for home use and for export, at unchanged prices. The London market is reported firm, with less business doing; their crops is estimated at £150,000 to £175,000, old duty. Cable advices received on the 14th report good weather for the past two weeks.

LIVE STOCK.—We hear of sales as follows: 350 Lambs, \$1.75; 2,500 Sheep, \$1.80; 800 Sheep, \$1.75; 200, \$1.25; 279 Lambs, \$1.50; 7 car loads Cattle, \$22.50; good, heavy Nevada Steers, 3 car loads Nevada Calves, \$9.65 per head; 400 Hogs, 3 1/2 c; 600 do, 3 1/4 c; 97 Hogs, 3c; 300 Hogs, 3 1/4 c.

OATS.—Prices are unchanged, and the trade is very quiet.

ONIONS.—Supplies are a little smaller, and prices are improved about 5c per ct.

POTATOES.—Old prices are still retained, and the market is quiet. Sweet potatoes are much lower, the ruling rate being 1c per lb.

PROVISIONS.—Trade is moderate at last week's quotations.

VEGETABLES.—Better Cantaloupes are now arriving, which accounts for better prices; poor ones are still low. Carrots are lower and hard to sell. Cucumbers and Tomatoes are also lower, and supplies not well cleaned up. The tendency in Vegetables generally is lower, as may be seen from our price list.

WHEAT.—The English market, as reported to this coast, has been at a standstill. Prices here are just about the same as a week ago. The following sales are reported: 300 tons good and 150 do choice Shipping at \$1.67 1/2; 530 sks good Milling, \$1.66 1/2; 120 do Sonora, \$1.65 1/2 c.

WOOL.—Fall Wool is now arriving, and some sales have been made, although prices are probably not yet fully established. Next week, perhaps, more definite rates will be known. Our quotations are according to sales thus far. We note sales: 20,000 lbs Solano county Wool at 13 @ 17c; 100,000 lbs Oregon and Humboldt (spring), at 25 @ 28c, according to quality.

RETAIL GROCERIES, ETC.

WEDNESDAY M., August 27, 1879.			
Butter, California			
Choice, lb...	25 @ 35	Rice...	8 @ 12
Cheese...	18 @ 25	Yeast Pwdr. doz...	1 50 @ 2 00
Eastern...	25 @ 30	Can'd Oysters doz...	2 00 @ 3 50
Lard, Cal...	18 @ 25	Syrup, S F Gold'n...	75 @ 1 02
Eastern...	20 @ 25	Dried Apples, lb...	10 @ 14
Flour, ex. fam, bbls...	9 @ 10	Ger. Prunes...	12 1/2 @ 15
Corn Meal, lb...	24 @ 30	Fig...	11 @ 10
Sugar, wh. crshd...	12 1/2 @ 13 1/2	Oils, Kerosene...	50 @ 60
Light Brown...	8 @ 9	Wines, Old Port...	3 50 @ 5 00
Office, Green...	23 @ 35	French Claret...	1 00 @ 2 50
Tea, Fine Black...	50 @ 60	Cal. doz bot...	3 00 @ 5 00
Finest Japan...	55 @ 60	Whisky, O K, gal...	5 00 @ 6 00
Candles, Adm'te...	15 @ 25	French Brandy...	4 00 @ 8 00
Soap, Cal...	7 @ 10		

BAGS AND BAGGING.

WEDNESDAY M., August 27, 1879.			
Eng Standard Wheat, 9 @ 9 1/2	Elghths...	3 1/2 @ 4	
California Manufacture...	Hessian, 60 inch...	@ 14	
Hand Sewed, 22x36, 9 @ 9 1/2	45 inch...	9 @ 10	
24x36...	40 inch...	8 1/2 @ 9	
22x40...	Wool Sacks...		
23x40...	1 and Sewed, 3 1/2 lb...	44 @ 45	
24x40...	Machine Sewed...	47 @ 52	
Machine Sewd, 22x36...	Machine Sewed...	45 @	
Flour Sacks, halves...	Standard Gunnies...	13 @ 14	
Quarters...	Bean Bags...	7 @ 7 1/2	

DOMESTIC PRODUCE.

[WHOLESALE.]	
WEDNESDAY M., August 27, 1879.	
BEANS & PEAS.	Soft sh...
Bayo, ct...	1 10 @ 20
Butter...	1 50 @ 75
Castor...	3 00 @ 50
Pea...	2 00 @ 40
Red...	1 00 @ 10
Pink...	1 00 @ 10
Sm'l White...	2 15 @ 37 1/2
Lima...	6 00 @ 75
Field Peas...	1 25 @ 50
BROOM CORN.	
Southern...	2 @ 2 1/2
Northern...	2 @ 2 1/2
CHICORY.	
California...	4 @ 4 1/2
German...	6 1/2 @ 7
DAIRY PRODUCE, ETC.	
BUTTER.	
Cal. Fresh Roll, lb	22 1/2 @ 27 1/2
Fancy Brands...	20 @ 23
Pickie Roll...	18 @ 21
Firkin, new...	12 1/2 @ 15
Western...	12 @ 15
New York...	@
CHEESE.	
Cheese, Cal., old, lb	6 @ 8
do, new...	7 @ 10
N. Y. State...	@
Cal. fresh, doz...	32 1/2 @ 35
Ducks...	@ 27 1/2
Oregon...	@
Eastern, hy exp's...	27 1/2 @ 30
Pickled here...	@ 25
Utah...	@ 27 1/2
EGGS.	
Bran, ton...	14 00 @ 15 00
Corn Meal...	20 00 @ 21 00
Hay...	6 00 @ 10 00
Middlings...	@ 18 00
Oil Cake Meal...	32 00 @
Straw, bale...	10 @ 50
FEED.	
Extra City Mills...	25 @ 62 1/2
do, Country Mills...	4 50 @ 50
do, Oregon...	4 50 @ 50
do, Walla Walla...	4 75 @ 55
Superfine...	3 25 @ 50
Extra Superfine...	3 50 @ 55
FRESH MEAT.	
Beef, 1st qual, lb	5 @ 5 1/2
Second...	3 1/2 @ 4
Third...	2 1/2 @ 3
Mutton...	2 1/2 @ 3
Spring Lamb...	4 @ 5
Pork, undressed...	3 @ 3 1/2
Dressed...	4 1/2 @ 5
Veal...	4 1/2 @ 5
Milk Calves...	7 @ 7 1/2
do choice...	7 @ 7 1/2
GRAIN, ETC.	
Barley, feed, ct...	70 @ 85
Brewing...	90 @ 100
Chevalier...	50 @ 75
Buckwheat...	25 @ 35
Corn, White...	75 @ 85
Yellow...	75 @ 85
Small Round...	85 @ 90
Oats...	60 @ 65
Milling...	60 @ 65
Rye...	80 @ 85
Wheat, No. 1...	@ 70
do, No. 2...	65 @ 65
do, No. 3...	40 @ 50
Choice Milling...	@ 72 1/2
HIDES.	
Hides, dry...	16 @ 16 1/2
Wet salted...	7 @ 9
HONEY, ETC.	
Beeswax, lb...	20 @ 25
Honey, in comb...	15 @ 15
do, No. 1...	7 @ 9 1/2
Dark...	5 @ 6
Extracted...	8 @ 10
HOPS.	
Oregon...	@
California, old...	8 @ 12
Wash. Ter...	4 @ 8
Old Hops...	4 @ 8
NUTS, Jobbing.	
Walnuts, Cal...	8 @ 9
do Chile...	6 1/2 @ 8
Almonds, hd sh lb	7 @ 8

Soft sh...	16 @ 18
Brazil...	12 1/2 @ 13
Peanuts...	12 1/2 @ 14
Albertain...	6 @ 8
Albertain...	15 @ 16
ONIONS.	
Albertain...	@
Union City, ct...	@
San Leandro...	@
Stockton...	@
Sacramento River...	@
Salt Lake...	@
Oregon...	@
New Orleans...	40 @ 55
Red, sk...	@ 55
White, ct...	@ 60
POTATOES.	
Petaluma, ct...	@
Humboldt...	@
Cutter Cove...	@
Early Rose...	40 @ 50
Half M'n Bay, new...	30 @ 50
Kidney...	@
Sweet...	@ 1
POULTRY & GAME.	
Hens, doz...	5 50 @ 7 00
Broilers...	4 00 @ 5 50
Broilers...	2 50 @ 3 50
Cocks, tame, doz...	5 00 @ 6 00
Geese, pair...	1 75 @ 2 25
Wild Gray, doz...	@
White do...	@
Turkeys...	18 @ 22
do, Dressed...	@ 1 50
do, Common...	50 @ 75
Quail, doz...	@
Rabbits...	@ 50
Hare...	1 25 @ 1 50
Venison...	5 @ 8
PROVISIONS.	
Cal. Bacon, Hvy, lb	8 1/2 @ 9 1/2
Medium...	8 @ 9
Light...	9 @ 10
Lard...	8 @ 9
Cal. Smoked Beef...	6 @ 7
Shoulders, Cover'd...	6 1/2 @ 7
Hams, Cal...	9 1/2 @ 10 1/2
Dupe's...	13 @ 14
Nonpareil...	13 @ 14
Boyd's...	13 @ 14
Whittaker...	12 1/2 @ 13 1/2
Royal...	13 1/2 @ 14
Reliable...	@
Clough's...	13 @ 14
SEEDS.	
Alfalfa...	5 @ 12
Calver, Red...	15 @ 16
White...	50 @ 55
Cotton...	6 @ 10
Flaxseed...	2 1/2 @ 3
Hemp...	8 @
Italian Rye Grass...	35 @
Perennial...	10 @
Millet...	10 @ 12
Mustard, White...	5 @ 8
Brown...	1 1/2 @
Rape...	3 @ 8
Key Blue Grass...	17 @ 20
2d quality...	16 @ 18
Sweet V Grass...	1 @
Orchard...	20 @ 25
Red Top...	13 @ 15
Hungarian...	8 @ 10
Lawn...	30 @ 50
Mesquit...	@ 20
Timothy...	7 @ 8
TALLOW.	
Crude, lb...	5 @ 5 1/2
Refined...	7 1/2 @ 8
WOOL, ETC.	
FAIR.	
San Joaquin and S. Coast...	
Burly...	11 @ 13
Free (dusty)...	12 @ 13
Free (choice)...	13 @ 15
Northern...	@
Free...	14 @ 17
Burly...	12 @ 13
Oregon, Eastern...	16 @ 20
do, Valley...	25 @ 28

Albertain...	@
Union City, ct...	@
San Leandro...	@
Stockton...	@
Sacramento River...	@
Salt Lake...	@
Oregon...	@
New Orleans...	40 @ 55
Red, sk...	@ 55
White, ct...	@ 60
POTATOES.	
Petaluma, ct...	@
Humboldt...	@
Cutter Cove...	@
Early Rose...	40 @ 50
Half M'n Bay, new...	30 @ 50
Kidney...	@
Sweet...	@ 1
POULTRY & GAME.	
Hens, doz...	5 50 @ 7 00
Broilers...	4 00 @ 5 50
Broilers...	2 50 @ 3 50
Cocks, tame, doz...	5 00 @ 6 00
Geese, pair...	1 75 @ 2 25
Wild Gray, doz...	@
White do...	@
Turkeys...	18 @ 22
do, Dressed...	@ 1 50
do, Common...	50 @ 75
Quail, doz...	@
Rabbits...	@ 50
Hare...	1 25 @ 1 50
Venison...	5 @ 8
PROVISIONS.	
Cal. Bacon, Hvy, lb	8 1/2 @ 9 1/2
Medium...	8 @ 9
Light...	9 @ 10
Lard...	8 @ 9
Cal. Smoked Beef...	6 @ 7
Shoulders, Cover'd...	6 1/2 @ 7
Hams, Cal...	9 1/2 @ 10 1/2
Dupe's...	13 @ 14
Nonpareil...	13 @ 14
Boyd's...	13 @ 14
Whittaker...	12 1/2 @ 13 1/2
Royal...	13 1/2 @ 14
Reliable...	@
Clough's...	13 @ 14
SEEDS.	
Alfalfa...	5 @ 12
Calver, Red...	15 @ 16
White...	50 @ 55
Cotton...	6 @ 10
Flaxseed...	2 1/2 @ 3
Hemp...	8 @
Italian Rye Grass...	35 @
Perennial...	10 @
Millet...	10 @ 12
Mustard, White...	5 @ 8
Brown...	1 1/2 @
Rape...	3 @ 8
Key Blue Grass...	17 @ 20
2d quality...	16 @ 18
Sweet V Grass...	1 @
Orchard...	20 @ 25
Red Top...	13 @ 15
Hungarian...	8 @ 10
Lawn...	30 @ 50
Mesquit...	@ 20
Timothy...	7 @ 8
TALLOW.	
Crude, lb...	5 @ 5 1/2
Refined...	7 1/2 @ 8
WOOL, ETC.	
FAIR.	
San Joaquin and S. Coast...	
Burly...	11 @ 13
Free (dusty)...	12 @ 13
Free (choice)...	13 @ 15
Northern...	@
Free...	14 @ 17
Burly...	12 @ 13
Oregon, Eastern...	16 @ 20
do, Valley...	25 @ 28

Albertain...	@
Union City, ct...	@
San Leandro...	@
Stockton...	@
Sacramento River...	@
Salt Lake...	@
Oregon...	@
New Orleans...	40 @ 55
Red, sk...	@ 55
White, ct...	@ 60
POTATOES.	
Petaluma, ct...	@
Humboldt...	@
Cutter Cove...	@
Early Rose...	40 @ 50
Half M'n Bay, new...	30 @ 50
Kidney...	@
Sweet...	@ 1
POULTRY & GAME.	
Hens, doz...	5 50 @ 7 00
Broilers...	4 00 @ 5 50
Broilers...	2 50 @ 3 50
Cocks, tame, doz...	5 00 @ 6 00
Geese, pair...	1 75 @ 2 25
Wild Gray, doz...	@
White do...	@
Turkeys...	18 @ 22
do, Dressed...	@ 1 50
do, Common...	50 @ 75
Quail, doz...	@
Rabbits...	@ 50
Hare...	1 25 @ 1 50
Venison...	5 @ 8
PROVISIONS.	
Cal. Bacon, Hvy, lb	8 1/2 @ 9 1/2
Medium...	8 @ 9
Light...	9 @ 10
Lard...	8 @ 9
Cal. Smoked Beef...	6 @ 7
Shoulders, Cover'd...	6 1/2 @ 7
Hams, Cal...	9 1/2 @ 10 1/2
Dupe's...	13 @ 14
Nonpareil...	13 @ 14
Boyd's...	13 @ 14
Whittaker...	12 1/2 @ 13 1/2
Royal...	13 1/2 @ 14
Reliable...	@
Clough's...	13 @ 14
SEEDS.	
Alfalfa...	5 @ 12
Calver, Red...	15 @ 16
White...	50 @ 55
Cotton...	6 @ 10
Flaxseed...	2 1/2 @ 3
Hemp...	8 @
Italian Rye Grass...	35 @
Perennial...	10 @
Millet...	10 @ 12
Mustard, White...	5 @ 8
Brown...	1 1/2 @
Rape...	3 @ 8
Key Blue Grass...	17 @ 20
2d quality...	16 @ 18
Sweet V Grass...	1 @
Orchard...	20 @ 25
Red Top...	13 @ 15
Hungarian...	8 @ 10
Lawn...	30 @ 50
Mesquit...	@ 20
Timothy...	7 @ 8
TALLOW.	
Crude, lb...	5 @ 5 1/2
Refined...	7 1/2 @ 8
WOOL, ETC.	
FAIR.	
San Joaquin and S. Coast...	
Burly...	11 @ 13
Free (dusty)...	12 @ 13
Free (choice)...	13 @ 15
Northern...	@
Free...	14 @ 17
Burly...	12 @ 13
Oregon, Eastern...	16 @ 20
do, Valley...	25 @ 28

Albertain...	@
Union City, ct...	@
San Leandro...	@
Stockton...	@
Sacramento River...	@
Salt Lake...	@
Oregon...	@
New Orleans...	40 @ 55
Red, sk...	@ 55
White, ct...	@ 60
POTATOES.	
Petaluma, ct...	@
Humboldt...	@
Cutter Cove...	@
Early Rose...	40 @ 50
Half M'n Bay, new...	30 @ 50
Kidney...	@
Sweet...	@ 1
POULTRY & GAME.	
Hens, doz...	5 50 @ 7 00
Broilers...	4 00 @ 5 50
Broilers...	2 50 @ 3 50
Cocks, tame, doz...	5 00 @ 6 00
Geese, pair...	1 75 @ 2 25
Wild Gray, doz...	@
White do...	@
Turkeys...	18 @ 22
do, Dressed...	@ 1 50
do, Common...	50 @ 75
Quail, doz...	@</



# Agricultural Articles.

## The Famous "Enterprise."

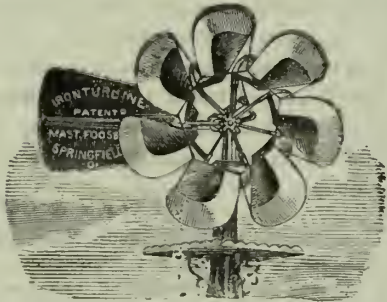
PERKINS' PATENT  
Self Regulating  
WINDMILLS,  
Pumps & Fixtures.



These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babbitted boxes. Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

HORTON & KENNEDY,  
GENERAL OFFICE AND SUPPLIES, LIVERMORE,  
ALAMEDA CO., CAL. Also, Best Feed Mills for sale.  
San Francisco Agency, LINFORTH, RICE  
& CO., 401 Market Street.

## Iron Turbine Wind Engine



### AND BUCKEYE FORCE PUMP.

This machine made of iron, wheel, vanes, etc., made of No. 24 sheet iron, bound and braced with best quality of wrought bar iron, gives more power than any other wheel of same diameter. No wood to swell, shrink, rattle or be destroyed by the wind. The most durable and the best Windmill ever invented. For particulars, price lists, etc., address

D. E. GOLDSMITH, State Agent,  
419 Sansome street, San Francisco.

## MATTESON & WILLIAMSON'S



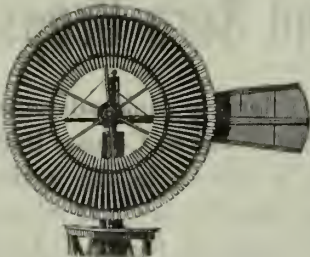
Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,  
STOCKTON, CAL.

\$50.

The New  
Worthington  
Windmill



Manufactured  
by

W. D. PARSON,  
1364 San Pablo Avenue, Oakland, Cal.

Also, maker of the "Colorado Wind Engine," Wind Grist Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern of Deen Well and Artesian Lift Pump Cylinders. Circulars free.

## Anderson's Springs,

LAKE COUNTY, CAL.

Nineteen miles from Calistoga, five miles from Middletown, and ten miles from the Great Geysers; between which and Anderson's Springs there is a good stage road.

### HOT SULPHUR WATER

For Rheumatism, Paralysis, etc.; Cold Sulphur for Dyspepsia, Diseases of the Stomach and Bowels. Scenery unsurpassed. Climate mild and equable. Consumptives generally improve in health, and asthmatics are invariably relieved.

### TROUT FISHING ON THE GROUNDS.

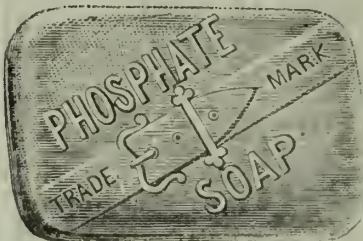
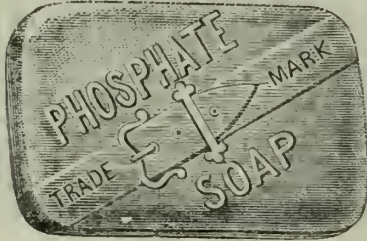
Deer Hunting in the Immediate Vicinity.

Accommodations and Cookery good. Board from \$10 to \$12 by the week.

ANDERSON & PATRIQUIN, Prop's.

# THE BEST TOILET SOAP Ever Made.

## PHOSPHATE SOAP



A superb article for the toilet, beneficial to the skin, giving it a soft, velvety appearance, and leaving a soothing, pleasant sensation after use, imparting a healthy natural and lasting beauty to the complexion. It eradicates the poisonous effects of cosmetics; prevents skin diseases by acting as a constant purifier and disinfectant; if used constantly will cure skin diseases of long standing; is superior to any other article for bathing infants; cleansing and healing for all eruptions on the scalp or face of children; good for the teeth; produces a soft, creamy lather, nicely adapted to shaving or shampooing, removes dandruff, and gives health to the scalp without injuring the hair.

Phosphate Soap is a scientific preparation manufactured from the best toilet soap with potent medicinal agents, which unite chemically with other ingredients. It is cheap, because it wears longer and combines more cleansing, healing and soothing qualities than any other article in the market.

Cheap toilet soaps, manufactured from rancid and refuse grease, injure the skin, and are really more expensive than PHOSPHATE SOAP, which retails for 25 cents per cake. One cake will last longer than three of cheap, inferior soaps.

Natural beauty surpasses anything which can be imparted by artificial means. PHOSPHATE SOAP gives health to the skin simply by removing impurities and eradicating the poisons which give rise to skin diseases.

Not only for daily use on the face and hands, but for bathing the entire body, there is nothing equal to PHOSPHATE SOAP. It is a thorough disinfectant and removes offensive odors of every kind.

Thousands of articles are palmed off on the public, which have no genuine merit, but PHOSPHATE SOAP is the result of modern discoveries of celebrated chemists.

PHOSPHATE SOAP costs no more than other good toilet soaps, while its medicinal qualities make it worth ten times its price to every man, woman and child.

For chapped hands, the constant use of PHOSPHATE SOAP will be recommended by all who give it one fair trial.

If you want a nice article of Toilet Soap and something that is beneficial to the skin, buy PHOSPHATE SOAP.

Sensible girls avoid cosmetics, but use PHOSPHATE SOAP for the toilet, because it is fragrant, pure and pleasant.

Ladies who wish to make the skin look beautiful and natural, should use PHOSPHATE SOAP.

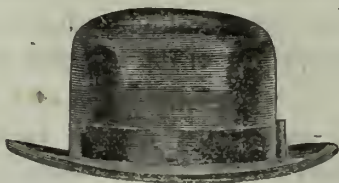
It should be in every house. Sold by all dealers. One cake sent by mail on receipt of 30 cents in postage stamps. A neat box containing 3 cakes sent by mail, postpaid, on receipt of 80 cents. Manufactured by the

## STANDARD SOAP COMPANY, 204 Sacramento Street, San Francisco.

## WELLS, RICHARDSON & CO'S PERFECTED BUTTER COLOR

Gives Butter the gilt-edge color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.

## HERRMANN'S HATS ARE THE BEST!



Try one and you will Wear no other.

Spring and Summer Styles,

— AT —

336 Kearny St., bet. Bush and Pine,

— AND —

910 Market St., above Stockton.

Send for Illustrated Spring Style Catalogue.

## Contents of Pamphlet on Public Lands of California, U. S. Land Laws, Map of California and Nevada, Etc.

Map of California and Nevada; The Public Lands; The Land Districts; Table of Rainfall in California; Counties and Their Products; Statistics of the State at Large.

Instructions of the U. S. Land Commissioners.—Different Classes of Public Lands; How Lands may be Acquired; Fees of Land Office at Location; Agricultural College Scrip; Pre-emption; Extending the Homestead Privilege; But One Homestead Allowed; Proof of Actual Settlement Necessary; Adjoining Farm Homesteads; Lands for Soldiers and Sailors; Lands for Indians; Fees of Land Office and Commissions; Laws to Promote Timber Culture; Concerning Appeals; Returns of the Register and Receiver; Concerning Mining Claims; Second Pre-emption Benefit.

Abstract from the U. S. Statutes.—The Law Concerning Pre-emption; Concerning Homesteads; Amendment Act Concerning Timber; Miscellaneous Provisions; Additional Surveys; Land for Pre-emption; List of California Post Offices. Price, post paid, 50 cts.

Published and sold by DEWEY & CO., S.F.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

## Stock Notices.



### SPANISH MERINO SHEEP.

Choice stock of thoroughbred Bucks and Ewes, guaranteed free from disease. Purchasers are invited to examine. About 10 minutes' walk from the Railroad terminus, adjoining State University.

E. W. WOOLSEY,  
Berkeley, Alameda County, Cal.

### BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,  
18th and A Streets, Sacramento City, Cal.

### ANGORAS AT THE FAIRS.

The undersigned would announce to those interested in ANGORA GOATS, and the public generally, that he will have a lot of

### Choice Angora Bucks

On Exhibition at the State and District Fairs

This fall, namely: At the State Fair at Sacramento, the Golden Gate Fair at Oakland, the Nevada State Fair at Reno, and the Oregon State Fair at Salem.

These Bucks will be sold at fair rates.

JOHN S. HARRIS,  
Hollister, San Benito Co., Cal.

### RAMS FOR SALE.

400 THOROUGHbred  
And Graded  
SPANISH MERINO



Rams For Sale.  
Bred from the first importation of Spanish Merino Sheep to California, in 1859.

Prices to suit the times. Residence, one mile north of McConnell's Station, Western Pacific Division C. P. R. R. P. O. address, MRS. E. McCONNELL-WILSON, Elk Grove, Sacramento Co., Cal.

JOHN ROGERS & SONS,  
GENERAL STOCK AND SALE YARD,  
Corner Market and 9th Sts., San Francisco.

HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN.  
Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

### THOROUGHbred JACK FOR SALE.



For sale, the fine thoroughbred Maltese Jack, "HENRY CLAY," six years old, fifteen hands high, weight about 1,000 pounds. For stock purposes, "HENRY CLAY" is one of the finest animals in California. For particulars, pedigree, etc., address

J. C. HEDDIN,  
Bernardo P. O., San Diego Co., Cal.

### ST. DAVID'S.

A FIRST-CLASS LODGING HOUSE.  
CONTAINS 113 ROOMS.

715 Howard St., near Third, San Francisco.

This House is especially designed as a comfortable home for gentlemen and ladies visiting the city from the interior. No dark rooms. Gas and running water in each room. The floors are covered with heavy Brussels carpet, and all of the furniture is made of solid black walnut. Each bed has a spring mattress, with an additional hair top mattress, making them the most luxurious and healthy beds in the world. Ladies wishing to cook for themselves or families, are allowed the free use of a large public kitchen and dining room, with dishes. Servants wash the dishes and keep up a constant fire from 6 A. M. to 7 P. M. Hot and cold baths, a large parlor and reading room, containing a Grand Piano—all free to guests. Price single rooms per night, 50 cts.; per week, from \$2.50 upwards.

R. HUGHES, Proprietor.

At Market Street Ferry, take Omnibus line of street cars to corner Third and Howard.



### LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price, \$2 per gallon. For directions and testimonials, apply to FALKNER, BELL & CO., Sole Agents, 430 California Street, S. F.



# Week's Grape, Fruit and Flower Picker.

SIZE NO. 1.



Valentine's Patent, Aug. 1, 1865

any kind, it is an invaluable assistant. Sent by mail on receipt of \$1.25.

These cuts represent one of the most useful articles of its kind yet invented, and supplies a want that has long been felt. Every one engaged in picking fruit knows the difficulty of detaching the fruit from the branch, and depositing it in the basket or other receptacle for receiving it, without bruising the fruit, and particularly with grapes, unless very great care is exercised, each bunch will be more or less injured. The tool is a pair of shears arranged with an elastic holdfast that cuts the stem and holds it, so that the fruit can be deposited in the receptacle for receiving it, without touching it with the hands.

It will take the smallest cherry, or hold a bunch of grapes weighing five pounds.

FOR PICKING ORANGES, where the branches are full of thorns, it will save many a hard word.

FOR LARGE PEARS AND CHOICE FRUIT OF

## FLOWER PICKER.

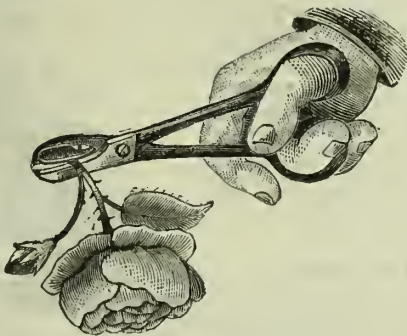
THE NO. 2, OR SMALLEST SIZE,

Is Particularly Adapted for

FLOWERS,

And will be found an invaluable assistant in the Garden or Hot-house.

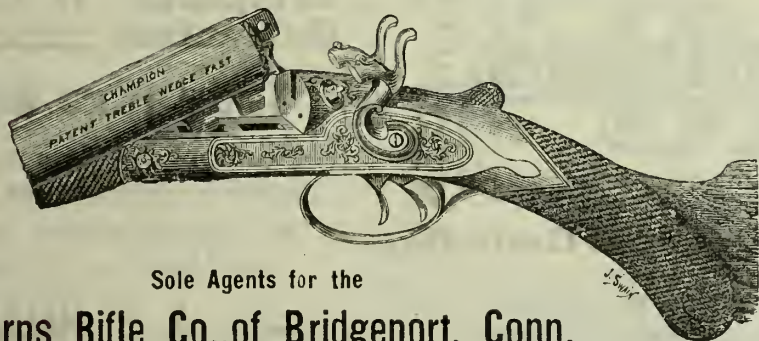
THEY ARE MADE OF THE BEST MATERIAL, and finished in a workmanlike manner. Sent by mail on receipt of \$1.00.



FOR SALE BY

**Dunham, Carrigan & Co.,**  
SAN FRANCISCO.

**Nathaniel Curry & Bro.,**  
113 Sansome Street, San Francisco,



Sole Agents for the

**Sharps Rifle Co., of Bridgeport, Conn.**

FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO.

Also Agents for W. W. GREENER'S Celebrated Wedgefast, Chokebore, Breech-loading DOUBLE GUNS; and all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America. AMMUNITION of all kinds in quantities to suit.

In consequence of spurious imitations of  
**LEA AND PERRINS' SAUCE,**  
which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

### ROOMS TO RENT.

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

**Dewey & Co.** { 202 Sansome St. } Patent Ag'ts.

### MONEY TO LOAN

AT LOWEST RATES

On Country Real Estate and Grain in Warehouse.

McAFEE BROTHERS.

202 Sansome Street, San Francisco.

50 Perfumed, gilt edge & chromo Cards, elegant case, name in gold, 10c. ATLANTIC CARD CO., E. Wallingford, Ct.

# Winchester Repeating Rifle,

MODEL 1873.



One-third size by Dr. E. H. Lardner.

The Strength of All its Parts,

The Simplicity of Its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,



String measuring from center of target to center of each shot, 32 inches. Average distance of each shot, 1 9-100 inches.

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder.

**JOHN SKINKER, No. 115 Pine Street, San Francisco,**

SOLE AGENT FOR THE PACIFIC COAST.

—OFFICE OF THE—

## BLACK POINT PACKING AND SLAUGHTER HOUSE.

MERRY, FAULL & CO., Proprietors.

### TO OWNERS OF LIVE STOCK!

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

### SQUARE DEAL and FULL MARKET PRICES

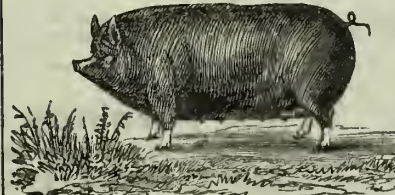
For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices.

Please address our

Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.

### A BARGAIN IN BERKSHIRES.

The undersigned offers for sale for the next 30 days a limited number of Pure Bred Berkshires, aged from 3 to 18 months. These pigs are all bred by myself from stock imported from some of the most noted breeders in the United States, and include several Boars fit for service, and a few choice Sows in farrow, to imported Boars. These pigs are not calls, but the choice pigs of their respective litters.



PRICE LOW FOR CASH.

A perfect and complete pedigree, and a written guarantee they are as represented sent with each animal sold. Correspondence solicited. Among purchases of my stock are the following gentlemen well known as men of careful discrimination: Dr. G. A. SHURTLEFF, Superintendent State Insane Asylum; RANT I. TAGGART, Oakland; J. D. SMITH, Prof. Livermore College; LELAND STANFORD, by R. H. COVEY; Col. PETER Saxe, San Francisco; L. U. SHIFFER, President S. J. V. Ag. Society; W. HESICK, Sacramento; W. C. HOPPING, P. M., Sacramento. For further particulars address

ALFRED PARKER,

Bellota, San Joaquin Co., Cal.

## MISSION ROCK DOCK AND GRAIN WAREHOUSES.

SAN FRANCISCO, CAL.

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

GRAIN consigned to us by water insured in open policy at Special Rates. Wheat shipped by railroads via Stockton, care of the CALIFORNIA STEAM NAVIGATION CO. will be received by them at Stockton and delivered at Mission Rock Warehouse at same rate of freight as to Oakland Wharf. Freight paid, Fire Insurance and Loans effected and proceeds forwarded free of commission. Money advanced at bottom rates, interest payable at end of loan. Fire Insurance 1% per annum. Short Rates of Storage—First month, 30 cents per ton, or 40 cents per ton if delivered. Each month thereafter 20 cents per ton. Weighing in, free. Weighing out, 10 cents per ton.

**CHAS. H. SINCLAIR, Superintendent,**

Or to the California Dry Dock Co., Office, No. 318 California Street, San Francisco.

### A Card to Grangers and Farmers.

HAY, GRAIN, HORSES and CATTLE.

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nov. 11 and 13 Bluxome St., San Francisco.

SEND FOR THE  
\$1.50

Homœopathic Medicine Case.

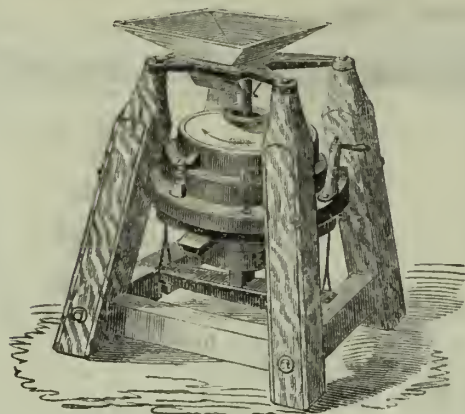
Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address

**BOERICKE & TAFEL,**

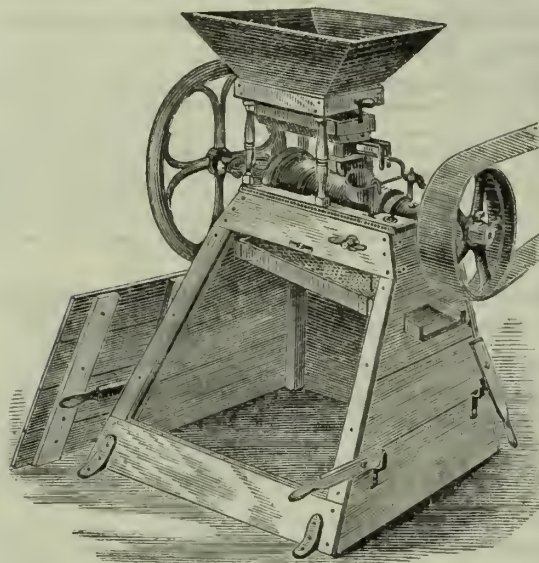
Homœopathic Pharmacy, San Francisco.



# Money Made in grinding feed. Important to Farmers.



QUEEN OF SOUTH PULLEY MILL.



PREMIUM FARM GRIST MILL.

Queen of the South Wheat and Barley Mills have sustained themselves wherever they have been brought in competition with other Mills. Of these Mills there are manufactured five sizes for Corn or Barley, and three expressly for grinding Wheat Flour. The peculiar novelty of this Mill is, the understone is the running stone in all cases. There is no limit to the speed, and as speed is everything in grinding, it will outgrind any upper runner in the world. These mills take any kind of grain without choking, and we warrant against choking in any and all cases. The stones are of the best quality of imported French Burrs. Grinding Mills are often built of refuse burr stones, brought to this country from France as ballast for returning vessels; such Mills are wholly unfit for grinding purposes.

When it is known that the Burr Stones are the most important and valuable material used in the manufacture of Grinding Mills, the advantage of the facts here stated cannot be overestimated.

The faster a Millstone can be run, the more it will grind, because at each revolution the cutting edges pass by each other a certain number of times—thus, at 400 revolutions per minute, double the amount of edges will pass each other than the same stone run only 200 revolutions. In the "Queen of the South" Mills the lower burr is the running burr, consequently can be run at as high speed as desired. Moreover, these mills will never take any injury from running empty, as the under burr is kept off the upper by gravitation. For the past two years hundreds of them have been sold to millmen and farmers. These mills can be easily set in a wagon or on the barn floor, and can be run by either steam or horse-power. They are simple, strong and durable, easily adjusted to grind.

Send for Descriptive Illustrated Catalogue.

Address

BAKER & HAMILTON, San Francisco.

## Premium Farm Grist Mill.

PREMIUM FARM GRIST MILL has valuable improvements, which we have recently made, which renders this Mill still more efficient and more durable, by the use of a device so as to prevent the cylinder from coming in contact with the concaves. The grinding plates are CAST STEEL. It is adapted only for power, and for grinding meal and feed. As a farm Mill it is unsurpassed, and we recommend it to all who do not wish to incur the expense of the French Stone Mill. The grinding surfaces are of chilled iron, so arranged as to be self-sharpening, and working constantly for years without repairs. It is adapted to any power from one to four horses, and will grind Corn, Rye, Oats, Wheat, etc., fine or coarse, as may be desired. Driven by a two-horse railway power, or four-horse lever power, it will grind from six to ten bushels per hour, and crack from ten to twenty-five bushels per hour; and driven by a one-horse railway power, or a two-horse lever power, it will grind from three to five bushels per hour, or crack six to twelve bushels per hour. It is also arranged with steel cutters to GRIND CORN IN THE EAR. It occupies a space of about three feet square, and weighs about 375 pounds.

### Prices of Premium Farm Mills.

With Steel Grinding parts, with Fly Wheel and Sieve for Sifting Corn Meal..... \$75  
With Steel Grinding parts, and with Bolting Attachment for making Family Flour..... 100

Every Farmer Should Grind His Feed.

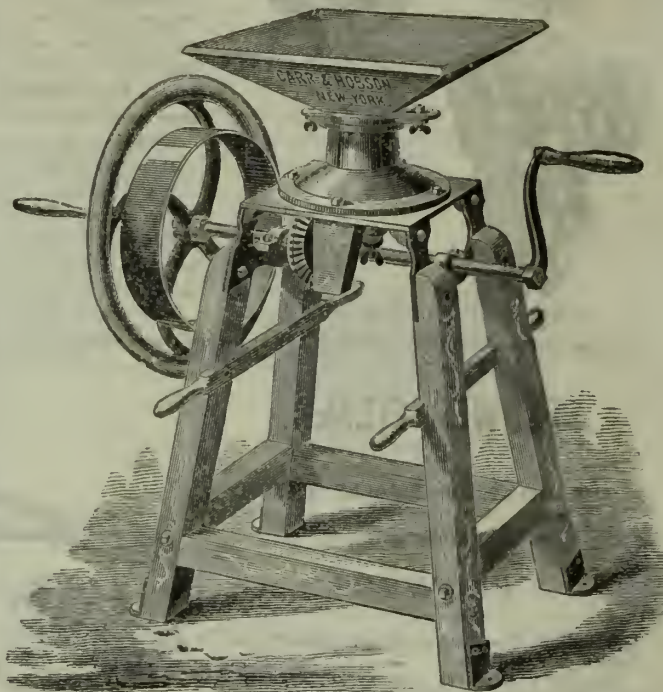
THESE ARE THE

Best Mills on the Coast.

BAKER & HAMILTON, San Francisco.

SIZES AND PRICES.—Order direct from us

SIZE	Feet Mill.	Steam Power Required.	Grind Fine Per Hour.	Weight
18 in.	3 1/2	4 horse	10 to 12 Bus	700
26 in.	22	3 horse	15 to 20 "	1,100
30 in.	27	0 horse	20 to 25 "	1,300
36 in.	37	12 horse	25 to 30 "	1,700



HAND AND POWER GRAIN MILL.

Hand or Power Grain Mill - \$37.50  
Extra Grinding Plates, per set. - 7.50

This Mill, which is intended for hand or for power, and is capable of being driven by either one or two men, or by any kind of mechanical power, when the latter is used in grinding corn, eight bushels per hour is the usual capacity. They are extensively used by Farmers and Grocers for grinding Oats, Barley, Corn, Coffee, etc. It is simple, not liable to get out of repair, and extra grinding plates can always be obtained at a trifling expense, which will last several years.

## Commission Merchants.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCE.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

BRYANT & COOK,

Commission Merchants,

AND DEALERS IN

GRAIN, FLOUR, ETC.

No. 8 Davis St., near Market, San Francisco.

CHARLES NAUMAN.

FRANK NAUMAN.

C. & F. NAUMAN & CO.,

Wholesale Commission Merchants

AND DEALERS IN—

GRAIN, POTATOES, FRUIT, BUTTER, POULTRY, EGGS, GAME, ETC.

227 & 229 Washington St., San Francisco.

Consignments Solicited.

A. GALLI & CO.,

General Commission Merchants,

AND WHOLESALE DEALERS IN

Tropical, California and Oregon Fruits, Nuts, Produce Butter, Cheese, Poultry, Eggs, Honey, Hides, Potatoes, Grain, Wool, Etc.

516 and 518 Sansome St., San Francisco.

Cash can be drawn for immediately upon receipt of account of sales.

## Phylloxera-Resisting Vines.

Vineyard Proprietors desiring to plant American Grape Vines, which will resist the attacks of the Phylloxera, either as Grafting Stock, or for direct production, which proves to be the only salvation and means of reconstructing the destroyed vineyards of France, will do well to address

BUSH & SON & MEISSNER,

Bushberg, Jefferson Co., Mo.

Rosecomb Brown Leghorns for Sale.

PURE BREED COCKERELS and PULLETS from 3 to 5 months old. Address

P. E. MONAGHAN,

Alcatraz Island, Cal.

**BERRIES!** LARGEST AND BEST. Loufellow, Warren, Lindell's Favorite, Black Giant, Sharpless, and Queen of the Market. Pomona Nursery. 100 acres devoted to small fruits. Price-List free. Send 3c. stamp for colored illustrations and testimonials. WM. PARRY, Cummington, N. Y.



SOLE PROPRIETORS AND MANUFACTURERS

## Celebrated Detrick "E W" 22x36 Grain Bag.

CALCUTTA, DUNDEE and PACIFIC JUTE HAND-SEWED BAGS always on hand. OUR No. 1, No. 2 and No. 3 SECOND-HAND GRAIN BAGS selected and graded with care.

## TWINES.

3, 4 and 5-ply for Grain Bags, 6 and 8-ply for Potato Gunnies, 3-ply EXTRA FINE for Flour Bags, made expressly for our trade and QUALITY GUARANTEED.

FLOUR BAGS Printed to Order WITHOUT EXTRA CHARGE. POTATO GUNNIES, Wool, Bean, Ore and Salt and Seamless Cotton Bags.

## Tents, Awnings and Hydraulic Hose.

ORDERS PROMPTLY FILLED AT LOWEST MARKET RATES.

119, 121 and 123 Clay St., and 118 and 120 Commercial St., San Francisco.

# PIANOS

LARGEST MUSIC HOUSE

On the Pacific Coast.

WHOLESALE AND RETAIL.

Lowest Prices and Best Goods.

Write for information concerning any Musical Instrument, and terms of sale. It will be given with pleasure.

ESTABLISHED IN 1850.

KOHLER & CHASE,

137 and 139 Post Street, San Francisco.

50 Pertumed, Snowflake, Chromo, Motto Cards, name in gold and jet 10c. G. A. SPRING, E. Wallingford, Ct

R. J. TRUMBULL & CO.,

SUCCESSORS TO

R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail

Dealers in



FLOWERING PLANTS and BULBS, FRUITS and ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock

EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

\*"Guide to the Vegetable and Flower Garden" will be sent FREE TO ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL & CO.,  
419 and 421 Sansome Street, S. F.

Baling  
Fencing  
Telegraph  
Telephone  
Galvanized

# WIRE

## Barbed Fence Wire.

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the

Trademark.



A. S. HALLIDIE

Wire Mills.

Office, No. 6 California St.

SAN FRANCISCO.

WIRE ROPE and CORDAGE

Of every kind on hand or Made to Order.

## CHEAPER YET!

## Tension Sewing Machines!

A large number of nearly new genuine SINGER, WHEELER & WILSON, HOWE, WOOD, WILSON, GROVER & BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

NO TENSION MACHINE.

Wilcox & Gibbs' S. M. Co.,

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.

## Well-Auger.

Ours is guaranteed to be the best in the world. Catalogue free.

W. W. GILES, 149 Clark St., Chicago, Ill.

P. Saxe, 520 Bush street, General Agent for Pacific Coast.

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 120 Sutter St., S. F.



# PACIFIC RURAL PRESS

Volume XVIII.]

SAN FRANCISCO, SATURDAY, SEPTEMBER 6, 1879.

Number 10.

## Landscape Farming.

We are not sure that the term is admissible, and yet why not? If landscape gardening is to signify those finer arts which have their central idea in the esthetic, why not landscape farming for those coarser arts which, in addition to points of beauty, may be counted profitable merely from the practical and material results attained. If this idea be true, then there is a field for certain styles of landscape work beyond the limits of ornamental grounds, discussed so ably by Mr. Armstrong in the articles which he prepared for recent issues of the Press.

Probably other standards of taste must prevail in the practical efforts which we would designate by the term landscape farming. Perhaps, for example, a miniature lake which the landscape gardener would give a gravel bottom and set with ragged rocks and people with gold fish, if the climate suited, would give place in landscape farming to a pond with mud beneath, in which carp and catfish could fatten for the breakfast table, and from which ditches would lead out water for irrigation or for the stock yard. Perhaps the hedge which the landscape gardener would introduce to escape the harsh outline of a five-board fence, would become in the hands of the landscape farmer a dense barrier, fit to turn a jack rabbit, or might be even more thoroughly of use, if of Osage orange, as a feeding place for silk worms. But even this might not detract from the essence of beauty, for different views of a thing do not change its real character. The marriage of beauty and utility, even though it be unhallowed by formal rites, must still be recognized as a lawful union, even though it be approved only by the Scottish law of association. In nature, too, the highest beauty is for use. The fragrance and color of the flower which serve the expounder of natural theology as an evidence of design to develop the perception of the beautiful in man, are none the less the lure to the insect which accomplishes plant fertilization by his busy, bustling visits. Not until man is raised above the engrossment of the bread and butter contest of this world will he be wholly free from sacrificing the esthetic to the practical. Even so pure a thing as moonlight, which seems the poet's own treasure, was proclaimed at first an illumination for the use of man at night, as sunlight was by day. Nor is the early edict yet forgotten. It is said that Tennyson once met his butcher when the night was all aglow with moonbeams. "Is it not a queen of nights?" quoth the poet. "Yes," replied the skull-crusher, "it is so light that I thought I would hurry home and do a little killing."

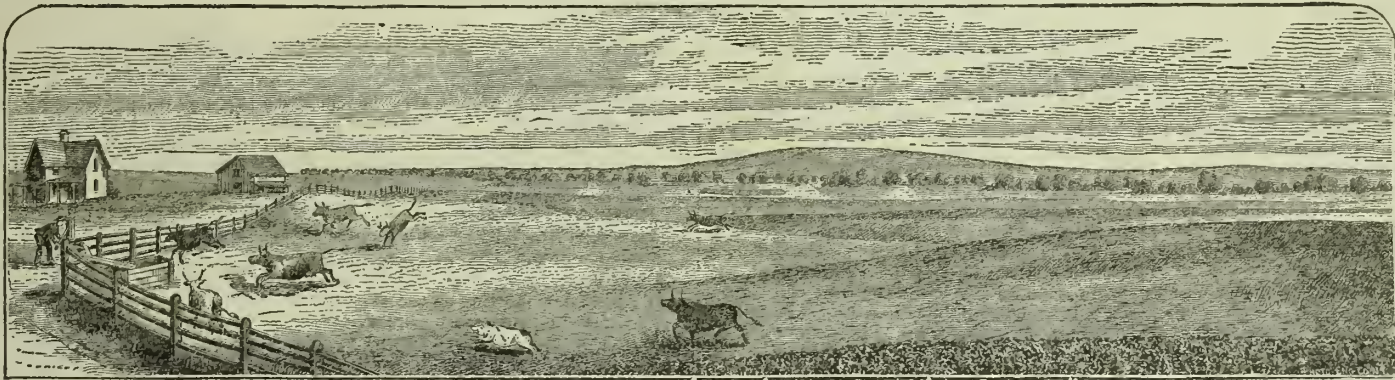
But we did not intend to wander into the realm of the abstract. Our purpose was to suggest that much might be done in cultivating the beautiful even in the hard soil of farm economy. Our illustrations show two views of the same locality, with ten years between them. The scene lies in Kansas, and we are enabled to point our moral with the engravings by the

courtesy of Col. Gray, Secretary of the Kansas Board of Agriculture. They adorn his last annual report, a document which, by its style and subject matter, does great credit to the progress of our sister State. We doubt not just as great tokens of advancement in farm improvement could be found in our own State, were the artist to portray them. But either here or there the lesson is the same, for the principles involved are of universal application.

We have often held that the duty of every farmer to his farm, as a business enterprise, was to improve it in every possible way. It is true that it is often much easier to write it than to do it, for the burdens under which many of our worthy friends are struggling make it impossible for them to retain their farms, much less improve them. But this does not reduce the

are, gifted with zeal and enterprise, who seek both use and beauty in the face of unfavorable conditions. We know a man of San Joaquin who raised a pond on the surface of the plain, giving its sloping sides the appearance of nature's work by growth of grass and shrubs. He had no water except that pumped from artesian wells. And yet his pond was full, and, thus stored above the level of his orchard, vineyard and cultivated fields, the water was ready to run hither and thither as his needs required. The improvement necessitated the investment of money and exertion, but the one will be soon returned, and the other rewarded, by the growths which the water will promote. This too, is but a hint. Let those of our readers who have shown by their works their faith in farm improvements which in them lies, continue the

**HIPPOPHAGY.**—It is a tremendous word, but it only means to eat a horse, or, by way of diversion, to eat a mule. The French have enjoyed a sort of a grand and gloomy solitude in this style of dental exercise. It is reported that last year the Parisians ate up 10,800 horses and 519 asses and mules, furnishing over 4,500,000 pounds of meat for the hippophagists. In other towns the use of this species of food is extending, for in Marseilles 1,533 horses were eaten last year. It seems that there is a French society for the purpose of encouraging the use of horse and mule meat in other countries, and that a standing offer of a bonus of \$200 is made to any one who will keep a horse-meat shop open in London for three months; but no London butcher is willing to risk the edge of his cleaver on horse shoes. Why does not the French society extend an offer to San Francisco? Doubtless it would be accepted by one of our street railway companies. But really it seems as though California would be a good place for a colony of French hippophagists, as good fat mustangs can be had from \$2.50 to \$10 each. And then, why would not canned mustangs be a good article of export in return for French manufactures?



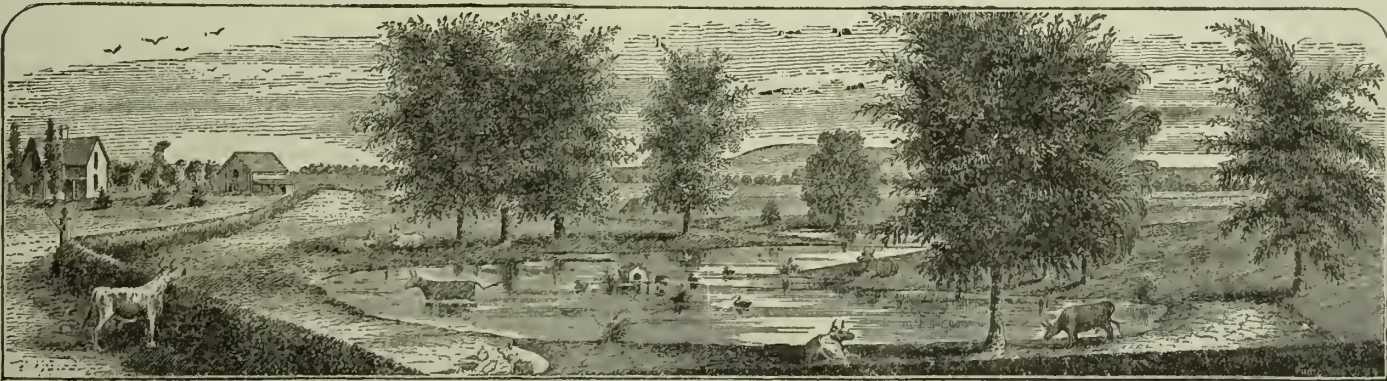
THE OLD-FARM SCENE TEN YEARS AGO: THIRST AND SCORCHING HEAT!

responsibility which many others must shoulder, and that is of squandering in outside ventures, surpluses which should have been devoted to making the farm a more desirable place upon which to pass a lifetime, and rear new lives. The State is full of desolate stretches of land, broken only here and there by weather-beaten houses and tumble-down shelters for stock, which might long ago have been varied by the growth of plant and tree and vine, if but moderate effort and squandered money had been applied to such ends. No State has a climate which fosters more rapid growth of vegetation than our own, in situations where

hints which we have begun in this showing. Let them describe for us what the conditions were when they began, and what they did to secure the desirable changes amid which they live. If each will outline for our columns the work he has done, all will pluck some suggestion which will aid to carry on the work. Farm and home improvements are live topics, and to describe them with practical details will nerve many to begin the work at their own door steps and beyond. The subject is now open for remarks.

**BARLEY.**—Again, as last year, there is re-

**BANANAS IN EASTERN MARKETS.**—A Philadelphia exchange says that extra efforts are now being made to introduce bananas to free use among Eastern fruit eaters. The supplies are chiefly brought from Cuba, where a large amount of Eastern capital is invested in banana culture. Bananas are now to be found not only in confectionery stores, but also in grocery stores, and are huckstered about the streets with the orange, and there is a constant and growing demand for the fruit. But it is said that the production in Cuba is increasing at such a rate that next season the fruit will in all probability be pushed in a variety of ways not before attempted. The Germantown Telegraph says: "The process of making a market for this foreign fruit is a curious one for observation and full of instruction for our own agricultural and horticultural interests, for doubtless if American grapes were pushed into sale with the same zeal and enterprise there would be much profit to growers." The way in which Eastern growers of semi-tropical fruits are pushing their Cuban enterprises is suggestive to our Californian producers of articles for which they hope to secure a large Eastern demand. In the article of bananas, however, we have first to compete with importations in our own markets before we compete with Cuban fruit for Eastern coin.



THE NEW-FARM SCENE TO-DAY: COOLING WATER AND GRATEFUL SHADE.

water can be easily secured; and perhaps no State can show more unmistakable evidence of the fact by the wide improvement which has been already made. We are not unmindful of the fact that thousands of our citizens have made rural homes bowers of beauty, and have developed wider areas by generous planting and expensive water working. Our words have no application to such deeds, except in approval of them, and they are spoken in the hope that such efforts may be the more generally appreciated. Let the hint implied in the engravings which we present on this page, awake each neglectful one to thoughts of what can be done with such conditions as surround them. Many there are who can store up a treasure of water with such natural aid as the scene in the engraving shows; and some have gullies and ravines, now wholly waste, which can be easily blocked and filled with water, enough to irrigate all the slopes below, and supply a neighborhood with scaly breakfasts besides. But some there

ported a shortage of barley abroad. The London Farmer says: "The growing crops promise well neither in England, France, nor America. Ireland still hopes for a fair yield, so does Germany, but on the whole the next cereal year's expectations of barley are short. This suffices to account for the firmness of the barley trade." In this market there has already been disclosed a good demand for choice Californian Chevalier barley for export to New York. If it could be found practicable to produce far more of this fine sort, our barley export trade might sometimes return a large lot of money to growers. The great mass of the barley grown in this State is, however, not fit for brewing, and sells low for feed uses. How much the production of the choicest barley is influenced by local conditions of soil and air, and how much improvement could be secured by the use of better seed are fit subjects for test and inquiry in all our grain-growing regions.

**MASSSES OF PINES.**—In the last of Mr. Armstrong's articles on landscape gardening (recently printed in the Press), the compositor made it read in one place "massses of pines," when it should have been "masses of pinas." We hope our readers will note the correction in their files.



## HORTICULTURE.

### The Best Fruits to Cultivate.—No. 2.

EDITORS PRESS:—As it will be some time yet, before we will be ready to set fruit trees; and, as we are just now in the midst of the fruit season, may be we had better look around among our neighbors' orchards a little, and see if we cannot profit by their experience—by their mistakes.

I will look through A's orchard first. He set his orchard a good while ago, when the country was new, and, fruit being scarce, almost anything that could be called fruit would sell, and for a time his fruit was all profitable; but, as orchards began to multiply, fruit became plenty, and buyers more particular, and, pretty soon, "A" was nearly crowded out of the market, because he had not posted himself with regard to the best market varieties, when he planted his orchard. He has a good many summer and fall apples, of inferior quality; early and fall pears, that don't pay transportation; a good many small, sour plums, that won't sell at all; and a very few good winter apples and pears, that will do very well for market if well cultivated and properly handled. Of the marketable winter apples are the Baldwin, Esopus Spitzenberg, and Newtown Pippin. Of the winter pears are the Winter Nellis, and Easter Beurre. If his orchard had consisted entirely of these varieties, it would have been all right; as his location was suitable for growing that kind of fruit, and such fruit, well grown, and of good quality, has ready sale at good prices.

But, some will ask, if I am going to discard all the summer and fall apples and pears, as market fruit, as there are more than 200 different varieties of summer and fall apples and pears, named and described in the "fruit books" as being worthy of cultivation. No; I will select a few that are good, and may be made profitable with good care. The earliest apple, worthy of cultivation, is the Red Astracian. It is a little earlier than the Early Harvest—the next best. But in order to have your Astracians, and especially your Harvests, in good condition for market, you must see to your trees, that their tops are regularly and properly pruned, thinned out, both of surplus small limbs, and overcrowded fruits. And if you want to be at the "top of the market" (as we should all strive to be), make two or three different gatherings of these (as well as all other summer varieties of apples), for some will mature while others are not more than half grown, and to have your fruit in the best condition you should gather it as soon as it is fully grown, and put it carefully away in boxes, and let it ripen there, ready for market; and with such attention to your trees and fruit, you may go to market with a hope of success.

But I am getting a little off the subject under consideration and will return. Suppose that you are satisfied from experience and observation that your location is suitable for growing apples, and you want to cultivate especially for market, then there are three things to be considered in this case: First, what does your place of market demand? What are your facilities for getting there? What time and means do you wish to employ in cultivating and gathering your fruit? If you wish to spend most of your time in the orchard and wish to grow apples for the San Francisco market, or any other large place on the coast, you would do well to have a variety that will be ripening at different seasons, in order to give employment; but your early and fall apples must be of excellent quality and well handled, in order to bring any profit, and if you can grow plums and pears for summer employment you would likely do better. But for your winter fruit, grow the yellow Newtown Pippin. It will pay better for the outlay than any other fruit, except perhaps the Winter Nellis pear, where it attains a good size, flavor and appearance; and as the Nellis pear and Pippin apple generally do well on the same soil, they may be grown together profitably. But you must bestow a reasonable amount of care upon your fruit, in order to make it pay, no matter what kind or variety you cultivate. Your trees must have good cultivation and proper pruning, in order to produce a first-rate fruit. And for this reason it is hard to select a suitable fruit for others to cultivate, for there are so few that give their trees the attention they need to get a good quality of fruit. Take Winter Nellis pear, for instance: If it is neglected the fruit will be small, dull in color and insipid in taste, and not worth the expense of marketing. But we will talk more about cultivation after we have determined what to cultivate.

Soquel, Cal.

M. P. OWEN.

THE PROPOSED SOCIETY.—The *Record-Union*, in an article approving the proposed State Horticultural Society, writes as follows: Fruit trees have different habits than in most any other country, and require different treatment, and their habits are different, and they require different treatment in localities here almost and sometimes in sight of each other. On one side of a hill, not a half mile over, the plum or cherry will grow to perfection and bear an abundance of excellent fruit, while on the other side neither the tree will thrive or give any crop.

In some localities close pruning seems to be a necessity, while in another, not half a mile away, close pruning will kill the tree or render it of no practical value as a bearer. In one locality the Muscat of Alexandria grape will grow and come to the greatest perfection, while the Zinfandel is of no value at all, while half a mile away the latter will do well and the former is good for nothing. Now all these strange and apparently unaccountable facts have reasons for their existence founded in nature, and a close study of the circumstances will discover these reasons, and teach how to avoid failure and secure success, and it is the province of horticultural societies to discover these reasons, and avoid mistakes and their consequences. Indeed we think the need of a live and active society to investigate and determine questions that are constantly being presented to the horticulturists of this State is great and generally recognized. We hope therefore, that all interested will join hands whenever a move is made towards the formation of such a society and make it a success.

GRAFTING PRUNES ON ALMOND STOCK.—This subject which has been frequently alluded to in our columns is made the subject of an article, by our contributor, J. B. Armstrong, of Santa Rosa, in the *Country Gentleman*. Mr. Armstrong writes: Grafting and budding in the almond have succeeded beyond the most sanguine expectation. On the 24th of February, 1879, as an experiment, I grafted a row of almond trees with apricots and nectarines. Five months later, at this writing, the apricots have made shoots over four feet long, each with many branches heavily clothed with leaves. The nectarines show a rather larger growth, with numerous laterals. My budding of prunes into almonds, August 1st, 1878, succeeded magnificently as respects the growth of those that lived. But the bark of the stocks, in spite of the greatest care, drew rapidly away from the buds, leaving about half to perish. Until the first of April they were dormant. By May 1st they showed green buds. From that time forward the growth has been wonderful. A measurement made to-day with a ten-foot pole, from a step-ladder, gives the length of an average shoot 7 feet 10 inches, with 6 branches, each from two to three feet long. This is the work of three months, and the season is not over. Two of the almonds grafted with prunes—the Fellenberg and the Petit de Agen—in March, 1878, or about 16 months ago—made rapid advances last year. When the canes were from five to eight feet in length, it was judged best to shorten them, for fear the winds might break them off. This developed the fruit buds of the Fellenberg, which is now bearing. The tops of both trees, as is the habit of the plum to grow upright, have good dense heads of foliage between 9 and 10 feet high and 7 feet through, by measurement, above the point of grafting. The new limbs are from three-fourth to one and one-fourth inches in diameter, and the points of junction are well knit, strong and smooth.

## THE VINEYARD.

### The Phylloxera Problem.

Julius Dresel, of Sonoma, Cal., writes to the *Alta* concerning the danger of the phylloxera and what he is doing to guard against it, as follows: Something must be done soon, or shall we continue calmly to stand by and see the vineyards, in the neighborhood of Sonoma for instance, in increasing proportions steadily changing into dead land? In vain I look around and nowhere can I see any serious steps taken to remedy the fearful evil that is upon us. But how can we afford to remain inactive for another season! Forsooth, then, we had better prepare ourselves at once to see the 100,000 vines already destroyed amount to millions. Allow me, therefore, to give you here, with my experience and my opinion about the best means to reconquer the lost ground; for as to averting the destroyer, I think we had better dispense with the application of any chemical preventative. The great prize offered by France for such an invention has not yet been won; and even if it had been, how could we employ, and perhaps more than once, a chemical preparation on stretches of 100 acres, to a depth of four feet? Where is the money to come from? And neither is there any reliance to be put on the power of resistance of the younger vines, or on the richness of the soil. My own eyes witnessed the phylloxera crawling on its victims entirely regardless of individual, young or old, luxurious or lean; all Asiatic varieties of the *vitis vinifera*, that is to say every grapevine imported from Europe has succumbed to the relentless double sting of these myriads of lice—the roots rot! No more is manuring, however much soever to be recommended in other respects, a preservative against the inroads of these insects. As the rings grow wider and wider from the spot where the stone has fallen into the water, be it deep or shallow, so the circle of devastation of the phylloxera expands from the first point of infection toward the outskirts over rich and poor land with scarcely any difference; the strong and the weak have to perish alike. In three years the work is done. In the first you will not remark much, excepting perhaps a fading of color on the leaves; in the

second, you see the branches no longer hanging down in sweeping boughs, but standing upright, shortened and stiff, with a yellow foliage early in fall; in the third, their appearance is entirely crippled and shorn; they look like old willow stumps, and the horses have to tear them out to be burned.

Under these circumstances, I followed the precedent of the French, who for some time have made experiments with, and ordered phylloxera-proof vines from Missouri in still increasing quantities. I planted Elvira and Taylor, both white varieties of the Riparia grape, and Cordifolia, a wild, red variety of the same family, which has obtained the preference up to this time. Previously, I grafted the cuttings indiscriminately with Gutedel, Riesling, Zinfandel, etc., and I see them grow with their grafts just as well as ours; also, those that were transferred to the nursery, there to form roots for the next season. Further, my own experience does not go, but I put entire confidence in this way to help us out of the scratch, supported as I am not only by the success of the French, as stated in the highly interesting articles of Wetmore, which appeared in the *Alta*, but also by the microscopic examinations of F. Hecker, of Belleville, who found the fiber of the varieties of the Frost grape and the Riparia so hard and tough that the tiny trunk of the phylloxera cannot well penetrate it. Catawba, Isabella, and many other varieties formerly in use, have been relinquished, as not reliable in the same degree, or for other objections.

There, then, we have a sufficient reason to make use of the above-given sorts, as resisting the inroads of the phylloxera, to make up for losses with new plantations.

I cannot help wondering at those who still continue to trust the Asiatic vines, even for new extensions, when they stand surrounded by the irrepressible hosts of their arch-enemies. No doubt they believe that something fortunate will yet turn up against the phylloxera. Let us rather be watchful and active—all who are weary and burdened with vineyards—lest we may fall under an impending mortgage foreclosure.

My mode of proceeding is this: I put an exactly-fitting graft of two eyes on the cuttings, having them first shortened for the uppermost knot, and winding around it, all along the graft-cut, a suitable twine. I have not used any wax, which perhaps might do well as a coating. For the manner of grafting, everyone may choose the cut he likes best and thinks suited to answer the purpose. Good care should be taken to prevent the cuttings from getting dry, by keeping them covered with moist soil; and would be preferable. In this wise, one can finish about 175 grafts in a day, sitting snugly at home; some years later, grafting on the stem may cost three times as much work. I leave it to the judgment of my fellow vine-growers, whether they would not rather plant the Missouri vines first in the nursery, there to take root, and graft afterward, before transferring to the vineyard. If orders are given during October, the vines will probably be sent in January, and the planting should be done in March at the latest. Do not expect to get as vigorous and many-eyed cuttings as we are wont to get here; most of the slips are thin and long-linked, but they grow all the same. About the stems which these Missouri vines will make, I cannot speak from experience, but I have not heard any complaints from France; beside, I am inclined to assume that our genial climate will improve their strength, as it did for the Gutedel, Riesling and others.

### Statistics of the Wine Interests.

The *Wine and Grape Grower* of New York city says: "According to the meager statistics which are accessible, the average product of late years is about 20,000,000 gallons, 8,000,000 being of California growth, and the remainder of the States east of the Rocky Mountains, though some years it has been considerably greater, and this year California alone promises a yield of 12,000,000 gallons, and a proportionate increase is probable in the other States, more particularly the Southern States, where great interest is developing (and not without reason) in this industry. To be sure, these figures look small beside the 1,287,000,000 gallons produced by France (crop of 1878), but then it must be remembered that only about 3½% of that quantity comes to the United States, which only brings about 45,000,000 gallons in competition with our own products. Starting with the balance only slightly against us, and being free from tax, it would seem that our native dealers could without much effort, take the lead and become virtual masters of the situation. That this state of things is rapidly being realized is shown in the fact that of the receipts at the port of New York during the past 6 months, over 800,000 gallons were of California production, against 700,000 gallons from Europe, showing 100,000 gallons balance in our favor. Owing to the ravages of the phylloxera and the oidium, the crop of 1878 was less by 8,093,000 hectoliters than the average crop of the past 10 years, and less by 48,700,000 hectoliters than that of 1877. A knowledge of these facts is of great value to the American wine grower, as foreshadowing the condition of the market a year in advance, thus enabling him to prepare his stock and regulate the production by greater or less effort, according as the demand is likely to be increased or diminished.

## POULTRY YARD.

### Points on Brown Leghorns.

Concerning this breed of fowls, very popular and widely disseminated in this State, a correspondent of the *Country Gentleman* writes as follows: A reader makes inquiry concerning what makes the tail of his Brown Leghorn cockerel grow crooked, as his roosting place is a good one. He also asks whether a Brown Leghorn with a cream-colored shade on his feathers is a pure one. The fowl spoken of is what is termed "wry tailed," and the cause of the tail feathers growing crooked is a bend in the extreme terminus of the spinal column; or rather the rump bone is turned to one side, perhaps so slightly that it might not be observed, even on close examination, while the bird was alive, but when dead and the feathers plucked it is quite perceptible. The tail feathers, of course, take the direction of the curve and turn to one side. It is considered a great deformity, and such birds are unfit to breed from, no matter how good their other points may be, as the hemic is transmissible to the progeny. The roosting place has little to do with it. It may come from generations back, and might in the first place be caused and handed down by the injudicious practice of breeding from birds that had acquired this habit from weakness and thus became permanently distorted. Frequently, with Brown Leghorns, the tail feathers take a bend towards the head, the sickles lying on the back and touching the comb when the head is erect, giving to the bird a bold, haughty, stylish carriage. This style is termed squirrel-tailed, and is much admired by some. Indeed, it is showy, and gives to the bird a becoming appearance when not carried to so great an extent as to hug the back closely. This style is not considered a deformity, still the straight upright carriage is to be preferred.

The tail should always form a direct angle with the upright head, and be well sickled up. There is a good deal in a tail. A good cock should not be hen tailed, or wry tailed, or possess too much proneness to squirrel tail. The body of the tail should be straight and upright, not folded too closely, neither should it be spread out to that extent that would present a bristling appearance, with each feather standing separate but should preserve that compact position seen in a half-folded fan. Each feather should be of deep glossy black, with a very slight curve at the tip end, the last two feathers taller than the others, and the termination of each forming a gradual slope downward toward the lower body. Over this the two tall, long sickles should curve and wave gracefully. The coverts should come out below and curve over, covering the entire tail on each side. They should possess a soft silken web, with a pile like velvet, and in color a rich metallic or bottle green; the shaft of the feather black with no white at the roots. The breast, body and thighs of a true Brown Leghorn should be solid black, with no fleckings. The shanks must be deep orange yellow, with a dark rich stripe, approaching red, down the outside. The head should be ornamented with a straight, stiff, erect comb, possessing five points; long, thin pendant mottles, white earlobes, pinned snugly to the head; red face, vivid red iris to the eye, and yellow, short, strong beak. The head feathers are dark maroon, shading to bay and crimson in the hackle. The back and wing bows should be dark crimson, and the saddle feathers correspond with the hackle. Neither the hen or cock should possess cream or self-colored feathers.

The breast of the hen should be dark salmon and solid, the shaft of each feather a lighter salmon, the head and wings brown, traced with black; the tail black and upright, neatly folded, and well sheathed with the black feathers, which grow larger and slightly curved at their extremity. The comb should be large, serrated with five points, evenly planted, and droop to one side. The wattles are of equal proportion, neatly rounded; earlobes white, clear and smooth; head-feathers plum color, shading to brown and straw on the hackle; each feather striped; thighs salmon like the breast; shanks smooth and yellow.

The average live weight of a full-grown hen is from 3½ to 4 pounds; that of a cock from 4½ to 5 pounds. The eggs are of medium size, a full oval in shape, rather pointed at the small end, and of a chalky whiteness; smooth, with coarse-grained pores. Any color to the shell denotes foreign blood. The chicks when first hatched should present a uniform appearance, with either brown or cream breasts with a dark under coloring, a triangular mark on the head, of dark maroon brown, and three stripes down the back, like a chipmunk; yellow shanks and beak.

There is no denying the fact that the original Brown Leghorn bird has been improved, altered, and made up by crossing of other blood. Else how is this variety of splendid coloring obtained? The bird is a beautiful one, and we wink at the strategy that produced the present specimens. When stiff, projecting feathers grow at the hock joint the bird is termed "vulture-hocked."

WHEAT FOR CHICKENS.—The London *Agriculturist*, in view of the low price of wheat, says: Maize, barley, or oats may be very desirable, but for fowls of all ages, for laying hens, or for chickens getting fit for the market, there is nothing like good honest wheat.



## THE APIARY.

### Honey in the Healing Art.

We have always taken ground that one of the greatest points to be made for the success of the industry of the apiary was to educate the people in the useful qualities of honey, and thus largely increase the demand for it. At one time and another we have urged the desirability of honey as food. We now find in the *Beekeepers' Magazine* a comprehensive article by Rev. J. W. Shearer on the many uses of honey in the healing arts, which we shall quote as follows:

Karl Galter, a German teacher of some note, has recently written a book on the healing properties of honey. He says, as quoted in "Honey as a Medicine." "A strong influence for publishing this book was the fact that I, a sufferer from hemorrhages, already given up to despair, and on the verge of the grave, was saved by the wonderful curative powers of honey, and now, thank God, I am freed, not only from weakness of my lungs, but rejoice in the possession of perfect health. At my first attack, upwards of 30 years ago, powders and tea were ordered for me, which benefited me but little. I then placed but little confidence in honey, which I had used occasionally and in small quantities. Judging from my present knowledge, I believe that honey was the only remedy that was doing me any good, and it is this that I have to thank for the gradual but sure restoration of my health. As my disease increased I began to use codliver oil, which weakened and injured my stomach so that I could hardly digest anything more, and my condition became worse and worse. Again I returned to honey, when my suffering immediately began to decrease and disappear.

"Besides the use of honey I took pains to preserve my breast and lungs from injury, which, in my trying situation as public teacher, was almost impossible. My disease being caused by my constant teaching during so many years, I gave up my profession, and honey was my only medicine, whereby I, by the simplest, safest, quickest and pleasantest manner (for I was fond of honey), relieved disease in my throat; and out of thankfulness I now write this book for the use of those suffering from diseases of the throat and lungs."

"Honey is to be used when suffering with a cough, hoarseness, stoppage of the lungs, shortness of breath, and, especially with the best results, in all affections of the chest." Many persons afflicted with various species of consumption, thank the use of good honey either for their entire restoration to health, or for the mitigation of their often painful condition of mind and body. It strengthens weak nerves, appeases and mitigates fevers, promotes respiration and is very healing to the chest. For persons leading a sedentary life, and suffering from costiveness and especially from piles, pure unadulterated honey, either mixed in the drink, used alone, or on bread is the best and healthiest means of relief. Honey has also great value as a medicine for children, and is readily partaken of by them as a choice, dainty dish. It is especially useful to children afflicted with scrofula or rickets. In difficult teething, rub the gums with a mixture of honey and emulsion of quinces. For the removing of worms honey has often been beneficially used; and it is often used in diseases of the mouth and throat.

**For Coughs.**—In the incipient or inflammatory stages of a cough, attended with feverishness, the following simple prescription is recommended: Mix equal parts of honey, olive oil, lemon juice and sweet spirits of niter. Dose, 30 drops or half a teaspoonful taken several times a day, according to seeming need.

**Cough Candy.**—Boil a large double handful of green hoarhound into two quarts of water down to one quart. Strain and add to the tea one cup of honey, one cup of sugar, and a tablespoonful each of lard and tar. Boil down to a candy, but not of a brittle kind. Begin with a piece the size of a pea and go up to as large as needful. This is very highly recommended.

**Honey Cough Candy.**—It is made entirely of honey, but thickened with walnut kernels. It should not be boiled to brittleness; so regulate the size of the dose, which should be as large as the end of the fore finger to the first joint.

In severe coughing, when the chest is sore from it, the following preparation is healing:

**Honey of Squills.**—Clarified honey, three pounds; tincture of squills, two pounds; mix. In such cases Cox's famous Hive Syrup, or compound syrup of squills, which any apothecary can furnish, will be found useful.

**Cough Syrup.**—Stew two parts by measure of sliced onions with one of sweet oil in a covered dish. Then strain and add as much honey as the oil used. Stir it well and cork tightly. Dose, a tablespoonful before going to bed at night, or whenever the cough is troublesome. One dose will often give relief. In ordinary cough it is said to be an excellent remedy.

**Oxymel of Squills.**—Take by measures four parts of vinegar of squills to three of clarified honey. Mix well. To be used the same as syrup of squills, a tablespoonful occasionally as needed to check sore coughing.

### Honey as a Vehicle for Medicine.

Honey is nutritious and laxative and is employed largely as a vehicle for medicines, although it is now less used than formerly in general prescriptions, because in some particular constitutions honey has the insurmountable

gripping, or proving too great a purgative. The Medical Council of Great Britain prescribe it for use in the following pharmaceutical preparations, viz.: Confection of pepper, confection of scammony, confection of turpentine, honey and borax, oxymel of squills, and simple oxymel. In the *United States Dispensary* it is recommended in the following additional preparations, viz.: Aromatic confection, confection of opium, confection of roses, honey of borax and soda, and honey of roses. In all these preparations, clarified honey is recommended.

**To Clarify Honey.**—Melt the honey in a vessel standing in boiling water, and strain while hot through flannel, previously moistened with warm water.

**Honey of Borax.**—Mix one ounce of powdered borax with one drachm of clarified honey. It is a cooling astringent. "It is used in the thrush of infant and aphthous ulcerations of the mouth."—*United States Dispensary*.

### Honey in Gargles.

The following domestic gargle is very effective in common sore throat:

**For Sore Throat.**—Make a sage tea; putting half an ounce of sage leaves to a half pint of water and strain it. Add half an ounce of alum and two or three tablespoonfuls of honey and mix well.

**Honey of Roses.**—Pour one quart of boiling water on three drachms of rose leaves. Steep them for six or eight hours, strain and add four pounds of honey and then evaporate to a proper consistency. A copper or iron vessel will dissolve the preparation and should not be used.

"It forms a pleasant and healing addition to gargles used in inflammation and ulceration of the mouth and throat."—*United States Dispensary*.

**Oxymel.**—Take half a pound of pure liquid honey and mix it whilst hot with two tablespoonfuls each of good vinegar and water.

"This mixture of honey and vinegar forms a pleasant addition to gargles, and is sometimes used as a vehicle for expectorants, medicines and to impart flavor to drinks in febrile complaints."—*United States Dispensary*.

### External Application of Honey.

**For Boils.**—There is nothing superior to a mixture of honey and flour spread on a circular piece of linen or soft leather to draw boils or stubborn risings to a head. It is very soothing and acts rapidly in bringing the rising to a head. Applied to inflamed wounds, honey acts as an emollient, quieting the pain and hastening suppuration. In hard swellings, which do not yield readily, the addition of a little fried onion, henbane and other narcotic helps its action.

**For Sores or Wounds.**—A surgeon of Brooklyn tells us that pure honey is one of the best applications for old sores or wounds, and for had festering or pustulous inflammations. It may either be applied by pouring it into the wound or sore as hot as it can bear and then binding it up, or it may be used as a plaster.

Karl Galter says: "Undoubtedly in all wounds, pustulous inflammations, bruises and had festering, honey is the best and most reliable remedy, and affords quicker and safer help than all the known plasters. All that is needed is to spread it rather thick on a piece of linen, place it upon the fresh wound, bind fast and renew the plaster every four or five hours."

**For Ulcers.**—Karl Galter says: "For ulcers honey is often mixed with turpentine, tar, and tincture of myrrh."

**For Sciatica.**—He says further: "A plaster made of unsalted lime and honey has sometimes relieved the most obstinate sciatica."

**Ointment for Lips.**—Dr. J. R. Pratt thus writes in the *American Bee Journal*:

"I will give you a recipe that I have been in the habit of using for years, viz.: Good yellow beeswax or nice white comb, one part; fresh butter well washed, four parts. Melt, skim, and pour in molds, which makes it handy for toilet purposes, or in boxes. It is excellent for any dressing where ordinary ointment is used. Have had some bad ulcers healed by its use, but for the hands and lips it is not surpassed."

**Paste for Chapped Hands.**—Make a paste of four parts each of honey and lard and three parts of wax. Melt them together over the fire and stir until cool. Perfume with any agreeable odor and keep well protected from the air. It is said that nothing is better for keeping the hands from chapping. Put a little on the hands after wetting them slightly. Its use is also said to soften the hands after hard work.

**For Sore or Inflamed Eyes.**—Take one part of honey to five parts of water. Mix and bathe the lids, putting a few drops into the eye two or three times a day until well. To these may also be added the following selected recipes:

**Balsam of Honey.**—Take fine pale honey, four ounces; glycerine, one ounce; mix by a gentle heat, and when cold add alcohol, one ounce; essence of ambergris, six drops, citric acid, three drachms. This is intended to remove discolorations and freckles, as well as to improve the general appearance of the skin.

**Honey of Mercury.**—Quicksilver, three ounces; honey, one drachm; triturate till the globules disappear. Properties similar to mercurial pills.

**Sea Captain's Cough Remedy.**—The following has been strongly recommended for severe cold and cough: Boil three ounces of spikenard in a quart of water, making a strong tea, strain and mix with half a pound of honey and a half pint of Jamaica rum and one and one-half ounces of licorice. Dose, a teaspoonful several times a day.

It is stated that dysentery is almost unknown

## THE FIELD.

### The Frick Barley.

EDITORS PRESS:—In response to the call for cereals for the University collection, kindly published in your paper, I received from Ernest H. Frick, Washington, Alameda county, two or three pounds of clean grain, and also a handsome sample in the straw, of a barley that was new to me. With it came the following letter, which explains the introduction of the grain, and is full of just such details of the mode of cultivation and results as we want, but which are too often omitted by parties sending samples to us.

I should have answered the letter more promptly if we had not been expecting a large collection of cereals from Europe, and I wished to compare the new barley with them. Mr. Frick writes as follows:

I send you some barley that I found growing in my field of Chevalier barley in 1869. I saw two stalks of this kind standing a foot higher than the other and of a bright golden yellow. The heads stand upright, while those of the others lop down. When ripe I gathered it and planted it in my garden. I have sown it every year since, with the same good results, always getting a big yield.

In 1874, if I am correct in the year, I had a 12-acre field of Chevalier, and alongside of it I sowed a piece of this kind of barley. It was sown and harrowed in on the same day, and the same field as the Chevalier. We had no rain that year, and on dry soil all crops failed. The Chevalier was dried up completely. I could not cut it for hay. This new barley was separated from the other by only about two feet. It grew two feet higher and matured a splendid crop of seed.

I have never heard its name. I find that it yields heavier than any other barley and with more certainty of a crop, stands drouth better and is adapted to any soil.

It has less foliage than other barley and yields crops on poor soil that would not produce common Chevalier. It threshes as easily as Chevalier. I have never found it damaged by winds or disease or insects. It makes the best of hay. The straw is preferred by cattle to other straw. The stalk is much harder than in the Chevalier, and is not liable to break or lodge.

If the land is rich and moist, the last of February would be early enough to sow it, as it would make too large a growth if sown early. On poorer land sow earlier. Sixty-five to seventy-five pounds of seed is sufficient to sow on an acre. Its height is from four to five feet. When ripening it turns golden yellow. I have some standing dead-ripe, still it has not broken down or shattered.

I sowed last year five sacks on the 20th of March, and threshed 225 sacks of good barley. My soil is not the best, as it is all mixed with alkali. You will notice that the samples which I send you are not as plump as they ought to be. The hot weather following the rain has shriveled all of the grain in this neighborhood.

If you would give me, through the *RURAL PRESS*, its proper name, and other particulars that you deem worthy of mention, you would confer a great favor.

The heads are really beautiful, and differ materially from the Chevalier although it belongs to the same class, the two-rowed barleys. It has a golden tint which the Chevalier has not, and although the heads are shorter they have the same number of grains, 16 or 17 on each side, and are therefore wider.

Among our German specimens I find two heads of Italian barley, which appear to have all of the characteristics of Mr. Frick's grain, except that being grown in a much moister and less favorable climate they are not so large nor so high. The "English Cyclopædia" speaks of the Italian barley as a good stiff-strawed sort, standing well where other kinds would be laid. I will send Mr. Frick a few grains of the Italian, so that he can grow it by the side of his, and I will do the same here on the University grounds. Any differences can then be noted. In the meantime, it would be safe to dub the new-come "Frick's Drouth-Proof barley."

If we had more such observing farmers to secure and propagate the choicest varieties of grain that appear by accident in our fields the average results might be vastly improved.

C. H. DWINELLE.

University of California, Berkeley.

## THE STABLE.

### A Good Word for the Mule.

Our Tuolumne correspondent last week alluded to the growing popularity of mules as a substitute for work horses in his region. The same tendency is in progress in other parts of the State. The following remarks by a mulish writer are quoted as having a present application in view of the above facts:

We have been told that the best horse on the farm is the mule. To this doctrine we subscribe in full. There never was a worse misrepresented or more abused animal than the mule. Barring some eccentricities that nature seems to have endowed him with when you get down to business—hard, unremitting, never-ending work; when you have got heavy loads to pull through sticky mud, where it is necessary that pullers should stretch themselves against a dead load—pull the very life out of themselves, even if the load never stirs, no jumping and rearing, no plunging or nervous action, but just an honest, hard effort to do all that is in him—commend us to the humble mule.

There is nothing deceitful about this long-eared gentleman. He is in favor of fair play—no flank movements on him. His rear is sacred soil, and he allows no trespasses in that direction; depressing the banners in fair warning before he strikes. It is true that, if abused, he will get even if he has to wait through long patient years to get a good square kick at you. This you should have known at first.

Use it with the horse? Put two of them

to the wagon and drive afield for a load of corn. Load up until the wheels settle in the mud, and how are you to get out? First a tolerably fair pull is made at; then begins that see-sawing, first one and then the other at the traces, ending in rearing and plunging, accompanied by showers of profanity, and a general breaking up all around.

Put mules in that wagon, and something has got to come. If the first pull does not bring it, give them a little rest to gather up their energies and look out for a steady pull that will make things crack. A mule's temper is adapted to this kind of work. He is slow, stubborn and determined, so that when he does make up his mind to do a thing he is sure to do it. He is not only a good puller, but a good stopper. When he is tired he is going to rest, and you might as well let him do it. Turn him out and let him have a good roll, and he is as fresh as ever. His body rarely tires—he only wants a little mental diversion. He is liable to scare on the road, and sometimes makes up his mind to run away. Then look out, for he is sure to make a first-class job of it.

So much for his good and bad points. His virtues are his staying qualities. He is no hypocrite; his vices are in all men's mouths. How is it with man's idol—the horse? It requires long and patient teaching to make him a reliable puller; he has "more ills than wars or women have;" delightful to our venturesome youth, a terror to our old age; man's best friend, yet man dare not trust him.

## THE STOCK YARD.

### Cattle Ranging in Colorado,

We find in the *Las Animas Leader* (Col.), a letter alluding to various changes alleged to have occurred in the cattle herding of that State during the last five years. There may be another side to the picture, therefore this should be accepted with a grain of allowance therefor. The writer says:

Five years ago nearly every man that was the owner of a herd of cattle, was during the working season (that is, marking and branding calves, etc.) out on the range with his men, and the work and business was managed perhaps not so economically as now, as more men were employed then and the owner knew the number of cattle he owned. Nothing was allowed to stray away from home. The hands were constantly on the range, working with the stock. During the storms in winter nothing could be done, but immediately after the men would go and drive their cattle home.

Now the practice is to send out a lot of bands on what we call a round-up, the owners remaining at home. The result of these bunts is never known. Many things are done that are not right, and a great waste and destruction of property is continually going on. Towns are visited for supplies and often times the men remain around town two or three days doing nothing, all this time their wages going on.

The past year the round-up has not proved what might be called a success, so far as this county is concerned. I do not know of a single outfit that has succeeded in getting his cattle in proper shape, and now at this time but very few calves have been branded. It has taken all our men's time examining herds that are being driven out, belonging in other sections of the country.

Then, at this time, nearly all of our calves were branded—no strays to bother. Now the range is full of strays, and likely to continue so. Then people who had cattle had a range and endeavored to keep their stock on it, and rights and claims were respected—now it is claimed that cattle anywhere within the State are considered on their range, and no attention is given particularly to remove cattle from this or that man's lands until it suits the owners convenience to do so. Many fine hay bottoms along the river will not produce one-half ton of hay per acre, because of the great number of stray cattle running on these places. The more land a man owns now the worse he is off. He has the taxes to pay annually, lays out of the use of the money invested, and cannot derive any benefit therefrom.

Now it is said that many persons owning thousands of cattle do not own an acre of land. They squat at some water hole, build a small pen, and as soon as the branding of calves and marketing of beef is done in the fall, all the hands are discharged, and the bosses go to some city in the State, or to Missouri, and get themselves corn-fed during the winter, and come out fat and sleek in the spring, all ready for work. During all this time their cattle are allowed to drift south and take care of themselves. If the winter is very severe, and they hear through the *Leader* that cattle are on the river suffering and want attention, they "rustle" around, hire a few men and send them down here on the river to watch their cattle. During the past winter several large calves belonging to stock-raisers have been branded by some of the employees sent here to watch us river fellows, and I hear it said that cattle owners in other sections of the country claim that they are a great many cattle out or short every year, and that we are getting away with them. This is very unkind. I think such remarks are unjust, uncalculated for and untrue.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### Grange Meeting at Martinez.

Accepting the invitation of Dr. J. Strentzel, Master, on the part of the Alhambra Grange, patrons and matrons from different parts of the State met at Martinez on Friday and Saturday, Aug. 22d and 23d.

Alhambra Grange Hall, in which the meetings were held, is becomingly furnished with pictures, a fine Steinway piano, and other appropriate equipments. On this occasion it was tastefully dressed with beautiful flowers, vines, grasses, grains, etc.

I. C. Steele, W. M. of the State Grange, presided; and Amos Adams, W. S., acted as secretary.

The meeting on Friday, we believe, was principally occupied in discussing the storing and marketing of grain and other produce.

On Saturday, H. M. La Rue, President of the association, led the discussion on the State Agricultural Society by giving a statement of its affairs.

Director Hancock continued the subject, defining how it belongs to farmers and grangers to come forward and sustain the Grange members of the board of directors and make this year's fair a success, as the future improvement in the management and conduct of the society will depend somewhat upon the prestige of this, the first fair held under the influence of Grange members on the State board. Mr. Hancock forcibly showed that it is important, and to the advantage of farmers individually and collectively to not only support the State fair, but to attend it and avail themselves of the business, social and educational advantages to be obtained in this way, and not so well, if at all, in any other manner. He alluded to reforms which the farmers on the board desire eventually to accomplish, which it were impracticable to undertake this season. The matter of bringing forward fair samples of wheat and other grains from every part of the State was urged. Also the matter of bringing medium or average samples of stock of all kinds, wool, etc., instead of a selection merely of the very best or most extraordinary specimens.

W. L. Overheiser spoke still more strongly in favor of exhibiting stock taken directly from the ordinary fields of the farmer, in such a way as not to oblige them to compete with grain and fancy fed or extra cared for stock, etc. To make the fair more popularly attended by farmers, he would suggest some special provision be made for lessening the necessary expenses for tarrying at the fairs. It is very nice for dead-heads and the guests of the society, and persons having money to spend, to occupy the grand stand, but ordinary farmers can ill afford to come forward and bear the expense of high prices, which naturally enough prevail during a crowded season in any city. Let some pains be taken to provide camping ground for families and parties who might prefer to pitch their tent and live in their own way, and aloof from doubtful associations, and, this too, without the danger of being considered "mean," or "stingy."

W. H. Grattan expressed further similar sentiments.

President La Rue invited Brother Overheiser to come and pitch his tent, and he should be guaranteed suitable opportunity. Mr. Overheiser and several others promised to be on hand with goodly companies and tents.

Mr. Overheiser decidedly stamped certain agricultural societies in this State as effective gambling institutions—in fact, giving young farmers their first taste of gambling before they fairly realized that in patronizing the enticing games and common practice of buying pools, betting on races, etc., is nothing less than "gambling."

President La Rue satisfied those present that all means possible would be used to suppress such evils in connection with this State fair, and as soon as possible eradicate them.

I. N. Hoag, Secretary of the State Agricultural Society, admitted the past evils of the society, in this direction, with explanations of some of the difficulties of restricting them in the past. The remedy lies in the farmers coming forward and showing by full exhibits that the farmers can make and sustain a good agricultural show, and then be on hand and elect the right farmers for managers hereafter. Instead of choosing lawyers (as usual heretofore) to deliver the annual address of the society, a prominent and thorough-going Granger will deliver the address—viz., J. V. Webster, Past Master of the State Grange.

This announcement was received with enthusiasm.

Lewellyn, Webster, Strentzel, Grattan and Nathaniel Jones were appointed a committee to prepare an address in favor of Patrons throughout the State attending and supporting the State fair. The Master and Secretary of the State Grange were added to the committee.

Mr. La Rue commenced the discussion on the cultivation of wheat, alluding to the advantage of free and full conference by farmers on this subject at the State fair—comparing samples, etc.

Christian Bagge said the Siberian wheat had proved the only kind devoid of rust at a time when all other kinds were comparatively destroyed. Dr. Grattan (whose ranch is near Stockton) seemed inclined to favor the cutting of grain while in the dough. The white Chile he believes the best for early sowing; the Propo the poorest for early sowing, but good for January or later sowing. He believes in early sowing. The old and more primitive methods of cultivation seemed to be favorable for surety and full crops. Land that can always be sown after the rains fall should be so seeded.

Webster alluded to the overshadowing importance of wheat growing on this coast—one-fifth of all in the United States being produced in California alone. The certain fact that continual wheat cropping will ruin our land stares us fairly in the face.

Hoag announced that Prof. Hilgard, of the State University, is expected to lecture at Sacramento during the State fair, on the subject of crops, soils, etc.

Dr. Strentzel announced that the special hour had arrived for convening Alhambra Juvenile Grange. Twenty-five or more boys and girls quickly came in possession of the hall, filling the various offices except the Master's chair, which was retained by Dr. Strentzel. Maria B. Landers, Secretary of Alhambra Grange, also assisted in leading the exercises. The idea of the senior (or as it were father and mother) Grange resting awhile in their labors and allowing the children to come in and occupy the middle field to recite the beautiful lessons of their ritual, seemed to both delightful and refreshing to all present. The charges of the different youthful officers were promptly and well delivered. The officers' charges were given singly and responded to in chorus by the members. They seem brief and remarkably appropriate. A good lesson was taught old Grangers by these little ones by having their work perfectly committed to memory. Short recitations and readings were well rendered by the little ones. Vocal and piano music greatly enlivened the exercises.

The speakers were much applauded. It is a real compliment to the authors of this Juvenile Grange that the simplicity and originality of its ritual are its rarest beauty. We wish every Patron in the land could witness its workings.

Adjourning to the lower hall, extensive tables filled with the fat of the land, tastefully and wholesomely prepared by the ladies of Alhambra Grange, were quickly surrounded and duly appreciated by the large number of both mature and juvenile Grangers. The fruit, sweet cider, coffee, cakes and substantial were excellent.

Dr. Strentzel recalled the meeting at about 2 P. M., when Dr. Carrothers, of Martinez, read a lengthy essay on the subject of farm products, adulterations, etc.

Mr. Hancock, on the subject of Grange corporations, spoke of the patience and persistency necessary for the successful conduct of co-operative corporations. He described in an interesting manner how the Grangers' Co-operative store at Sacramento from a small beginning, with careful management, had obtained confidence and success.

About 4 P. M. Alhambra Grange (one of the best working in the State) opened and conferred the Matrons (4th) degree on Miss Halliday. Good music added much to the ceremonies.

After the Grange closed the discussion on wheat cultivation was continued. The acting Overseer stated that last year he sowed light, and thistles nearly destroyed his crop. This year he sowed 70 to 110 pounds per acre, and got a large crop and clean grain. His neighbors followed suit and likewise got similar improved results. He would sow from 100 to 110 pounds of wheat to the acre. The amount ordinarily sowed in this vicinity is in the neighborhood of 65 pounds to the acre.

I. C. Steele, N. Jones, Dr. Strentzel and others spoke earnestly for the good of the Order.

The Past-Master of Rio Vista Grange spoke of the Propo wheat which he considered superior in the Montezuma hills of Solano county. His opinion seemed to be in favor of late sowing in that location.

Mr. Denning spoke of the superior quality of the Snowflake wheat.

Mr. Caben spoke very forcibly against the quality of common farming in California. We must till better or quit farming. We are not doing justice to ourselves, our farms, or our calling. On clayey alkali soil in Contra Costa county he gave a rough or indifferent plowing; then he plowed again and let the green sward grow, and afterwards a thorough plowing, fine harrowing and seeding. This way paid him well.

Mr. Larky cultivates part of his farm to grain one year, and the other portion the following year. He finds the Propo wheat better than the Australian.

Others spoke briefly and sensibly on farm topics.

[We wish all who spoke would write out their views for the RURAL PRESS.]

W. L. Overheiser felt well paid by the discussions of the meeting, and wished we had more hours to continue. He invited all Grangers to come to the re-union to be held at Stockton at some date to be announced between the State fair and State Grange meeting.

### Camping Grounds at the State Fair.

At a Grange and Farmers' reunion composed of the members of the Order and leading farmers from Contra Costa, Solano, Yolo, Napa, San Joaquin, Sacramento, Alameda and San Mateo counties, on the 22 and 23 instant, at Martinez, the subject of the State fair being under consideration, it was resolved by those present not only to attend the fair themselves, and contribute to its exhibitions with their various products, but also to make an earnest appeal to the Grangers and farmers throughout the State to do the same.

The undersigned were appointed a committee to prepare such appeal and give it general circulation through the press and otherwise, and the matter being one of general interest we confidently ask the papers receiving this circular to co-operate with us by giving it a prominent publication.

First—We believe that the State Agricultural Society, being the highest and best recognized medium for fostering and developing our agricultural industries and resources, as well as for the advertisement of the same to the world, should be earnestly supported and principally managed and directed by farmers and others directly interested in our various mechanical and manufacturing industries.

Second—We believe the time has now arrived when a good opportunity is offered for practically availing ourselves of our privilege both to support and help to manage the society so as to secure the objects for which it was originally instituted, and to separate it from the immoral influences and practices which have heretofore been connected with it. We therefore call upon all the farmers and Grangers of the State to make particular exertions to be present at the approaching fair, to commence at Sacramento September 8th, and continue one week. Also, to bring with you samples of what you produce on your farms, whether grain, fruit, wine, wool, stock, roots, cheese, butter or any other products, to be put on exhibition for comparison and examination, and in illustrating our agricultural resources and capacities. Of wheat bring especially samples of the present season's crop, to illustrate the effect of our worst wheat enemy, the rust, as Professors Hilgard and Dwinelle, of the State Agricultural College, will be present and give practical lectures on that subject, using the samples on exhibition for illustration.

Third—Farmers may come with their own teams and carriages, and bring their families, or camping companies may organize and come to the fair and spend a pleasant week in camp, as the Society have assured us they will provide good camping grounds near the park or fair grounds for all who may desire to pitch their tents, or to live in their wagons. The Sacramento Grangers' Business Association will also furnish hay, grain and provisions at cost, so all can live cheaply. Our climate above all others favors this way of attending our annual fair, and this year will witness its successful inauguration, as we already are advised of camping companies organizing in several counties.

Fourth—The small sum of \$5 will pay for a membership ticket admitting the member, his wife and minor children to all the exhibitions of the week, and permitting the exhibition of any article at the fair without further cost.

Fifth—The Central Pacific Railroad Company will transport on their cars and boats all articles and stock to the fair and return free of cost, and Wells, Fargo & Co. will deliver at the fair and return, all packages not weighing more than 20 pounds, on the same terms.

The railroad company will also sell excursion tickets from all points on their lines to and from Sacramento, from the 6th to the 15th of September, both inclusive, at 33½% discount on their usual rates.

All articles for exhibition may be addressed to I. N. Hoag, Secretary, Sacramento.

I. C. Steele, Master State Grange; A. Adams, Secretary State Grange; N. Jones, Contra Costa; J. V. Webster, Alameda; Dr. C. Grattan, San Joaquin; John Lewelling, Napa.

"BALANCE WHEELS."—In the Independent Church, at Oakland, Freeman Lovell, Esq., of San Francisco, lately gave a lecture, entitled "balance wheels." He spoke of the need of such influences in the home, as will counterbalance any tendency of things to go wrong—for example, when some one gets cross and is inclined to scold. Then, too, in the outside world, balance wheels are requisite. He instanced a rich boy and a poor boy going into the city to start in life. The former, lacking the balance wheels of principle, runs down and "goes to the bad;" while the latter, steadied in temptation by the early-instilled lessons of his good old mother, works up to wealth and standing. The address was of that character—both entertaining and valuable in suggestions—that is fitted to interest our young people as they listen, and leave them impressed with hints of lasting value.

THE arrival of the Chinese Professor at Harvard, Saturday, created some stir in Cambridge.

THE President and Mrs. Hayes will visit the Illinois State fair at Springfield.

### Causes of Hard Times.—No. 4.

EDITORS PRESS:—In the preceding letters I have confined myself to a consideration of the direct tax this excessive interest lays upon the industry of California. I now proceed to call attention to what we farmers pay indirectly into the coffers of the exactors of excessive interest.

1. We pay more for our store goods than we should if interest were reasonable. The country merchant trades largely on borrowed capital. For that borrowed money he has to pay from 1% to 2% a month, after 90 days, on the goods he buys on time. How shall he meet that excessive interest? Only by marking up his goods, and selling them about 10% higher than he would if his interest was only 6%. His customers, thus through him pay a tribute in every article they buy. Let us suppose the average store-bills of the farmers to be only \$200 each per year, and suppose the merchant charges 10% more than he would if he were only obliged to pay 6% on his borrowed capital. Then, each year the farmer pays \$20 extra for his goods; a hundred would pay \$2,000, and the 60,000 farmers of the State, \$1,200,000, and in 10 years, \$12,000,000!

2. We pay tribute to excessive interest through the lumber-dealer. He too buys his goods on time or on borrowed capital, and pays therefor from 1% to 2% a month. How can he stand it? Only by marking up his goods and getting the money out of the purchaser. The farmer must have lumber for houses, barns, granaries, corncribs, fences, and what not, and every board costs the more because of excessive interest. The cost of fences and buildings in the State is enormous. So, also, is the extra sum we have to pay for all our lumber, because of excessive interest.

3. In the purchase of agricultural implements, indispensable to farming, we also pay tribute to this despot. Every wagon, carriage, plow, seeder, mower, header, rake or threshing machine we buy, costs 10% more than it would if the dealer paid only a fair rate of interest.

4. Our transportation rates are high, because the transportation companies have to pay high rates of interest on borrowed money, necessary to fill out their lines of ships, cars, wagons, etc. This high rate of interest must be met by a higher charge for the transportation of every sack of grain, or pig, or dozen of eggs the farmer has to send to the city, and on every pound of sugar or flour that comes back to him. In short, the usurer of California has put his brand on everything, small and great, and obliges us to pay a tax more odious and oppressive than the British "stamp tax," which brought on the Revolution. Yet we have endured it with the patience of an ox, until the farmers are pretty generally broken up. Five years more like the past, will see the agriculturists broken up, and a few capitalists owning all the best part of the State! Then look out for sand-lot gatherings! armies of tramps, and mobs of men, women and children clamorous for bread! Then, what will securities be worth? What the price of real estate in the country and in the city, too? I forbear speaking of what else may follow. If now we conclude that the indirect excessive interest the farmers have paid during the last 10 years, equals that which they have paid directly, then the farmers of this State have paid during the last ten years a sum-total of \$200,000,000 over 6%, or about \$3,300 to every one of the 60,000 farmers in the State!

"Well, what are you going to do about it?" So said Tweed, the boss swindler of New York, and so say the rich usurers of California. We will show you presently. When the farmers have put the new Constitution in working order, then we will attend to this matter of excessive interest. When we have compelled rich men to pay taxes on all they have, like poorer people, then we will do just what every other civilized State has been compelled to do, sooner or later in its history, viz: Pass a strong usury law making it a felony to take excessive interest. If the first set of laws will not do it, we will enact another, and "fight it out on this line if it takes all summer."

We propose to try it on and see if the usurers are so much smarter than other people. Detectives are sometimes as sharp-sighted as rogues. And when the people are fully aroused, and judges and the Legislature determined to put down this excessive usury, as against public policy, and laws are passed making any overt act evincing an intent to evade the usury law a State prison offense, and juries are charged to bring in their belief, as to your intention manifest in your round-about ways to extort ruinous rates, then look out for San Quentin.

"But we will not lend at 6%." All right! Keep your money. Better you should never lend a cent than ruin agriculture by your greed, as you are doing and have done.

"We will invest in business our funds." Not long. If you do, your 6% per annum will come harder than ever before. But if you think so, go ahead. Would like to see you try.

"But usury laws are everywhere broken." Not by law-abiding people. The great majority of the people who pass laws intend to obey them. They would not pass them if they did not.

"But many money-lenders get around them." Yes, and they will try to do so here. But this is a day of improvement. Perhaps we can improve on the usury laws of other States, and capture sharks which have dodged or broken through other nets. We propose to try. San Buenaventura, Cal. S. BRISTOL.



## AGRICULTURAL NOTES.

## CALIFORNIA.

## FRESNO.

**EARLY WORK.**—*Expositor*, Aug. 27: Many of the farmers are dry-plowing their land, preparatory for seeding this fall.

**RAISINS.**—*Republican*, Aug. 30: Several parties in the Central colony are preparing platforms for curing their own raisins. Last season some excellent home-prepared raisins were produced in this colony.

## KERN.

**CATFISH.**—*Courier*: The catfish planted in the slough near town, some three years ago, have multiplied wonderfully, and they have found their way into all of the waters of the valley. They may be seen swimming in any of the little irrigating ditches in town, and they are occasionally found as far as 15 or 20 miles down the valley. That they have proved a success is no longer questioned.

## LASSEN.

**CATFISH FOR COUNTY STREAMS.**—*Reno Gazette*, Aug. 30: The catfish for Susan river and Eel lake, in Lassen county, came up on the lightning this morning. They arrived in splendid condition, only one death having occurred on the trip. The fish were taken from San Francisco creek, in Alameda county, Cal., and forwarded in barrels of water. The water was changed every two or three hours on the trip. T. B. Sanders, of Susanville, was waiting here to receive them, and left this morning with his finny freight. The transportation of four barrels of live fish in water over mountain roads is necessarily slow, so they will not reach their destination before Monday noon. The distance is about 90 miles. The toughness of catfish is almost equal to that of the stories that are told concerning them, so there can be little doubt of the success of the attempt to stock the waters of Lassen county. Since the California Commissioners supply fish for nothing, when used to stock the public waters of the State, there should be no barren lakes and streams in California.

## LOS ANGELES.

**FARMERS' MEETING.**—*Downey Courier*: Thursday a number of the farmers of this valley assembled at McGarvin's hall, in this place, to discuss and perfect a plan to better their condition—to realize remunerative prices for their products. It is proposed, as we understand it, to organize an association, with permanent officers to conduct its affairs; that a prominent and reliable San Francisco commission house be selected, and all shipments made directly to it, the producers fixing the price at which they can afford to sell. If stored, and the farmer desires to raise money upon his grain until sold, the commission merchant presents the warehouse receipt at the bank, and obtains the sum at a low rate. It is high time the farmers organized for their own protection. The plan outlined above was received with much favor by the farmers present, and another meeting appointed for next Saturday, the 30th, when it is hoped the farmers of the valley will rally in force.

**COUNTY ITEMS.**—*Gazette*, Aug. 30: Mr. Collins, of Artesia, got 350 sacks of Odessa wheat off 12 acres. Mr. Smith of Los Coyotes, got 30 cents to the acre. We notice that the cornshellers are at work at different farms, and many are preparing to plant the fall crop of potatoes. The green fields of Westminster are widely in contrast with the parched spaces of the surrounding country. The Columbia plum has proved itself this year to be a great bearer of excellent quality. B. Rice raised 40 bushels of wheat to the acre. Grapes are 20 cents a pound in Tucson, Arizona, and two cents a pound in Los Angeles. The time of transit is about 72 hours between Los Angeles and Tucson. The *Commercial* wants to know who makes the profit. An insect is damaging the pumpkin crop at Compton.

**KONAH ORANGES.**—Dr. Greenleaf, of Skowhegan farm, has placed on our table a Konah orange measuring 1½ inches in circumference, one of 130 taken from a tree four years old.

**IMMIGRATION MOVEMENT.**—A committee appointed by a citizens' meeting, and composed of Gen. J. H. Shields, J. De Barth Shorb and R. M. Widney, have addressed a circular to the people of Los Angeles county in which the following and other points are set forth: In this county not one-fifth of the tillable lands are under cultivation, and the present population is not sufficient to cultivate all of the lands. Land holders assure us that for the purpose of inducing immigration, they are willing to reduce the price of land to very reasonable rates. It is also a fact that in every community in the East and in Europe there are one or more families which have decided to leave their present homes for some new place, hoping by the same labor and care to better their condition. It is the object of the present movement to lay before such persons the facts relating to our soil, climate, products, etc., so that they may select this country instead of some other place; also to aid them in reaching this place by securing through tickets at lowest rates. No effort will be made to bring here persons without means. To accomplish this object it will be necessary to send proper agents, with carefully prepared and printed information relating to this country. These agents will find out such families in each community as intend to move somewhere, and try to induce them to come here. Colonies will

then be organized by each agent to leave some fixed point at a given day, on a special through train for Los Angeles, thus preventing the immigrants from being turned off at some other place. To put in one year's work will require an expense of about \$6,000. With this amount spent judiciously Los Angeles county can in two years be placed where it will take 10 years to put it without an effort. Canvassing committees have been appointed for each district of the county to wait upon the people and secure a statement of how much each will be willing to give to accomplish this object—the amounts to be paid one-half in September and one-half in January, 1880. If the full amount is not secured the matter will be dropped and no money will be asked for. In case the amount is raised it will be placed in the hands of the following named persons, who will make all arrangements for carrying out the details of the work. J. E. Hollenbeck, President Commercial Bank; I. W. Hellman, President Farmers' and Merchants' Bank; J. S. Slauson, President Los Angeles County Bank; J. R. Toberman, Mayor Los Angeles city; Gen. J. H. Shields, B. Dreyfus, Eugene Meyer, Bryant Howard, N. R. Vail, R. M. Widney.

## MARIN.

**NICASSIO.**—*Petaluma Argus*, Aug. 29: A friend writing from Nicassio, Marin county, says that in that neighborhood hay was a fair crop. Threshing is nearly over and the yield of grain is hardly up to expectation. "The grass and cows are drying up."

## NAPA.

**WINE GROWERS' MEETING.**—*St. Helena Star*, Aug. 29: The Vinicultural Club of St. Helena and vicinity met last Saturday afternoon as announced, President Charles Krug in the chair. Present, Messrs. Krug, Beringer, Pellet, Benner, Gardner, Crane and R. A. Haskin. The president stated the object to be the consideration of a permanent place of meeting. The society lacked much of the interest that ought to belong to it, from the want of an office of its own where its books and papers could always be found, and where could be filed for convenient access such information as was useful to its members. A lot large enough had been offered by Mr. Edwards for \$50, and a carpenter had figured on a rough building suitable for the purpose, at \$205. He thought that enough wine-makers and grape growers—men interested in the welfare of the society—would subscribe \$10 apiece to buy the lot, build the office and furnish it moderately. Beringer moved the appointment of a committee to solicit such subscriptions. Pellet seconded, and the motion was carried. The chair appointed Beringer, Thomann and Heymann as such committee, to report at the next meeting.

**THE SEASON LATE.**—Wine-making will be late this year. We hear of nobody who expects to begin under 10 days or a fortnight yet. Crushing has commenced some years as early as the 26th of August.

**GRAPE PRICES.**—*St. Helena Star*: Mr. Krug has engaged the most of his grapes at the following prices: \$22 for Zinfandel and Reislings; \$20 for all other foreign, and \$14 for Mission.

## PLACER.

**HARVEST.**—*Argus*, Aug. 30: The grain yield in this section has not been as large as was expected, and now that threshing is about over, our farmers are able to calculate on the year's profits. Just previous to the ripening of the grain a hot north wind prevailed for several days and caused a too rapid ripening, which has resulted in shriveled and half-filled heads in many fields. The yield runs from 10 to 25 bushels to the acre. Our grape crop is also short, many fields having the yield decreased on account of mildew.

## SACRAMENTO.

**AUGUST COLP.**—*Bee*, Aug. 29: At sunrise yesterday morning the thermometer was down to 46°. This is said to be the coldest weather of which there is any record in this city during August.

**FLOWING WELL.**—*Bee*, Aug. 28: It is learned that Mr. Sanborn, who resides near Burns' slough, east of Aiken's place, has struck a fine flowing well, from which he is obtaining a good flow of clear, bright and cold water. He has bored to a depth of 60 feet with six-inch pipe and intends sinking still deeper. The water is apparently of excellent quality and will be submitted to a thorough analysis in a few days. This is the first flowing well, we believe, which has ever been struck in or about Sacramento, and Mr. Sanborn is of the opinion that he has tapped a current from the mountains.

**SHIPPING DRIED FRUIT.**—*Folsom Telegraph*, Aug. 30: The bulk of the fruit crop at the Natoma orchard has been gathered in and at the fruit-drying house—since being dried—has been neatly packed in boxes ready for shipment. One car-load has already gone to Chicago, and two more are ordered. The grape crop will soon be in order and the place will resume the stir and bustle consequent on such a large number of hands busily and cheerily engaged in their respective duties.

## SAN BERNARDINO.

**RIVERSIDE LAND SALES.**—*Los Angeles Express*: Mr. H. J. Rudisill has sold half his place at Riverside for \$10,000. Mr. D. W. McLeod has sold 20 acres with young orange trees, opposite Mr. Rudisill's, for \$3,500.

## SAN JOAQUIN.

**ENORMOUS YIELD.**—*Independent*, Aug. 29: The wheat crop on the farm of Mr. C. Ashley, 85 acres summer-fallow, yielded 4,115 bushels, being an average of 48 and 7-17 bushels per

acre. Of the above area, 35 acres yielded 2,080 bushels, or an average of 59 and 15-35 bushels per acre. Mr. Ashley raised on the farm of the late L. C. Bliss, adjoining his own, 86 acres summer-fallow, 3,219 bushels—an average of 37 and 37-86 bushels per acre.

## SANTA BARBARA.

**ITEM.**—*Press*, Aug. 30: Considerable wild honey is being gathered this season by hunters who go up the coast and over the mountains.

**BEAN HARVESTER.**—Some of the Goleta farmers are harvesting their beans this year by horse-power, which supersedes the back-aching process of pulling them, which has hitherto been the great obstacle in bean production. The arrangement consists of a knife something like a plowshare, attached to a gang plow carriage, by means of which the bean vines are cut off just below the surface of the ground. They can then be gathered with pitchforks, which is comparatively easy work.

**BARLEY AND POTATOES.**—*Cor. Lompoc Record*: Foggy weather still prevails and it seems as though it will never let up; since June 1st there have been very few days without fog. It makes our barley look as if it had "yaller-janders," and sensibly impairs its value in the San Francisco market. The neighbors have all finished their threshing, and the yield was very good, in fact it was extra, and now the work of hauling it to the landing has begun. At present rates farmers just about realize good wages for self and teams, for hauling their barley to the landing, to say nothing of their expense in plowing, sowing, seed, care of crop during its growth, and last though not least, 10% interest on their land. Beans and potatoes seem about gone by the board for this season, the former being scarcely worth harvesting; and the latter is hardly worth enough to pay the wear and tear of hogs noscs while rooting them out. I turned loose an old, lean self-sharpening sow on the potato patch, the other day, and she put up her nose in high dudgeon, and put out for a neighbor's barley field, as much as to say, "I'm not going to dig your spuds, they're too cheap."

## SANTA CLARA.

**ALMONDS.**—*San Jose Mercury*: Mr. Porter, of Chicago, of the firm of Porter Bros., of Chico, who is purchasing fruit in the Santa Clara valley, has thus expressed himself: If the whole Santa Clara valley were an almond orchard there would be a ready market for its produce. Where they can be raised there is nothing more profitable. The latest Chicago prices are: Soft shell Taragona, 20 cents per pound; soft shell Ivaca, 16 cents per pound; paper shell, 45 cents a pound. It does not cost more than from 3 to 5 cents per pound to gather, hull and sulphur them, and you at once see the immense profit. You can easily calculate the profit per acre if the trees average, as from all accounts they will do this year, 20 pounds each.

**FIGS AND ALMONDS.**—*Gilroy Advocate*: The fig and almond crops will be good this year.

## SANTA CRUZ.

**GRAPES.**—*Courier*, Aug. 29: The grape crop of Santa Cruz county now promises to be a heavy one, much better than that of last year. This is the testimony of all the owners of vineyards with whom we have conversed.

## SOLANO.

**A BIG DAY'S WORK.**—*Chronicle*, Aug. 30: At Starr's Mills, South Vallejo, the largest day's work in loading grain aboard of a ship ever done in this State was performed Thursday—1,160 tons of grain being put on board the ship Oneida, which came up from San Francisco Wednesday. At noon of to-day she was entirely loaded with 2,550½ long tons. The grain was on hand, and they desired to see how short a time they could load the ship in. One hundred and twenty-five men were employed in handling the grain. This was the largest day's work by 300 tons that has ever been performed at the mills. [Since the above was in type we have seen a gentleman who had conversed with Mr. Starr concerning the subject presented. Mr. Starr states that the item is incorrect in several respects. He says there were but 83 men employed, and they did not work steadily as they would if an extra effort were being made. He says that if they had worked with that view they might have loaded 1,500 tons. The work accomplished was simply greater than usual, but not with design to do as much as possible.—EDITORS PRESS.]

## SUTTER.

**RIVERSIDE GRAIN.**—*Meridian Cor. Sutter Banner*, Aug. 29: Grain is coming in at the rate of over 100 tons a day; every corral on the river bank is full, and they are opening up new ones. It is hard to tell where it will stop. We think that some of the grain on the river bank will get wet before it goes below, as every person is banking instead of storing.

**GRAIN AT YUBA CITY.**—Our streets are filled with wagons during the entire day, loaded with grain being brought for storage in our warehouses. A very large amount has already been stored here and on the Sacramento, while considerable has been sold outside of the county. A very considerable portion of the crop remains to be threshed. The wheat is variable in quality, portions of the crop being foul and shrunk, but we believe the average is good. For the week ending Wednesday evening last, the total receipts of grain at the Farmers' Union warehouse in this place has been 800 tons. The largest receipt for any one day during that time, and during the season, was on Saturday last, reaching 181½ tons.

## SONOMA.

**GRAPES AND ALMONDS.**—*Dry Creek Cor.*

*Healdsburg Enterprise*: It is noticeable, in the vineyards, that all the foreign varieties of grapes have been injured the most. The Flaming Tokays are an entire failure; the Muscats fared but little better, and even the Mission are hard and gritty, and will not amount to much. The Sweet Water had advanced enough to escape injury. Almonds are doing well. The trees are full, and they will mature early.

## News in Brief.

**ROBERT BONNER** is now the owner of "Rarus." Affairs in Hayti continue in a troubled condition.

The bad state of affairs continues at Constantinople.

The British resident at Mandalay has been withdrawn.

The Chilean Minister of War has tendered his resignation.

DURING August 2,787,059 standard silver dollars were coined.

The excess of exports over imports during 1879 is \$263,572,089.

ANOTHER party of farmers left Liverpool last Saturday for America.

The public debt statement shows a decrease in August of \$527,395.

A BROTHER of the Pope died at Rome, September 23, of apoplexy.

The Austrian budget this year shows a deficit of 21,000,000 florins.

"MOLLIE McCARTY" is broken down and will probably never run again.

SPECIE in the Bank of France decreased 1,527,000 francs the past week.

The coal miners of the Cumberland region in Pennsylvania, are on a strike.

DON CARLOS denies that he has compromised his claims to the throne of Spain.

EX-QUEEN ISABELLA will attend the wedding of Alfonso and Archduchess Marie.

WHOLESALE arrests were made at Houston, Tex., for violating the quarantine laws.

SILVER in London, 51½d; consols, 97 11-16; 5% U. S. bonds, 105½; 4s, 104½; 4½s, 108½.

The state of siege in the recently disturbed districts of Bulgaria will shortly be raised.

The interest at the East in regard to the De Young-Kaloch business has about died out.

The deaths at Memphis from yellow fever to date number 233—183 white and 50 colored.

In Staffordshire, England, 50,000 workmen are affected by the recent reduction in wages.

The death of John Adams Jackson, the American sculptor, is announced from Florence.

A LETTER from Tangier announces the death of a brother of the Emperor of Morocco by poison.

GEN. TODLEBEN, Governor General of Odessa, is to be relieved by Prince Don Dankoff Korsakoff.

A RAILROAD is soon to be built from Austin, Nev., to the Central Pacific, a distance of 90 miles.

The Oneida community has been compelled by public sentiment to abandon its free love system.

AT Liverpool wheat is quoted at 8s 6d@9s 6d for average California white, and 9s 5d@9s 10d for club.

SINCE August 12th \$1,000,000 in gold has been received at the New York assay office from London.

ENGLISHMEN at Constantinople strongly protest against the proposed new taxes on foreigners in Turkey.

SINCE the yellow fever broke out at New Orleans, July 22d, there have been 17 cases and five deaths.

STEAMERS leaving Europe during the last three days for New York have on board \$5,500,000 in gold.

TROUBLE is reported in the States of Coahuila, Durango and Chihuahua, Mexico, over disputed mining ground.

THE number of gallons of spirits produced during the fiscal year 1879, is 71,892,617, against 56,103,053 in 1878.

THE President will enforce his order in regard to the active interference of Federal officials in political conventions.

THE coinage at the Philadelphia mint during August amounted to \$2,233,497, of which \$1,876,050 was in silver.

THE programme of the prize shooting at Creedmoor contemplates 19 matches, with an aggregate value of \$7,277.

ALL the gambling houses in St. Louis are to be closed after Sunday night, under the new law, which is very strict.

GENERAL GRANT does not desire to be President again, according to a letter from him to the Hon. Elihu B. Washburne.

RICHARD STEVENSON, United States Deputy Marshal, was shot to death last Saturday by a horse-thief, near Wellington, Ka.

A MONSTER meeting was recently held at Tirnova to protest against the unconstitutional acts of the Bulgarian government.

THE Italian military maneuvers were abandoned because it was not thought advisable to concentrate troops near the Austrian frontier.

IN San Francisco half dollars are quoted at 99½ buying, 99½ selling; trade dollars, 97 buying, 98 selling; Mexican dollars, 98 buying, 98½ selling.

IN New York Government bonds are quoted at 101½ for 4s of 1907; 102½ for 5s of 1881; 104½ for 4½s; sterling, \$4.82@4.84; silver bars, 112½; silver coin, ½@ discount.

THOMAS W. BOOKE & Co.'s sheet iron and tin plate works near Cardiff, Wales, in constant operation since 1740, have been closed, throwing 1,500 persons out of work.





Mother, Watch the Little Feet.

Mother! watch the little feet,  
Climbing o'er the garden wall,  
Bounding through the busy street,  
Ranging cellar, shed and hall;  
Never count the moments lost,  
Never mind the time it cost;  
Little feet will go astray,  
Guide them, mother, while you may.

Mother! watch the little hand,  
Picking berries by the way,  
Making noises in the sand,  
Tossing up the fragrant hay,  
Never dare the question ask,  
"Why to me this weary task?"  
These same little hands may prove,  
Messengers of light and love.

Mother! watch the little tongue,  
Prattling eloquence and wild,  
What is said, and what is sung,  
By the happy, joyous child,  
Catch the word while yet unspoken,  
Stop the vow before 'tis broken;  
The same tongue may yet proclaim  
Blessing in a Savior's name.

Mother! watch the little heart,  
Beating soft and warm for you;  
Wholesome lessons now impart;  
Keep, O keep that young heart true,  
Extricating every weed,  
Showing good and precious seed,  
Harvest rich you then may see,  
Ripening for eternity.

Only a Husk.

Tom Darcy, yet a young man, had grown to be a very hard one. At heart he might have been all right, if his head and his will had been all right; but these things being wrong, the whole machine was going to the bad very fast, though there were times when the heart felt something of its own truthful yearnings. Tom had lost his place as foreman of the great machine shop, and what money he now earned came from odd jobs of tinkering which he was able to do here and there at private houses; for Tom was a genius as well as a mechanic, and when his head was steady enough he could mend a clock or clean a watch as well as he could set up and regulate a steam engine, and this latter he could do better than any other man ever employed by the Scott Falls Manufacturing company.

One day Tom had a job to mend a broken mowing machine and reaper, for which he received \$5; and on the following morning he started out for his old haunt—the village tavern. He knew that his wife sadly needed the money, and that his two little children were in absolute suffering for want of clothing, and that morning he held a debate with the better part of himself, but the better part had become weak and shaky, and the demon of appetite carried the day.

So away to the tavern Tom went, where, for two or three hours, he felt the exhilarating effects of the alcoholic draft, and fancied himself happy, as he could sing and laugh; but, as usual stupefaction followed, and the man died out. He drank while he could stand, and then lay down in a corner, where his companions left him.

It was late at night, almost midnight, when the landlord's wife came to the bar-room to see what kept her husband up, and she quickly saw Tom.

"Peter," said she, not in a pleasant mood, "why don't you send that miserable Tom Darcy home? He's been hanging around here long enough."

Tom's stupefaction was not sound sleep. The dead coma had left his brain, and the calling of his name stung his senses to keen attention. He had an insane love of rum, but did not love the landlord. In other years Peter Tindar and himself had loved and wooed the sweet maiden—Ellen Goss—and he won her, leaving Peter to take up with the vinegary spinster who had brought him the tavern, and he knew that lately the tapster had gloated over the misery of the woman who had once discarded him.

"Why don't you send him home?" demanded Mrs. Tindar, with an impatient stamp of her foot.

"Hush, Betsy! He's got money. Let him be, and he'll be sure to spend it before he goes home. I'll have the kernel of that nut, and his wife may have the husk!"

With a sniff and a snap Betsy turned away, and shortly afterward Tom Darcy lifted himself up on his elbow.

"Ah, Tom, are you awake?"

"Yes."

"Then rouse up and have a warm glass."

Tom got upon his feet and steadied himself.

"No; I won't drink any more to-night."

"It won't hurt you, Tom—just one glass."

"I know it won't," said Tom, hutting up his coat by the solitary button left. "I know it won't."

And with this he went out into the chill air of midnight. When he got away from the shadow of the tavern, he stopped and looked up

at the stars, and then he looked down upon the earth.

"Aye," he muttered, grinding his heel in the gravel, "Peter Tindar is taking the kernel, and leaving poor Ellen the worthless husk—a husk more than worthless! and I am helping him to do it. I am robbing my wife of joy, robbing my dear children of honor and comfort, and robbing myself of love and life—just that Peter Tindar may have the kernel and Ellen the husk. We'll see!"

It was a revelation to the man. The tavern-keeper's speech, meant not for his ears, had come on his senses as fell the voice of the Risen One upon Saul of Tarsus.

"We'll see!" he said, setting his foot firmly upon the ground; and then he wended his way homeward.

On the following morning he said to his wife: "Ellen, have you any coffee in the house?"

"Yes, Tom." She did not tell him that her sister had given it to her. She was glad to hear him ask for coffee, instead of the old, old cider.

"I wish you would make me a cup, good and strong."

There was really music in Tom's voice, and the wife set about her work with a strange flutter at her heart.

Tom drank two cups of the strong, fragrant coffee, and then went out—went out with a resolute step, and walked straight to the great manufactory, where he found Mr. Scott in his office.

"Mr. Scott, I want to learn my trade over again."

"Eh, Tom! what do you mean?"

"I mean that it's Tom Darcy come back to the old place, asking forgiveness for the past and hoping to do better in the future."

"Tom," cried the manufacturer, starting forward and grasping his hand, "are you in earnest? Is it really the old Tom?"

"It's what's left of him, sir, and we'll have him whole and strong very soon, if you'll only set him at work."

"Work! Aye, Tom, and bless you, too. There is an engine to be set up and tested today. Come with me."

Tom's hands were weak and unsteady, but his brain was clear, and under his skillful supervision the engine was set up and tested; but it was not perfect. There were mistakes which he had to correct, and it was late in the evening when the work was complete.

"How is it now, Tom?" asked Mr. Scott, as he came into the testing house and found the workmen ready to depart.

"She's all right, sir. You may give your warrant without fear."

"God bless you, Tom! You don't know how like sweet music the old voice sounds. Will you take your place again?"

"Wait till Monday morning, sir. If you will offer it to me then, I will take it."

At the little cottage Ellen Darcy's fluttering heart was sinking. That morning, after Tom had gone, she had found a dollar bill in the coffee cup. She knew that he left it for her. She had been out and bought tea and sugar, and flour and butter, and a bit of tender steak; and all day long a ray of light had been dancing and shimmering before her—a ray from the blessed light of other days. With prayer and hope she had set out the tea table, and waited; but the sun went down and no Tom came. Eight o'clock—and almost nine.

Hark! The old step! quick, strong, eager for home. Yes, it was Tom, with the old grime upon his hands, and the odor of oil upon his garments.

"I have kept you waiting, Nellie."

"Tom!"

"I didn't mean to, but the work hung on."

"Tom! Tom! You have been to the old shop."

"Yes, and I'm bound to have the old place, and—"

"Oh, Tom!"

And she threw her arms around his neck, and covered his face with kisses.

"Nellie, darling, wait a little, and you shall have the old Tom back again."

"Oh, Tom! I've got him now, bless him! bless him! my own Tom! my husband! my darling!"

And then Tom Darcy realized the full power and blessing of a woman's love.

It was a banquet of the gods, was that supper—of the household gods all restored—with the bright angels of peace and love and joy spreading their wings over the board.

On the following Monday morning Tom Darcy assumed his place at the head of the great machine shop, and those who thoroughly knew him had no fear of his going back into the slough of joylessness.

A few days later, Tom met Peter Tindar on the street.

"Eh, Tom, old boy, what's up?"

"I am up, right side up."

"Yes, I see; but I hope you haven't forsaken us, Tom?"

"I have forsaken only the evil you have in store, Peter. The fact is, I concluded that my wife and little ones had fed on husks long enough, and if there was a good kernel left in my heart, or in my manhood, they should have it."

"Ah, you heard what I said to my wife that night?"

"Yes, Peter; and I shall be grateful to you for it as long as I live. My remembrance of you will always be relieved by that tinge of warmth and brightness."

The Cheerful Side.

Bulwer Lytton wrote a most truthful sentence when he penned these lines: "If there is a virtue in this world at which we all should aim, it is cheerfulness." And Sir Philip Sidney adds that "the cheerful live the longest." Youth will never see age unless they keep themselves in breath with exercise, and in good heart with cheerfulness.

"Give us the man who sings at his work!" exclaims Carlyle enthusiastically. Be his occupation what it may, he is equal to any of those who follow the same pursuit in silent sullenness, however industrious these may be, or with whatever amount of diligence the latter may toil. The cheerful man will do more work in the same space of time, he will accomplish this with far greater ease, he will perform his task better, and he will persevere in it the longest.

One scarcely realizes fatigue while marching to music, however long the tramp. The very stars above us are said to make harmony as they revolve in their spheres. Wondrous, indeed, is the power of cheerfulness. And efforts to be permanently useful to ourselves and our kind must be uniformly joyous from a spirit innately all sunshine!

Cheerfulness bears the same regard and influence alike to body and mind. It is as natural to the heart of man in strong health and good habits, declares Ruskin, "as is color to the cheek. And wherever there is habitual gloom, there must be either bad air, unqualified ignorance, unwholesome food, improperly severe labor or erring habits of life."

The wise man is always cheerful. Moroseness, dullness, ascetic or sour inclinations are but evidence of "loose screws" in the mental and physical construction. The healthy soul is ever a happy one. And if we take heed of our own proper conditions of mind and body, we shall have no leisure or desire to carp at our neighbors' short-comings, or trouble ourselves with their real or fancied woes.

Why not be cheerful, then? Why not sing as we toil and work as we sing? Life is just long enough for this—and it is too short to indulge in whining, in mourning, in criticising the doings of others.

We never knew a thriving, prosperous poultry fancier who was not a cheerful man. We never met with one of the other sort who did not prove a thorn to himself and a nuisance to those around him. Let us be cheerful, obliging, friendly and happy, then—

For, what's the use of sighing,  
While time is on the wing?  
We can't prevent its flying—  
So merrily, cheerily sing!

—Poultry Yard.

ROSA BONHEUR.—Rosa Bonheur is now a little stout lady of masculine appearance; her hair is gray in places and parted on the side, and she has bright black eyes, strongly marked features, and a wonderfully resolute mouth. She wears a plain black silk skirt, with a vest and jacket of black velvet, and white linen collar and cuffs. She tells a pleasant little story concerning the painting of her famous picture of the "Horse Fair." She went every day to the fair to paint, and was one day working, and thinking only of her work, when a horse's head appeared over her shoulder, engaged seemingly in examining her picture. "I merely looked round," she said, "to see my admirer, the horse; but, alas! it was too late—he had stepped into my box of colors, and, I suppose, taking fright at my scream of dismay, he gave one bound ahead, overturned the easel, and stepped on my canvas, tearing a hole right through the center of my cherished piece of work. Owing to the friendliness of that horse, I had all my work to do over again."

THE ÆOLIAN HARP.—This instrument, which gives forth such sweet music, should be placed in the window of every man's house. Its "mutterings" will do more to harmonize the soul than any other thing that can be devised. The Æolian harp consists of a long narrow box of very thin deal, about five or six inches deep, with a circle in the middle of the upper side of one and a half inches in diameter, in which is to be drilled small holes. On this side seven, ten or more strings of very fine gut are stretched over bridges at each end, like the bridge of a fiddle, and screwed up or relaxed with screw-pins. The strings must all be tuned to one and the same note, and the instrument placed in some current of air, where the wind can pass over its strings with freedom. For instance, a window, of which the width is exactly equal to the length of the harp, with the sash just raised to give the air admission, is a proper situation; when the air blows upon these strings with different degrees of force, it will excite different tones of sound.

PHILANTHROPY.—There is a time in our life when we are almost exclusively occupied by individual endeavors and suffering; when we merely labor for ourselves and those who are nearest to us. Another time also comes when we have, in some measure, accomplished this, and are in a state of peace, or, at least, of quietness. It is then the time when the thinking and the good man looks observantly around him into social life, and sees how he can labor in the best way for the great, neglected family circle there, and make it a participation in the good things which he has obtained.—Fredrika Bremer.

How to keep the fire from going out—keep the door shut.

What we Read.

From a sermon preached by the Rev. Frank P. Woodbury, the *Inter-Ocean* learns that the booksellers of Freeport, Illinois, have entered into a mutual agreement not to keep for sale upon their counters the vicious "nickel" and "dime" novels which of late years have done so much to corrupt and dwarf the minds of the youth of the country. Mr. Woodbury urged upon the people of Rockford the necessity of taking steps similar to those of Freeport, with a view to curtail the sale of bad literature.

It is interesting to contrast the habitual poring over what is simply weak and trivial with the study of what has a permanent interest and value. It is this sort of aimless, promiscuous, rapid reading which at once gorges and enfeebles the mind, and crowds out the knowledge which would prove really beneficial. The public libraries of the United States fairly teem with this kind of literature. It comprises nearly the entire amount of English prose fiction and juveniles drawn from the free libraries of the land. We have succeeded, says the *Inter-Ocean*, in compiling the following table showing the percentage of fiction drawn from 42 public libraries in 13 different States of the Union:

Place.	Circulation of Library.	Percent- age of Fiction.
San Francisco, Cal.	35,000	74
San Jose, Cal.	13,113	74
Chicago, Ill.	339,156	76
Elgin, Ill.	26,563	64
Jacksonville, Ill.	1,819	50
Indianapolis, Ind.	101,231	77
Des Moines, Iowa.	5,523	71
Andover, Mass.	18,724	66
Hyde Park, Mass.	26,694	50
Lawrence, Mass.	123,463	74
Provincetown, Mass.	30,000	50
Southbridge, Mass.	14,156	66
Ware, Mass.	22,956	85
Bay City, Mich.	25,740	64
Hannibal, Mich.	5,311	70
Minneapolis, Minn.	6,943	70
Salem, Minn.	9,960	55
Batavia, N. Y.	9,500	70
Ithaca, N. Y.	22,400	60
Middletown, N. Y.	3,500	57
Cincinnati, Ohio.	239,457	73
Dayton, Ohio.	24,003	77
Bennington, Vt.	9,000	66
Petersburg, Va.	4,935	75
Average about		63

The above cities were selected because no other figures bearing on the point were accessible. The average percentage of circulation in the libraries mentioned is religion and theology about 1%; history and biography, 8%; voyages and travels, 7%; science and art, 4%; poetry and the drama, 4%; and miscellaneous, 8%. Here we have it:

Fiction	63
All other reading	32
Total	100

A great portion of this 63% is worthless, aimless stuff. To a large extent it is the fiction of to-day. It is the fiction that Frederick Harrison alludes to in his recent essay in the *Fortnightly Review* as poring forth from Paternoster Row at such a rate that in a few years a pyramid large enough to fill the dome of St. Paul's might be built of it.

How, in this mountain of literature, is the young man and young woman of the day going to find the useful book? How is he to keep his head clear in the torrent and din of works, all of which distract his attention, the title of which promises something, but rarely redeems the promise. If Mr. Woodbury and the gentlemen who have stopped the sale of positively bad books at Freeport and Rockford, would now turn their attention to these questions, they would confer a still greater boon upon the rising generation.

HINT TO OUR GIRLS.—Aunt Esther writes to the *Rural New Yorker* as follows: I would say a word to girls about plain sewing. In these days of sewing machines there is a tendency to slight the finishing up of garments. How untidy to have the ends of thread hanging just as left by the machine, or to have the garment disfigured by a zigzag hem. Do your work neatly, finish it up nicely, and the habit once formed will never be regretted. Anything that is worth doing at all is worth doing well. Never be ashamed to have the wrong side of your garment examined. I once heard a lady, who was looking at a dress a careless girl had made, say: "If that is the way she makes her dresses, I don't want her to make my boy's shirts; they wouldn't stay together until they were half worn out."

WAGNER AND HIS MISSION.—In the September number of the *North American Review* is the concluding part of Richard Wagner's "The Work and Mission of My Life." In this, he continues the description of his art life to the present time, gives the reasons and motives which led him to write each of his operas, and tells the story of the great festival performance at Bairenth, in 1876. With the result of the last, it appears that he was far from satisfied. What he desired was to establish there an institution for the training of musicians for the production of all the masterpieces of their art. This part of his plan he now desires to carry out with the aid of friends.

AN OLD gentleman took his horse to a riding-master to have him taught to amble. After several lessons, finding that his horse made no progress, he exclaimed, as he went jolting around: "Do you call this an amble?" To which the teacher coolly replied: "No; it's a preamble."



## Chaff.

FUNNY, isn't it, that coal, instead of going to the buyer, goes to the cellar.

"AND the iron entered my sole," said Gray-head, as he pulled the tack out of the bottom of his slipper.

A LITTLE boy, when reproved for breaking a new rocking horse, said: "What's the use of a horse till it's broke?"

"I go through my work," as the needle said to the idle boy. "But not until you are hard pushed," as the idle boy said to the needle.

A LADY who was more favored by fortune than education, at a party she gave desired her daughter to "play the fashionable malady" she got last week.

FATHER (to sleepy boy).—"Come, James, you ought to be up with the lark on such a beautiful morning." Matter-of-fact boy—"All right, but how'm I going to get up there?"

"No, DARLING," said the undertaker to his wife, "I can't afford to give you a silk dress at present. Just wait a few weeks until green apples are in market."

A COUNSEL being questioned by a judge to know "for whom he was concerned," replied, "I am concerned, my lord, for the plaintiff, but I am employed for the defendant."

ALL men are dreamers, but it took a blacksmith to dream and realize any beneficial effects therefrom, and it took him fourteen years to do it. But then he didn't go round dreaming that he dwelt in marble halls, with lots of servants, and all that kind of trash. He wasn't that kind of an oyster.

THE captain of a whale ship, in allusion to the severe climate and various privations suffered by the inhabitants of Spitzbergen, told one of them that he sincerely pitied the miserable life to which he was condemned. "Miserable!" exclaimed the philosophic Spitzer; "I have always had a fish-bone through my nose and plenty of train-oil to drink; what more could I wish?"

A TEXAS man brought out a forlorn, spavined looking steed, and addressed the spectators thus: "Fellow citizens, this is the famous horse Dandy Jack. Look at him. He's perfect. If he were sent to a horse maker, nothing could be done for him. What shall I have for the matchless steed?" "What will you take?" yelled the crowd. "Two hundred dollars." "Give you \$5." "Take him. I never let \$195 stand between me and a horse trade. That's business."

A MAN was brought into court on the charge of having stolen some ducks from a farmer. "How do you know they are your ducks?" asked the defendant's counsel. "Oh! I should know them anywhere," replied the farmer, who proceeded to describe their peculiarities. "Why," said the prisoner's counsel, "those ducks can't be such a rare breed—I have some very like them in my yard." "That's not unlikely, sir," said the farmer; "they are not the only ducks I've had stolen lately." "Call the next witness."

## An Old Man and His Carp.

A German writer tells the following about an old Frenchman, M. Anthraume: He was old, broken-down, and embittered, tormented by weakness, rheumatism and short breath, but was still a passionate angler. In order to gratify his desire he has arranged a little pond in his garden and put in a dozen little carp. Every day he is shoved to the pond in an arm-chair, and drops his rod into the water. He is now more lucky than formerly. The carp, to be sure, are very cautious; they have noticed the designs of their master, and play around the hook without touching it. But now and then one of them is less clever than the rest, or wishes to do its master a favor, in letting itself be caught. Then the joy of the fat gentleman should be seen! He calls the whole house together in triumph, and says: "Marguerite, come and see! Catherine is caught. Just see how fat she has become! One would hardly recognize her! How pretty she is! Just see! I wonder if Michel is looking as well too! And Celestin has not taken a bite for a long time—it is not so?" And his housekeeper, Marguerite, and all the servants come running in and admire the fish and return to their work. But the old gentleman carefully detaches the fish from the hook, and drops him again in the water. Then he "lays for" Michel or Celestin. For all his carp have names. He knows them all and cares for them, as the old soldier cares for his dogs. Some time passed in this manner. In the meantime the carp had become very fat. One morning last spring M. Anthraume noticed that his cherished carp seemed to be sad. They would touch neither the chopped meat, nor the anglerworms, nor the barley cooked in fat. The old man was prey to the greatest anxiety. He read all the books on pisciculture which he could lay hands on, but no remedy was of any avail. The carp had simply become too fat and stood off. He then had recourse to a supreme device. It was an act of desperation. He bought three young pike which he called Voltigeur, Chasseur and Dragon, and put them in the pond. Now a wild combat began—the poor carp put out all their strength to defend themselves from their youthful persecutors. This exertion was their death; one after the other turned on its back and died. M. Anthraume was disconsolate.

## Young Folks' Column.

## Our Puzzle Box.

## Cross-Word Enigma.

My first is in father, but not in son.  
My second is in pistol, but not in gun.  
My third is in April, but not in May.  
My fourth is in grass, but not in hay.  
My fifth is in eve, but not in morn.  
My sixth is in hate, but not in scorn.  
My seventh is in many, but not in few.  
My eighth is in one, but not in two.  
My ninth is in green, but not in blue.  
My tenth is in old, but not in new.  
My eleventh is in minute, but not in hour.  
My whole is the name of a beautiful flower.

M. E. D.

## Blanks.

(Fill the blanks with the same words synopated.)

1. The best — trees sell at one dollar and a half — tree.
2. A — of his speech was very — to the occasion.
3. An — of land was given to the man who played the — of clubs.
4. His — up wrath was at last vented upon his unfortunate —.

CLAUDE REVERE.

## Double Acrostic.

1. I'm one of those months of the year  
Which people have a need to fear.

2. Curtail ere read, when thus bereft,  
The object is not wholly left.

3. I'm never known but to be right,  
And for me people often fight.

4. When I am put up before a ring  
I only mean one-half the thing.

5. Me, you must backward spell ere read—  
I'm what in dislike you've said.

The finals up, and primals down,  
Name two inventors of renown.

L. W. L.

## Problem.

At the club room the other night, A agreed with B to drink no more alcoholic stimulants, upon these conditions: For every time he (A) should refuse a proffered glass, B should pay him 10 cents, but for every glass he drank in violation of his pledge he was to pay B 25 cents. At the end of three months A found he had drank nothing, save when so solicited, and the total number of times he had received the solicitation was 26. The amount due him from B, he ascertained, was \$145. How many times did A violate his pledge?

UNCLE CLAUDE.

## Geographical Arithmorems.

- |                |                |                 |
|----------------|----------------|-----------------|
| 1. 551 roaf.   | 3. 1050 araba. | 5. 1051 obe.    |
| 2. 1002 rosus. | 4. 1101 aaaj.  | 6. 1052 naapon. |

B. O. G.

## Answers to Last Puzzles.

ENIGMA.—Consignment.  
ZOOLOGICAL COLLECTION.—1. Elephant (ell-e-fan-t); 2. Camel (el J); 3. Li (e) on; 4. Buffalo (buff-aye-low); 5. Gnu (new); Hippopotamus (hip-Po-to-Amos).  
CHARADE.—Life-time.  
INITIAL CHANGES.—1. Bate, date, fate, gate, late, mate, pate, rate, sate. 2. Bay, day, fay, gay, Jay, lay, May.

DIAMOND PUZZLE.—  
V  
S O T  
F A L S E  
R E B U K E S  
V O L U N T A R Y  
S H U T T E R  
S C A L E  
E R E  
Y

## Benny's Little Fishes.

Little Benny had come up to his grandfather's in the country.

He thought it was always summer in the country.

It was the middle of April, and it snowed the very next day after he came.

Benny stood at the window watching the large flakes of snow coming down, lighting on the tops of the spires of grass, and all over the twigs and boughs of the shrubbery and trees, and he 'most cried, because he wanted to go fishing, and he thought "peoples" didn't go fishing when it snowed.

Then he wished he had brought his sled and his mittens.

But before he had done thinking about that, out came the sun, which so "s'prised" the large downy snow-flakes that every one of them ran away and hid.

Those who could, ran right down into the ground, to come up flowers by-and-by, and some which had lighted on the stone wall and stones, and could not get into the ground, flew up into the sky to come down in showers "which bring forth May-flowers."

Aunt Gertrude told him all about that, so Benny did not after all cry about the snow.

After the snow was all gone, Benny had on his rubber boots and warm coat; and his Aunt Gertrude bent a pin into a fish-hook and fastened it to the end of a thread, and hung that at the end of a long stick, and he started off alone to fish in a little shallow brook near by.

If there had been any other children at Benny's grandfather's they would have gone too, but there weren't, and that is why Benny had to go alone.

In a few minutes he came back, and said he did not like the looks of the long fishes, but there were some little round ones, and that was the best kind, and he wanted grandmother's new tin water dipper.

When he returned the next time he had a lot of little black "pollywogs," and he held the dipper so tight to him that the water had slopped, slopped, slopped, all down his clothes.

Aunt Gerty never scolded him one bit, but put on dry clothes, and grandmother gave him a large soup tureen to put his "little round black fish" in.

They seemed to like their new home, for they wiggled about, never stopping to rest, and all the time grew larger and larger, and eating more and more.

After about four weeks' time they all had

each two tiny fore feet and legs, and in a day or two after some hind feet and legs made their appearance.

In a few more days their long tails, which had been to each a rudder, dropped off, and Benny had some beautiful little frogs and toads, not much larger than the end of his thumb.

Some of them died in a few days, and Aunt Gerty said it was because they were toads and must live out of water; so he built a beautiful little bridge above a pile of stones right in the soup tureen, and the little toads lived on the bridge and stones, but the frogs lived in both places.

The days had grown warm and sunny, and Benny had too many out-door amusements to keep his little family (so unexpectedly cast upon his care), so he took them back to the brook.

They grew to be fine large frogs before the summer was over, and croaked equal to the best.

The toads hopped back to the garden, and repaid all Benny's care and kindness by eating up all the bugs and insects, which would otherwise have been troublesome.

## GOOD HEALTH.

BLOOD EXAMINATION IN DIPHTHERIA.—Prof. Bouchut made daily enumerations of the blood corpuscles in all the cases of diphtheria that came under his observation within a period of six months, the number of analyses amounting to 177, and from the results obtained he has deduced the following conclusions: In severe septicæmic, or malignant diphtheria, there is always an acute leucocythæmia or increase of the whites corpuscles of the blood, which increases as the disease progresses, and diminishes when convalescence sets in. On the other hand, in the mild cases of diphtheria without septicæmia, there is no leucocythæmia, and the children always recover. In 24 cases studied day by day through the whole course of the disease, the number of white globules varied between 5,000 and 10,000 in 12 out of 93 analyses, and between 10,000 and 100,000 in the other 81, the average being 26,824. Prof. Bouchut insists on the necessity of daily examinations of the blood, as the number of white globules may be normal in one day and greatly increased in the next. He claims that valuable prognostic data may be gathered from the examinations, a rapid increase of white globules indicating the occurrence of septicæmia, and pointing almost positively to a fatal termination, while a persistence of the normal relations between the red and white globules indicates a mild form of the disease, and almost certain recovery.—*Medical Record.*

POISONED BY NICOTINE.—A rather unusual case of poisoning by nicotine occurred lately in a Parisian suburb. The victim, a man in the prime of life, had been cleaning his pipe with a clasp knife; with this he accidentally cut one of his fingers subsequently, but as the wound was of a trivial nature he paid no heed to it. Five or six hours later, however, the cut finger grew painful and became much swollen; the inflammation rapidly spread to the arm and shoulder, the patient suffering such intense pain that he was obliged to betake himself to bed. Medical assistance was called in, and ordinary remedies applied ineffectually. The sick man, questioned as to the manner in which he cut himself, explained the use to which the pocket-knife had been applied, adding that he had omitted to wipe it after cleaning his pipe. The apparent mystery that surrounded the case was thus cleared up, and, as the patient's state had become alarming, he was conveyed to the hospital. Upon his admission, the doctors attached to the institution declared that in the immediate amputation of the arm lay the only hope of saving the patient's life. The poisoned member was therefore amputated; but, in spite of the promptitude with which the operation was performed, the man lies in so precarious a condition that the chances of his recovery are said to be slight.—*Parisian.*

TO SAVE FROM DROWNING.—Never approach a drowning person from the front, but take him from behind by the hair, and never allow him to grasp any part of your body if you can possibly avoid it. Should he do so, sink at once to the bottom, when he will release his hold on you. Only a good swimmer should attempt to rescue a drowning man in deep water; for a novice to try it is to imperil a second life with little chance of saving the first. Better hasten to secure a rope or a pole, or plank, which throw to the person in danger. This will give him a better chance of escape. If possible, let one going to the rescue have a rope tied under his own arms and held by some one on shore, or tied securely to some firm object. Young swimmers should use great caution.

ARSENICAL DOLLS.—A shopkeeper in a small place not far from Berlin bought a doll dressed in a green muslin frock, from a peddler for his child, aged one year and a half. The latter repeatedly put the doll into its mouth, as babies often will do; and a few days later showed very grave symptoms of some illness which the doctor could not define till he happened to cast his eyes on the doll. The frock was immediately sent to the next chemical laboratory, where it was found to contain a quantity of arsenic sufficient to injure even an adult. The police succeeded in discovering the peddler and the name of the firm where the doll had originally been bought.—*American Med. Bi-Weekly.*

## DOMESTIC ECONOMY.

## Baked Beans.

The pot of baked beans!—with what pleasure I saw it! Well seasoned, well porked, by some rosy-faced dame; And when from the glowing hot oven she'd draw it, Well crisped and well browned to the table it came. Oh! give me my country, the land of my teens, Of the dark Indian pudding and pot of baked beans, The pot of baked beans! Ah! the muse is too frail, Its taste to descant on, its virtues to tell, But look at the sons of New England so hale And her daughters so rosy, 'twill teach thee full well; Like me, it will teach thee to sigh for the means Of health, and—of rapture!—the pot of baked beans.

## Preserved Peaches.

EDITORS PRESS:—I have received so many valuable hints from your "Domestic Economy" that I feel like returning the favor in some way, and, as this is the season of preserving, I cannot think of anything that will be more useful than my recipe for preserved peaches, which I think every housekeeper will do well to try:—Weigh the fruit after it is pared and the stones extracted, and allow a pound of sugar to every one of peaches, crack one-quarter of the stones, extract the kernels, break them to pieces and boil in just enough water to cover them until soft, when set aside to steep in a covered vessel. Put a layer of sugar at the bottom of the kettle, then one of fruit, and so on until you have used up all of both; set it where it will warm slowly until the sugar is melted and the fruit hot through. Then strain the kernel water and add it. Boil steadily until the peaches are tender and clear. Take them out with a perforated skimmer, and lay upon large flat dishes, crowding as little as possible. Boil the syrup almost to a jelly—that is, until clear and thick, skimming off all scum. Fill your jars two-thirds full of the peaches, pour on the boiling syrup, and, when cold, cover with brandied tissue paper, then with cloth, lastly with thick paper tied tightly over them. A few slices of pineapple cut up with the peaches flavors them finely. Mrs. H.

Orange, Cal.

TO PRESERVE FLOWERS.—1. Mix a tablespoonful of carbonate of soda in a pint of water, and in this place your bouquet. It will preserve the flowers for a fortnight. 2. Sprinkle the bouquet lightly with fresh water, and then put it in a vessel containing soap-suds. This will keep the flowers as fresh as if just gathered. Then every morning take the bouquet out of the suds, and lay it sideways—the stock entering first—into clean water, keep it there a minute or two, then take it out and sprinkle the flowers lightly by the hand with water, replace it in the soap-suds, and it will bloom as fresh as when first gathered. The soap-suds need changing every three or four days. By observing these rules (says a lady who has tested them), a bouquet may be kept bright and beautiful for at least a month, and will last still longer in a passable state. 3. We have heard that the natural color of flowers may be preserved for any length of time by dipping them for a moment in clear glycerine. When the glycerine dries, the various tints are seen almost as bright as before the flowers were plucked.

DUCHESS POTATOES.—Mash one quart of hot boiled potatoes through a fine colander with the potato-masher; mix with them one ounce butter, one small teaspoonful of salt, half a salt-spoonful of white pepper, a pinch of grated nutmeg, and the yolks of two raw eggs; pour the potatoes out on a plate, and then form it with a knife into small cakes two inches long and one wide; lay them on a buttered tin, brush them over the top with an egg beaten up with a teaspoonful of cold water, and color them golden brown in a moderate oven.

A STRONG waterproof and flexible cement for joining sheets of manilla paper to form a board, can be made as follows: Good pitch and gutta-percha (about equal parts) are fused together, and to nine parts of this are added three parts of boiled oil and one-fifth part of litharge; continue the heat with stirring until thorough union of the ingredients is effected. This is applied hot, or cooled somewhat, and thinned with a small quantity of benzole or turpentine oil.

TO BAKE EGGS.—Butter a clean, smooth saucepan, break as many eggs as will be needed into a saucer, one by one. If found good slip it into the dish. No broken yolk allowed, nor must they crowd so as to risk breaking the yolk after putting in. Put a small piece of butter on each, and sprinkle with pepper and salt, set into a well-heated oven, and bake till the whites are set. If the oven is rightly heated it will take but a few minutes, and is far more delicate than fried eggs.

PIANO COVER.—To cleanse a rubber piano cover lay the cover on a long, clean table, and sponge it all over with clean warm water, containing a little powdered borax; use no soap; with a clean soft cloth rub it dry. If it looks dull or does not give satisfaction take another soft cloth and drop on it not more than two or three drops of sweet oil, and rub gently all over the cover.





DEWEY & CO., Publishers.  
A. T. DEWEY. W. B. EWER.  
Office, 202 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.  
ADVERTISING RATES: 1 week, 1 month, 3 mos. 12 mos.  
Per line. 25 50 \$2.00 \$5.00  
Half inch (1 square). \$1.00 \$3.00 7.50 24.00  
One inch. 2.00 5.00 14.00 40.00

Quack Advertising positively declined.

Our latest forms go to press Wednesday evening.

The Scientific Press Patent Agency.

DEWEY & CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. G. H. STRONG

SAN FRANCISCO:  
Saturday, Sept. 30, 1879.

### TABLE OF CONTENTS.

EDITORIALS.—Landscape Gardening; Barley; Hippophagy; Bananas in Eastern Markets, 143. The Week; Penalty for False Pedigree; Progress of the American Silk Industry, 152. Victoria Regina; The Sharpless Strawberry; White's Grape Picker; Science and Industry, 143. The Mechanics' Fair; The Southern California Horticultural Fair, 156.  
ILLUSTRATIONS.—Landscape Gardening, 145. The Sharpless Strawberry; California Grape Picker, 153. The "Ajax" Lawn Mower, 156.  
CORRESPONDENCE.—Hard Times—No. 4, 148.  
QUERIES AND REPLIES.—Testing Melons for Sugar; Napa County Honey; Propagating Osage Orange; Toulouse Geese; Striped Bug, 152.  
HORTICULTURE.—The Best Fruits to Cultivate—No. 2; The Proposed Society; Grafting Prunes on Almond Stock, 146.  
THE VINEYARD.—The Phylloxera Problem; Statistics of the Wine Interests, 146.  
POULTRY YARD.—Points on Brown Leghorns; Wheat for Chickens, 146.  
THE APIARY.—Honey in the Healing Art, 147.  
THE FIELD.—The Frick Barley, 147.  
THE STABLE.—A Good Word for the Mule, 147.  
THE STOCK YARD.—Cattle Ranging in Colorado, 147.  
PATRONS OF HUSBANDRY.—Grange Meeting at Martinez; Camping Grounds at the State Fair, 148.  
AGRICULTURAL NOTES from the various counties of California, Nevada and Idaho, 149.  
NEWS IN BRIEF on page 149 and other pages.  
HOME CIRCLE.—Mother, Watch the Little Feet (poetry); Only a Husk; The Cheerful Side; Rosa Bonheur; The Aolian Harp; Philanthropy; What we Read; Hint to Our Girls; Wagner and His Mission; Chaff; The Old Man and His Carp, 151.  
YOUNG FOLKS' COLUMN.—Our Puzzle Box; Benny's Little Fishes, 151.  
GOOD HEALTH.—Blood Examination in Diphtheria; Poisoned by Nicotine; To Save from Drowning; Arsenical Dolls, 151.  
DOMESTIC ECONOMY.—Baked Beans (poetry); Preserved Peaches; To Preserve Flowers; Duchess Potatoes; To Bake Eggs; Piano Cover, 151.  
MISCELLANEOUS.—Requirements of the Age; The Perfection of Nature's Work, 154.

### Business Announcements.

New Edition, Webster's Unabridged Dictionary, G. & C. Merriam, Springfield, Mass.

### The Week.

To-day another great popular excitement culminates. The alternating discussion and vituperation, argument and iuvenile, truth and falsehood, which have filled the public ear for months past have run their lengths, and as we write the ballots are falling thickly in the urns from Del Norte to San Diego. The campaign has been like other excited issues between men and ideas, except that it has presented in most aggravated form the tendencies which are always present. It has been a season of fusion and confusion, and now no one presumes to say just where the disturbed waters will find their level or can tell who will ride and who will be beneath them. To-day the ominous quiet betokens the work of more subtle powers than those which are embodied in composition or oratory, and to-morrow the resultant of all contending forces will show forth. As before in doubtful times, there is nothing to do but to await the verdict, trusting so much to the deep-lying sense and integrity of the people, that one can feel secure that the right will triumph; or even if error win, it will endure but for a moment and then flee away. In spite of the evil which crops out so glaringly in this city, and the low price of human life which is instilled by some false teachers, quiet and peace still reign. Long may it reign be.

Advices from abroad are still more favorable to the increase in value of our leading cereal. The telegraph this morning reports the English wheat crop ill beyond retrieve, and that about 20,000,000 cents more wheat than in ordinary years must be imported. This must influence the market ere long and pour much money into this country, for the continent is also affected by unfavorable conditions and will compete with England for distant supplies.

### Penalty for False Pedigree.

We have had some experience with false pedigrees in this State—in former years if not recently. Time was when pedigrees were made to order and he would be a clumsy operator who could not make a good one when he has the whole material of the herd books to draw upon. The result was that many people had what they believed to be thoroughbred cattle of fancy families, while the only claims to these qualities lay in the thorough lack of principle and fanciful imagination of the man who fabricated the pedigree. We mention these facts, which we trust are now wholly in the past, in order that purchasers of cattle claimed to be thoroughbred may be on their guard and always take advice if they are not themselves able to verify a proffered pedigree. It is a serious offence to sell a man a grade animal which may in his progeny reproduce the traits of his scrub ancestry, when the purchaser expects and pays for constancy to the thoroughbred type. It is akin to the frauds of the tree peddler, for not until certain time has elapsed and certain expenditure has been made, can the victim determine that he has been sadly imposed upon. And when he finds his hopeful venture thus productive of disappointment, there will be a strong tendency to close his pockets and his mind against ideas of improvement which once commended themselves to his judgment. It is a sin not only against the individual's pecuniary interest, but it is a blow at all agricultural progress to allow a single shade of deception to enter the traffic in the fruits of skillful breeding or propagation.

We are led to these reflections by an account which we read in an English exchange of the penalty visited by the courts upon an English breeder who allowed a bull to be sold under a false name and pedigree. The breeder claimed that it was done without his knowledge, but the evidence was so strong that the judge considered him guilty of deliberate falsehood. In the address of the judge, the jurors were told that the bull was put up for sale in a class in which entries were only allowed of animals required for stud purposes, and they must ask themselves whether this fact was not known by the regulations to the defendant. If it was, the bull was bought for breeding, and the first question he asked then was, What was the difference between the value of the bull, being the animal he really was, and the price paid for him? This had been put at £30, and it would form the minimum sum of damages to which the plaintiff was entitled. The second question was, What was the real value of such a bull with reference to the 70 cows in the plaintiff's herd which had calved? And lastly, what was the difference between the value of the produce of the 58 cows, and what that value would have been if the bull had been of the high family represented? He thought the plaintiff had good reason in putting this head of damage as the direct consequence of his purchase of the bull, and they must say what they thought the actual loss was to the plaintiff, supposing they thought the defendant knew the bull was sold for stud purposes. The jury, after retiring for half an hour, found a verdict for the plaintiff—damages £750.

Here then is a penalty of \$3,750 awarded to the man who had been imposed upon by an unprincipled cattle seller. It will have a salutary effect to have this verdict fully understood by both purchasers and vendors of cattle claimed to be thoroughbred. The purchaser may know that he has a remedy in the courts, and the unscrupulous vendor may see that he makes himself an outlaw if he allows his cupidity to over ride his conscience. We know that some cattle dealers are irresponsible, and that a judgment against them for money damages would not be worth the paper it was written on, except in the way of exposing evil deeds for the benefit of the community. There are criminal actions for swindles, but, except in the most barefaced types of fraud, these can be evaded by the guilty party through various defenses. The best defense which an intelligent buyer can have lies in his own good sense in not buying pedigreed animals from those of whose responsibility he knows nothing. There are such things as manufactured pedigrees and forged certificates to fortify them. If then an animal is offered, as from a well-known breeder and approved by his certificate, pains should be taken to verify the certificate by direct application to the claimed breeder. If people are on their guard and keenly awake to their own interests it will be hard for ill-minded men to deceive them. The old text: "Prove all things; hold fast that which is good," has application both in the highest and the lowest affairs of life.

LOSS OF WEIGHT IN DRYING.—Questions are now and then received concerning the loss of weight in drying fruit, and facts of this kind are always interesting. According to the *Press* it has been ascertained by experiment in Riverside, that 25 pounds of whole grafted peaches, after being divested of skin and seed, weigh 18½ pounds, and that the latter amount of peeled and seeded peaches, when thoroughly dessicated in the sun, weigh 3½ pounds. Such peaches, therefore, lose seven-eighths of their weight by peeling, seeding and drying.

COLONEL MILES has arrived at Fort Keogh with his command, after a successful scout.

### Progress of the American Silk Industry.

It is beyond question that the silk manufacturing industry of this country is making notable progress. As we have stated before, while the production of raw silk in this country is restrained by many conditions, the manufacture of silk goods from imported raw material is going forward rapidly, and is succeeding in placing its products on the market with such traits of excellence that the foreign silks are taking a lower rank in the estimation of purchasers. Although we sincerely desire that in some way the production of the raw material may ere long demonstrate its practicability, so that our silk industry may be wholly American, it is gratifying that the manufacturing branch of the industry should be going forward, for this signifies the employment of a large number of operatives, and the money which our wealthy silk purchasers spend is going for the support of our own people rather than for the enriching of foreign nations.

An excellent compilation of facts and statistics concerning our silk industry is contained in a handsome volume, published by D. Van Ostrand, of New York city, under the auspices of the Silk Association of America, and written by W. C. Wyckoff, Secretary. The work is entitled the "Silk Goods of America," and it enters minutely into the causes and effects which mark the progress of the industry. It is but characteristic of American enterprise that the aid of improved machinery should have been already invoked, and it is true that our silk manufacturers now have fine power looms working with precision, while foreign makers are still laboring with rude hand appliances. In this country all sorts of fabrics are now made on power looms, from gossamer veiling to upholstery brocatelle, and goods are made with perfect uniformity of quality not attained by hand operations.

In the manufacture of silk thread, known as "sewing silk" and "machine twist," our factories have succeeded so well that foreign competition is already distanced. This branch of the industry is thriving on this coast as well as in the Eastern States. The method which our manufacturers have employed to secure a triumph for their silk thread, has been the high standard of purity which they adopted. Instead of loading the fiber with adulterants to increase its weight at the expense of strength, they determined to sell a pure, or standard dye silk. The result has been as we have said, the American-made silk thread has won the day, and those who use it not only encourage home manufacturers, but they consult their own interests by getting the better article. Foreign producers are now urged by their newspapers to adopt the American system of honesty in production, or their business will fail. This is a very significant fact. American-made sewing silks cannot be surpassed in delicacy, brilliance and permanence of hue.

One very interesting fact which is fully set forth by Mr. Wyckoff in his book, is that the raw material used by American silk makers is better than that used in Europe. He shows conclusively that American manufacturers are obliged to use the best raw silk as a simple measure of economy. The cost for labor in this country is so high that all the foreign manipulations, by which poor raw material is made to look like good when in the thread or fabric, are too expensive to practice in this country. In other words, the extra cost of the best raw silk is less than the cost of the labor required to "doctor up" the poor. Then, too, the best raw silk works well in machinery, and fabrics can be made rapidly, while the poor is continually breaking and the machinery has to be stopped to tie the ends. This time is lost and less work is done by the machine in the day. One manufacturer, in speaking about this matter, said: "It costs fully five times as much to tie a knot in this country as in France. These facts are of great importance to the silk purchaser, for he certainly would prefer to have the greater part of his money go for the purchase of perfect raw material than to have it pay for the skill required to make poor material look like good."

In all styles of silk goods, American enterprise and machinery are winning their way. The manufacture began a few years ago with some simple lines of manufacture. It has progressed to such an extent that nearly all kinds of silk goods are produced of unrivalled excellence. It is estimated that from a fourth to a third of the plain silks and a much larger proportion of the brocade silks which are consumed in this country, are now made here. The production of figured dress silks has attained large development within a very few years. The designs are mostly original, and no mere description can do justice to the beauty and variety of these fabrics. In producing grenadines and satins, the improvements have been equally striking. Ribbons of the most elaborate designs and most perfect finish are now made in this country by power looms, and they have superseded the foreign hand-made ribbons, being so superior that French makers compliment us by imitating American tickets, trademarks and designs. The finest silk laces are also made upon American machines. In short, the American silk manufacturing industry may be fairly regarded as thoroughly American in its character and methods, and highly creditable to those who are pushing it forward.

THE amount of National Bank circulation outstanding Saturday was \$329,344,147.

### QUERIES AND REPLIES.

#### Testing Melons for Sugar.

EDITORS *PRESS*:—In reply to the suggestion made in your last issue by Mr. Gennert, that a full test of the composition of the juice of melons should be made by the Agricultural Department here, in order to determine their fitness for sugar making, I would say that I will cheerfully carry out the determinations at once, so soon as the material is furnished. I have thought of doing so before, but it would be of little use to analyze, haphazard, some watermelons obtained in the general market, and perhaps plucked unripe in order to be able to stand waiting for a purchaser. Nor would any single melon be any safe criterion to go by for a large scale enterprise. If "Granger" will put down here by the quickest mode of conveyance from three to six sample melons, whose identity can be relied on (for such things sometimes get "mixed" on the way, to say the least), I will attend to the analysis promptly and report results.

Certainly the fertile plains of the San Joaquin ought to make the melons as sugary as they are in any place in the world; and they would come in finely to keep the factories running at the season when the beet has not yet matured. It would be still more important if, as Mr. Gennert suggests, the raw sugar could be made on the small scale by farmers, to be afterward worked up by the refineries; the more as a certain amount of light hand labor, over and above that required in the case of beets, must interfere with the profits of large scale operations.—E. W. HILGARD, University of California, Sept. 1st, 1879.

We hope our Lodi correspondent will act upon this matter at once as Prof. Hilgard suggests, and send representative melons to him at Berkeley, Alameda county, Cal. This will secure the amount of cane sugar in the juice and other points which must be determined before any undertaking toward sugar making can be safely begun. The data from Prof. Hilgard's analyses will be published for the benefit of all, and if favorable, may serve as a basis for efforts to utilize next year's crop.

#### Napa County Honey.

EDITORS *PRESS*:—I send you to-day some samples of honey as prepared for the market. The light bottle is from sage flavored with locust; the other is flavored from the Yerba Santa and lemon. Owing to the cool nights I could not keep them separate. The samples are not as light colored as usual, as the bees would not seal over. I would like your plain opinion of them.—J. D. ENAS, Sonoma, Napa, Cal.

The samples were duly received, and we consider them models of style for the retail trade. The producer has evidently tried to make his package distinctive, and to carry upon the face his warranty that the contents are the legitimate product of the bee. This is a good point to make now that the prevalence of glucose in grocery honey is so widely understood by purchasers. Mr. Enas uses a 2lb four-sided bottle, upon one side of which is a straw hive and the words pure honey blown into the glass. On the opposite side is his label, with a modern frame hive printed on it, also his name and the location of his apiary. The top of the bottle is filled with a sealed cork and covered with tin-foil, stamped "warranted best quality." We note these particulars to illustrate the manner by which pure honey can often be put up by the producer to meet the demands of small purchasers, and at the same time assure them of the quality of the article. Our largest honey producers have not the time, and perhaps not the capital, which would be required to put up all their product in such form, but apirians near our large towns and cities can make for themselves a profitable local market, and increase the sales of their honey by thus introducing it to consumers.

The honey which Mr. Enas sends is, as he says, rather dark, and not as handsome as the crystal or golden nectar, which is produced when all conditions are favorable, but it is very well flavored, and is not dark enough to make it at all objectionable in our eyes. We have no doubt that he will be rewarded for his enterprise in marketing by securing a demand which will compensate him for his outlay of time and money.

#### Striped Bug.

EDITORS *PRESS*:—In this vicinity this season a green-striped bug has done considerable injury to the apricot crop, destroying the leaves of young trees, also certain sorts of beans, corn, etc. Can you give us any information of the nature of this bug, its habits, modes of reproduction, etc.?

The "Lady bug" is the only bug, to my observation, that survives our winters. Is it the progenitor of the former, or not? Information on the subject would be of great value to this vicinity, as many dollars' worth have been destroyed through this pest this season. A description of this bug and how we can abate the nuisance will be of vast value.—A. E. Hayward.

We infer that our correspondent alludes to the diabroticae, either the 12 spotted or the striped, or both. We cannot speak certainly unless specimens are sent. The true "lady-bird" is not the progenitor of anything but its own species, and is not a pest. The diabrotica is often called a "lady-bug," but it is a totally different insect. Please send specimens, and we will tell what we can about them.

#### Propagating Osage Orange.

EDITORS *PRESS*:—Can the Osage orange be propagated successfully by cuttings?—OLD SUBSCRIBER, Fresno.

We fail to find any testimony in the affirmative; all that we have read and heard on the subject commends seedlings. Who knows otherwise?

#### Toulouse Geese.

EDITORS *PRESS*:—Please inform me if there is anyone in California who keeps Toulouse geese; if so, for sale and at what price per pair or trio?—MRS. C. W. SPRAGUE, Woodland, Cal.

We have several inquiries for these geese lately, and if anyone has them for sale they should advertise them.

THE ceremonies of unveiling the Custer monument took place at West Point, Saturday.



## Victoria Regina.

(Written for the RURAL PRESS by JEANNE C. CARR.)

The credit of the discovery of the queen lily is accorded to Doctor, afterward Sir Robert Schomburgk, the elder brother of a very remarkable family of naturalists. He commenced his career as modestly as our poet naturalist, Muir, and spent some years in business before receiving his call to explore and to write. He was a tobacco planter and manufacturer in Virginia, where he failed, went to the West Indies, and was employed in botanical and geographical explorations until 1840, when the English Geographical Society sent him to make certain surveys of the boundaries between British Guiana and Brazil. Schomburgk found the great lily in the river Berbice, in English Guiana, and gave it its royal name, which has been corrupted in consequence of misprint to the present form, "regia."

Several years earlier, D'Orbigny, a French naturalist, who, if I am not mistaken, was a member of the Academy, and died not many years ago in Paris, found the mammoth fleets of the leaves in the Parana and mentioned the discovery in his letters home. The wife of D'Orbigny visited California in 1870.

But the original discoverer of the marvelous plant was Hæckel, a German traveler, who found it in the year 1801, in the river Mamore, one of the great affluents of the Amazon. He said the vision caused him such a transport of delight and admiration that he "fell upon his knees and expressed aloud his thanks to God for this manifestation of the power and magnificence of his works." I repeat this pleasant story on the authority of a brother of Sir Robert Schomburgk, who is the curator of the Royal Botanic garden of Adelaide, South Australia.

Hæckel having died before the birth of the royal lady for whose advent the great lily and Dr. Schomburgk were waiting, it lay hidden in the inhospitable, yet magnificent solitudes which it adorns until 1841, when its seeds and dried specimens of leaf and flower were sent to England as a christening present, perhaps, to the baby princess soon to become Empress of Germany. The seeds were planted in the noble conservatory at Chatsworth, watched over by Sir Joseph Paxton; artists and botanists vied with each other in making it famous; the finder was made a knight for his pains; no one can say that the welcome it received was not worthy of its rank in the floral world. A mammoth colored atlas of the Victoria regia, which Col. Warren and possibly others in San Francisco possess, furnishes the best pictorial representation of the entire plant. There is also a large folded plate in one of the volumes of the *Botanical Magazine*, which is to be found in the library of the Mechanics' Institute. It first blossomed in the United States in the conservatory of Caleb Cope, in Philadelphia, in 1852, when hundreds visited it. It has since flowered in many other places, and its cultivation is not more difficult than many another "water bean," for such it is after all.

When I shut my eyes, and think how those still, dark water pastures must look, with the great leaves, the pure buds, the snowy blossoms just opened, the rosy masses of fading bloom, I am in sympathy with the rapture of Hæckel, oppressed with the wealth of nature with no one but God to speak to in those vast solitudes. Sometimes I think, how long the Lord and the lily had waited for the eye to see and the heart to feel this beauty. I remember, too, another lily bloom, which Audubon found and described in his lonely wanderings among southern lakes and lagoons, the yellow *Nymphaea*, which has lately been rediscovered and credited to him. This rare lily has bloomed in the garden of Jackson Lewis at San Jose. I wonder what manner of lilies Audubon and Hæckel perchance are gathering beyond the river of death; and so I leave this web of fact and of fancy to be finished by my reader, who, having seen the Victoria regia blooming in the Park conservatory, will be unwilling to rest without knowing more of it and of all the lotus-blooms, which the wisest of ancient peoples chose to symbolize things sacred and eternal.

Sacramento, Aug. 25th, 1879.

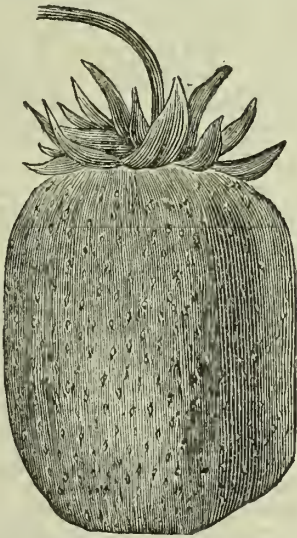
**SILK DRESSES FOR HORSES AND COWS.**—Apocryphos to the account of the progress of American silk manufacturing which may be found in another column, comes the statement that silk is being used in England for stable and farm yard. Silk horse and cattle clothing, though it sounds rather alarming on the score of expense, is said to be really cheaper in the end than the old horse-cloths, which are represented to be very liable to produce chills, the very things which they are supposed to obviate. But it is plain that a horse does not require the same heavy amount of clothing for every variety of temperature, and it is of importance that while his covering should be a warm one, it should be also fairly light. This seems to be obtained in the silk horse and cattle clothing. It is also recommended on the score of absence of moths. In this State silk horse and cattle clothing will not have much of a run, for our animals are generally consigned to a nude life, although many times more protection would be advisable. But we blanket our fine sheep sometimes, and why not use silk for that. It would cost more than burlaps doubtless, but it would be so appropriate. Silk dresses and all-wool underclothing would put our fine Merinos in better costumes than their owners.

## The Sharpless Strawberry.

In our issue of December 7th, 1878, we gave an engraving of a magnificent cluster of Sharpless strawberries as grown by Ellwanger & Barry, of Rochester, N. Y. Since then the berry has had another season's test at the East, and the testimony in its favor is unequivocal. It is placed at the very front of all the newer strawberries in point of size and marketing qualities. The engraving on this page, for which we are indebted to Mr. Parry, of Cinnamon, N. J., shows a berry of large size, for it measures about 4½ inches by 6 inches, but the Sharpless has been reported even as large as 8 inches either way. We are not informed of the success of the Sharpless in this State, although it must have been introduced last winter. We should be glad to hear from our readers on this point.

As we have said Eastern reports make the Sharpless king of the new race of berries. O. B. Galusha, Secretary of the Northern Illinois Fruit Growers' Association, is a large strawberry grower, and has lately published his experience with 27 varieties of recent origin. Of the Sharpless he writes: "Largest berries four and three-quarter inches. This is doubtless the most magnificent of all the strawberries yet introduced; of brilliant color, uniform, very large size, firm and of a rich sub-acid flavor; the vines are exceedingly robust and very productive."

W. C. Barry, of the Mount Hope nurseries, Rochester, New York, writes for the *Country Gentleman* a description of the comparative standing in the market and in the field of several strawberries. He says: "It is gratifying to note that the larger and finer-flavored varieties are becoming better known and appreciated. When Wilson was selling at six cents a quart, Sharpless sold for 12c, and Triomphe de Gand, Jucunda, Cumberland Triumph and Monarch,



THE SHARPLESS STRAWBERRY.

for eight and 10 cents. Of such varieties there has not been nearly enough fruit to satisfy the demand, and growers will consult their interests by giving more attention to the larger and better kinds. Sharpless is unquestionably the best new strawberry. This was my opinion last year, and every report received thus far proves that I was not mistaken. We planted largely of it this last spring for market."

This testimony is from disinterested growers, who have many kinds, and speak from their experience. We are quite curious to know the position the berry will take in this State.

**WATER IN WEEDS.**—Not long ago we gave some facts disclosed by European experiments, showing the comparative evaporation of water from earth covered by vegetation, or with a clean surface worked mellow. The waste of water by weeds was shown to be immensely greater than that by direct evaporation from a cultivated surface. It is pertinent now to remark that Dr. Congar, of Los Angeles county, who is doing much good by his general experimentation, has dissected a tumble-weed weighing four and a half pounds, and found that the same contained four pounds of moisture. These weeds, if allowed to grow, as they are, two feet apart, would absorb more water in a season than is supplied by irrigation. But it must also be remembered, that there is a great evaporation from the leaves of plants, and therefore the amount of water which a plant contains at any time would be but a part of its exhaustive power. The moral from these facts is plain: Conserve the moisture for the benefit of useful plants by uprooting greedy weeds, and prevent direct evaporation from the soil by pulverizing the surface and thus breaking up the capillaries which continually draw up the water from a compact soil.

A TERRIFIC hail-storm occurred Friday at Fort Keogh.

At Glasgow, Scotland, 1,000 cotton operatives have struck.

The Portuguese Consul at Permanbuco has been assassinated.

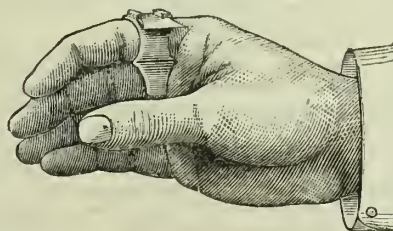
## White's Grape Picker.

In picking grapes in large vineyards, where they are gathered in great quantities, it is customary to carry in one hand a knife with which to cut the stems and the bunch is gathered in the other hand. When the foliage is thick the branches have to be pushed aside, in any kind of a way with the feet or body, so as get at the bunches, both hands being needed in cutting and gathering the bunch. In the vineyards of this State, and other places where wine-making is carried on, the gathering of the crops is an important item in the general expense, and large numbers of men are employed in picking for the market. The men are not allowed to touch the fruit with the hands, as that destroys the "bloom," but must grasp the stem of the cluster while separating it from the vine. This, of course, occupies both hands, and grape-picking, under these circumstances, is not so rapid an operation as is desirable where large quantities are gathered.

Mr. T. C. White, of Fresno, Fresno county, in this State, has recently applied, through the Mining and Scientific Press Patent Agency, for letters patent on a simple little device for gathering grapes, which leaves both hands free for plucking the clusters, while at the same time the knife is applied to cutting the stems.

The engraving shows the construction of this implement. A metal ring is formed of suitable size to fit the forefinger of the hand, on the front portion of which is fitted a cutting blade or knife, as shown. The second finger of the hand finds a place in the half ring on the side, which prevents the instrument from turning on the first finger. When in position on the finger the knife blade projects upwards, and by catching the stem of the bunch between the thumb and forefinger, and then moving the hand slightly the blade will cut the stem, leaving the cluster on the hand. Or the stem may be caught between the edge of the blade and the thumb, and cut in that way, if preferred. The grapes themselves are not touched, the stem only being handled.

This implement does away with the necessity of having to carry a knife in the hand, and one can cut and hold the cluster with the same hand, while the foliage may be parted or held back by the other. This device is simple, easily made, and kept in order, and will be found of great convenience to viniculturists. The blades may be removed for sharpening, or a number of sharp blades may be kept in the pocket, and substituted for dull ones during working hours.



THE CALIFORNIA GRAPE PICKER.

This implement will facilitate the gathering of a grape crop materially, as by it a greater quantity of grapes may be plucked by each picker.

The implements can be used with both hands at the same time. They are made entirely of metal, the knife of cast steel, tempered in oil. These little tools are sold for \$1 each or \$9 per dozen. The general agent for the United States and Europe is James L. Fiuk, Postoffice box 1,267, San Francisco.

**THE DRENCHED EUROPEAN VINEYARDS.**—It seems that even the ancient districts of the Rhine are afflicted by surplus rainfall, as well as those of cloudy France. We read in an English exchange that the growers are almost in despair as to their vintage prospects, the vines having bloomed only at the extreme end of July, and the fine weather so desirable at that critical juncture having been conspicuous by its absence. In fact, the weather searchers who have been exploring the records to find as bad a season, have to go back nearly 200 years, but they are rewarded by the search, for they discover that even worse seasons have been blessed with fine vintages. Thus in 1686 the vines were even later than now in blooming, and no warm weather set in till August 26th, and yet the vintage was a grand success. So, too, in 1696 the current predictions of failure were utterly falsified by the event, and again in 1705 an extremely late and apparently unfavorable season terminated in a magnificent grape harvest. The question now is whether the same sequence will follow the bad season of 1879, and while they doubt they mourn, if perchance, the clouds should not at last disclose a winy lining.

**PORTABLE SHEEP DIP.**—We read in accounts of the late Royal show in England of a portable sheep dip, which looks in profile view something like an old-fashioned "tread power" on wheels. The sheep walks up the platform, and is put into a wire cage which has a cover shaped like a sheep's back. Beneath the cage is a tub containing the dip. Into this the sheep and cage are lowered and pulled out again by a long lever, like the old well-sweep of our childhood. It is said sheep can be worked through it very fast—but then, the English do not know what fast dipping is as practiced in this State.

## Science and Industry.

It has been a characteristic of man from the earliest times to encounter two elements of intelligence, as distinct in principle as mind and matter. The province of one of these elements was and still is to discover facts, and the application of these facts was and is now relegated to the other. Science in human economy is the mind, and industry the matter, twin sisters that walk hand in hand, the one ever ready to aid the other. The line drawn between these two elements is not as sharply defined in the present age as it was in the beginning and up to the beginning of the present century. Perhaps there never has been a time in the history of the world when industry could dispense with science, or that either alone could bring the people up to the most ordinary criterion of civilization as at present understood.

We find that all those nations, which either became devoted to science in the abstract or to the misapplication of facts pointed out by it, have either been entirely swallowed up beneath the waves of time and disaster, or now drag out a feeble, flickering existence. And on the contrary, those that understood and appreciated the intimate relations existing between science and industry, now rule the world. The question is not yet settled as to which of the present great nations can grasp and solve the problems constantly being propounded by science. The struggle is becoming more conspicuous from the fact that Europe has awakened to the belief that America will be the victor if her influence is not met in kind and counteracted. The United States has shown the world that we are at least 25 years in advance of other nations in the originality of our inventive genius and mechanical appliances, and we have, in spite of European cheap labor, attacked and taken by storm the trade centers of the world. England, France, Belgium and Switzerland are filled with alarm, and their wisest statesmen have declared themselves unable to cope against American ingenuity. And a weak opposition is made by the European press by depicting the evils of this American invasion. England and France are now maintaining a remarkable *entente cordiale*, in the shape of a private exhibition in the "Palace of Industry," in Paris, which is devoted to products intimately connected with the manufacturing industry, an indication of efforts being made to devise ways and means of getting rid of the American incubus.

Secretary Evarts, in his review of Consular reports, says: "For the first time our manufactures are now assuming international proportions. At a time of universal depression we have met those nations which held a monopoly of the world's markets, in their strongholds, and established the fact that American manufactures are second to those of no other nation."

We have not far to go to determine the cause of this. As a nation we possess more individuality than any other nation on earth. To think with us, is to act. The momentum of our progress is so great that we cannot stop. We have arrived at a correct understanding of the connection between science and industry and quick to apply even the suggestion of a utility. We have been able to create and supply a demand which European nations would not have thought of for years to come. This advance of American ideas is fully realized in England and on the Continent, and although strenuous efforts are being made to stop further progress, the only result so far has been to increase it to such an extent, that complaint has been made to Parliament concerning the unjust discriminations of English railways in favor of American produce. English writers and manufacturers begin to acknowledge that the supremacy of manufactures is the heritage of America. The immense energy displayed by the United States in carrying out its singleness of idea to excel the world, encumbered as she has been by difficulties which would have ruined any other nation, has leavened the easy-going characteristics of Europe and even the world to such an extent that American machinery and produce has become cosmopolitan.

A NEW RAISIN-GROWERS' ASSOCIATION was formed at Riverside on the 22d ult. and C. L. North furnishes the *Riverside Press* with a report of the proceedings: "The object of the meeting was to form an association of all the raisin growers of this place; to establish a uniform brand or grade of raisins, and to obtain the advantages of unity of action in the disposal of our products." Mr. E. G. Brown gave a very interesting account of his manner of handling over-dried raisins last year. Raisins that he had considered almost ruined turned out some of the best of his crop—all by the timely application of a little water at slight expense. He advised very thorough drying, and making two grades of raisins. Messrs. G. W. Garcelon, E. G. Brown, D. C. Twogood, H. A. Westbrook and E. W. Holmes were elected a committee to report on constitution and by-laws, at an adjourned meeting to be held Sept. 5th. Messrs. Garcelon, Brown and Twogood were also empowered to confer with Mr. Shoemaker (of the firm of J. M. Spafford & Co., San Francisco), in regard to establishing business relations with his house and thereby securing better prices for their productions.



## Requirements of the Age.

We publish herewith the substance of an address delivered by the Rev. Thos. Guard, at the Grand Opera House, upon the occasion of the opening of the Mechanics' Institute fair:

There has not been any dearth of exhibitions in our metropolis during the last few months. I cannot imagine a type of taste for which exhibitors have not most liberally catered.

There have been political exhibitions, and of these a greater variety than the creative genius of America had ever dared to produce; indeed, no less than a perfect quartette—soprano, alto, tenor, bass. I shall not venture to say which is soprano, and I shrink from suggesting which is the bass; nor am I prepared to say to what concord of sweet sounds this quartette may yet constrain us to hearken. The air around us is tremulous with melody, and the symphonic billows of this political quartette break in silver spray upon Mt. Shasta's slopes, blend congenially with the hideous howling of the Cliff-House sea lions, swell the cadence of the Vernal and Yosemite falls, and die into silence amidst the murmurs of the honey-laden bees that haunt the orange gardens of the City of the Angels.

And then there has been the far-famed Pedestrian Exhibition in the great pavilion of this Association. Who has not heard of that exhibition? From what classes of society were spectators not drawn, to witness the sublime feats of the contestants for the diamond belt? Who among us is competent to describe the extremely salutary influence of that pedal display? In what a chastely fascinating aspect it presented woman! What a winsome example it lifted to the admiring gaze of "our sisters, and our cousins, and our aunts!" What a refining agency was suggested to the lovers of American culture! In what an economic light it placed the female members of our families! "Hard times" may become easy of endurance if we can but train the limbs of our girls into speed of motion; and, hushing all the objections springing from their pure and gentle bosoms, urge them to the saw-dust ring and the voluptuous leers of lewd gamblers, where they may barter away the pearl of their womanhood for thirty pieces of silver.

Oh, yes! ours is a progressive age.

At last we have reached our own exhibition. And I congratulate you on this auspicious occasion. Our exercises to-day are a sort of *prelude*, to which I have the honor of contributing a note.

I am to offer you a few thoughts, suggested by our annual fair. It is impossible for any but the most frivolously-minded to linger within the pavilion during an exhibition such as this without acquiring material for most remunerative study. Indeed, this is one of the many benefits which accrue from such an institution. It invites inquiry; it provokes discussion; it wakes the mind from stupor, and impels it to investigation; it excites the fancy; it regales the imagination; it refines the taste. And whatever elicits thought and compels the mind into meditative mood; whatever enlarges the comprehensive outlook, and strengthens the apprehensive grasp of the understanding; whatever augments our control over the activities of the mysterious spirit within; whatever gives us enfranchisement from the tyranny of the senses, and independence of the pleasures which materialism ministers; whatever lifts us into the region of pure ideas, and wings us for flight o'er the ære and luminous realms of truth and beauty; commands our most fervent gratitude, as an educator of the human race.

If you ask me what is the prime and most masterful thought suggested by my visits to "The Fair," I at once reply:

## The Sovereignty of Man.

(1) Everywhere, around, above, I recognize tokens of this; I look upon the tribute which, as a sovereign, man has extracted from nature. The dominion is a noble, it is a vast, it is a varied one. Here in the exhibition are proofs of man's sovereignty over winds and over water, over light and over heat, over chemie and over mechanic energies. From the marching season and the timely rains; from the hidden wealth of mountains and from the wealth more real of the generous soil; from the products of the forest and of the flock, and of the field, and from the products of the far-reaching sea; man draws revenues and service. Lightning is his courier, and light his artist. Trade-winds waft his white-winged argosies, and snows gather on Sierra crests to swell the floods wherewith his ample acres shall be irrigated. Flowers, by their weird alchemy, transmute dew and gases into aromatic odors for his delight; and change sunbeams and dull clays into hues emerald, purple, and roseate, wherewith to greet his kindling glance, as he moves out to gaze upon an inheritance, over which "far as the breeze can bear the billow's foam," it one day shall he true, man's nod is empire, and his footfall law. Silkworms spin for him; oysters secrete pearls for him; lime becomes marble and carbon diamonds for him; rocks are turned into silver, and plants become coal for him. Rivers leap to light from lofty fountains in the hearts of hoary hills, that, utilizing the law of gravitation, man may make them turn his ponderous wheels, and whirl his myriad spindles. The wild fowl "nurses" the plume that shall wave upon his victor helmet; and the cotton and the flax plant offer the fibers of which to fashion the banners beneath whose folds he shall move

forth to conquest; or repose unharmed amidst the fruits of his free and honest industry. Force guards him—sows, reaps, threshes, and grinds for him, as in ages past it toiled in fashioning his dwelling-place. Art breathes inspiration. Music reveals her mystic laws to his modulating genius. The block becomes a thing of beauty. The canvass glows with the tints and flush of life. Arch and pillar, capital and dome, spring from earth and soar to heaven, obedient to his all hut necromantic touch. Homer, wrapped in his singing robe, wet with the dew of the morning of the ages, chants his immortal epic, to find in the broadening centuries a whispering gallery, round which his melodies shall swell in musical thunder.—Dante, gentle as he is sublime, tender as he is stern—a violet in the rift of an Alpine glacier; or, the "Victoria Regia" of the middle ages; and Milton, blind with excess of light, laden with the lore of classic and of sacred thinkers, clarified by waters of sorrow, and chastened by fires of fierce scorn, his harp upon his shoulder, daring the Seraphim to a trial of their strength of passion and their sweep of thought—these all proclaim the extent and opulence of the sovereignty of man—all are his: the true, the beautiful, and the good.

(2). This sovereignty is based upon and maintained by knowledge of, and obedience to, the laws of nature. In our age it is superfluous to attempt to prove the unity and universality of law. The truth is axiomatic. The gem and the snowflake are crystallized according to law. The cloud floats and the bud bursts into blossom in accordance with law. Atoms combine, birds migrate, tears are molded, and planets wheel, obedient to law. Logicians reason, poets create, and orators persuade by reverence for law. "Her voice is the harmony of the universe, her home the bosom of God." Man must rule nature, in stern and strict conformity to the "constitution of nature." And so faultless is the constitution that no amendments are possible. Not amend nature's laws, but, know them and obey them, is man's duty, and "in the keeping of them" prove "there is a great reward." Man can, indeed, unite those laws; can effect a combination of several of them, and by so much augment his power. And this is being constantly done. Every building erected is the result of combination of many laws of nature; every organ built is another result of such combination of law's forces; every telescope is the product of many laws in combination; every strong man is a concentration of laws selected from the chief departments of nature's immense domain.

## This Makes Science a Necessity.

(3) For to rule you must know the subjects ruled—their natures, their natures, the conditions of their existence and well-being. Ignorance is incompatible with efficient government.

One of the most important points to be secured by the civil ruler is this: that he know the temper and the habits and tone of thought characteristic of the people ruled. The great Chatham knew the English people; and this made him supreme in the councils and supreme in the affections of his countrymen, who loved to speak of him as the "Great Commoner."

To truly rule yourself, it is of highest importance that you study and seek to know yourself. Therefore, "the proper study of mankind is man." Nor less is this true of the sovereignty now spoken of. All the sciences were included, therefore, in the decree,—"Have dominion, replenish the earth, and subdue it." Study the properties of plants and shrubs, of flowers and fruits, grasses and herbs. Botany is here. Study the properties of animals, of fishes, of birds, of beasts: their habits, their foods, their instincts, so that they may be utilized for commerce, or for domesticated ends. Natural History is here. Study the secrets of atmosphere and water; of heat and light; of soils and rocks; and of the mutual influences of all these upon organic life. What is this but Chemistry? And so of the Mechanical Sciences, and so of the science of Navigation. This at once proclaims the sovereignty of mind, thought, intelligence; and embraces all the progressive acquaintance with the facts and the forces of creation, gained by man during his process through the ages past, and yet to come.

The clearer the mental eye of the sovereign, the better equipped for the scepter of his empire. Thought is the ruler. Ideas are the conquerors of all things: physical, political, moral, and religious. The man of most ideas,—the man who knows best how to express, and embody, the greatest number of the greatest thoughts, is, by "Divine right," fittest to rule.

## Subjugation is Demanded.

(4) All sovereignty wielded by man hitherto has been preceded by struggle and subjugation. I cannot rule myself unless I subdue myself. Self-conquest prepares the way for self-government. Full of the struggle to subdue involves awe-inspiring efforts. The subjugation of the appetite and of the temper, and of the desires, of the tongue, of the senses and of the thoughts,—Ha! what battles are suggested by words like these. Marathon, Waterloo, Bunker's Hill and Gettysburg; these are but gala-day fights in comparison. No eye may have witnessed, no stranger have been cognizant of the strenuous, stern but sublime endeavor to put down and o'ermaster so as to rule the spirit with calmness and keep it in hallowed harmony. Only in the blaze of the great white throne, and when crowned by the all-seeing One at the last day, shall it be known how many the heroes whom history never emblazoned on her pages; whom

poets never lifted to fame by their imperishable odes.

The freedom of to-day is the fruit of struggle. Freedom of thought in society; freedom of opinion in religion; freedom of action in politics;—all secured by struggle. Tortures endured, blood spilled like water, life offered without stint, without complaint. But so the fetter melted from the bondsman; so the tyranny of superstition bit the dust of irretrievable defeat; so the despotism of Autocrats dissolves and "leaves not a wrack behind." Even so God wills it to be in the sovereignty referred to in my theme. "Subdue it," as He points to the sea; and man builds his breakwater and floats his navies. "Subdue it," as He points to the morass; and man begins to drain it, and build his causeways o'er it. "Subdue it," as He points to the forest; and man wakes echoes from the primeval shades with his axes, and kindles fires around the venerable monarch of the woods. "Subdue it," as He points to the Sierra; and man cuts out his iron pathway o'er them, tunnels his course through them, and waves his flag of triumph upon their loftiest summits. "Subdue it," as He points to the lightning; and man plants his conductors to draw down and tame its fire, and spreads his wires that o'er them the invisible and fleet-footed force may bear his message. "Subdue it," as he points to the wild horse of the plains; and man puts a bit in the mouth and bridle on the neck of the steed, until "a little child shall lead him."

## Labor Demanded.

(5). The struggle for existence and for sovereignty, implies and demands labor. Work is demanded, both in the study of the facts and forces of nature, and in the development of the physical resources of nature.

It were a grievous mistake to imagine that none save those who fling the shuttle, or drive the plow, are laborers, or workmen. Think you that the brave men who have gone forth to explore and discover the extent of the domain given to man for his possession, are not members of the guild of honest and noble workmen? Livingstone, Franklin, Kane, Baker, Stanley;—these not laborers as truly as the man who wields the hoe, and hews down the forest! No men have better right to their "spurs" than such knights as these. Think you that they who follow the comet, or foretell its approach; who bend over the crucible, and ply the scalpel; who untwist the sunbeam, and analyze the light-wave propelled by Sirius upon the shores of our small planet; that they who read the epitaphs carved upon the rocky tombs of fossil plant and Saurian monster; who watch the birth-hour of the tornado, and signal the moment of its advent of terror and desolation,—that these, and such as these, eat the bread of idleness, or sleep the sleep of the sluggard? Nothing is more remote from truth, than such a thought. Every furrow on their ample brow is the record of a conquest, as truly as that every crow's foot wrinkle round their eyes of unquenched fire is a scroll written over with fragments of "the fairy tales of science, and the grand results of time." Free from the law of labor man cannot hope to live. With cessation of the need of labor barbarism begins, and reversion to savagery becomes a law of life. Naturally, man is lazy. He loves the idea of "labor-saving machines." Scientists, perhaps, might tell us, that in this indisposition to work, we prove our ancestry back to the South American sloth. Be that as it may, it is not good for man that he be exempt from the law of labor. The more one ponders the matter, the profounder the conviction of the divinity, the dignity, and the blessedness of work. It has the approval of my reason, the sanction of my conscience, the well done of my God. Working, I develop my being; I restrain my animalism; I win self-mastery. Patience is cultivated; perseverance becomes a habit. Draining yonder marsh, I may be aided in draining one as sour within my own heart. Rooting out yonder briar, I shall be helped in checking the growth of a vice as pestiferous in the soil of my own spirit. And, knowing right well the drift and tendencies of my nature, the benign Father of all, "for my sake,"—for my weal, "curse the ground;" not CURSED LABOR;—the philosophy of which, it is not my business now either to discuss or to defend.

Again we say, labor is the law of life. All things living, on earth or elsewhere, move in harmony with it. From God, who worketh ever, upholding, renewing, restraining; consoling, inspiring, defending; bidding worlds from nothing into being, and feeding the fires of ever-burning suns, from age to age; nursing saints for heroic battle against wrong, and welcoming them from their fields of toil, or their furnaces of martyrdom, into quietness and assurance forever;—from this God, down to His tall angels, who now work in bearing up a little one along his path, lest he dash his foot against a stone, and again work in wafting the spirit of a pauper upon their unmoulding pinions, whither the storms of this world cannot travel, nor its mist of darkness float; down to the coral-builder that faints not, neither is weary in its toil masonic beneath bright tropic skies, and cheered on in its silent labors by the choral chantings of Pacific waves,—Labor is life—is gladness—is beauty. And let the thought be repeated and emphasized—the labor of life is a battle. It is a fierce strife. Vigilance ever demanded; forethought in ceaseless play. For floods challenge, tempests call in trumpet tone, and drought, and locust, and prolific weed-growth dare man to wrestle with and vanquish them. And if man were as wise as he might be—then should he hail the struggle

as his opportunity for achieving that "to which the whole creation moves"—"MORAL MANHOOD"—SELF-SOVEREIGNTY!

The peril in our midst is great in this particular: That work shall be deemed ignoble. But, in truth, in no land beneath God's generous sunlight is honest toil more honorable than in this free country. The spirit of gambling has been in our atmosphere quite long enough for the health of our sons and daughters. It creates feverishness, restlessness, impatience, contempt for slow, steady processes and deferred results and profits. We would move, but when swept by lightning express, or "two-twenty trotters." The old method of honest, intelligent, persevering, plodding toil, as that by which honor shall be won, competence gained, and well-being realized, may have served in generations past. But young Californian Americans cry out against all such "old fogyism."

No thoughtful observer can have failed to recognize in this fair an illustration of the laws of co-operation and division of labor. These products had never been, but for diversity of gifts in the endowments of men; diversity of adaptation as the result of those endowments; and then, union of all these, in endeavors to supply the wants of humanity.

Single-handed, single-hearted—how feeble is man! What a narrow map of survey; what a superficial acquaintance with the facts within that circumscribed domain! What hope can he cherish of victory over nature's forces single-handed. The highest type of animal life presents us with the greatest diversity of organs and functions co-operating to one end. The loftier the life, the greater the number of forces focalizing to sustain such life. The functions of the lowest living thing are fulfilled by one organ. Loftiest life is nourished by a score. Savage life, as contrasted with civilized, illustrates the same principle. It is before us most truly in our exhibition. There is the product of the worker in iron and the worker in marble. There is the flockmaster with his wool, and the grape grower with his wines and raisins. There is the manufacturer of blankets, and the producer of beaves, of butter, and of beet root. There is the spinner of steel wire and of hemp rope, by the former meeting the needs of our street car companies, and by the other supplying the demands of that extremely necessary adjunct to our civilization—the common haugman. There is the tooth extractor, with its pleasures of hope, and the toy for the infant just cutting its teeth. There are Cinderella slippers for fairy-footed belles, and there are the no less fair and fairy edifices, "castles in the air,"—called bouquets. There are sweatmeats for "hilling and cooing" lovers, and preserved meats for sorrow-cheeked, desiccated and melancholy bachelors. There are crystal goblets, from which to quaff that elixir of life, and home of living things, called "Spring Valley water;" and then there are brooms, and "combination mops," over which Mrs. Partington must shed tears of ecstatic joy, and large enough to sweep into limbo all the cobwebs that ever clustered in the antique corners of an old City Hall, and cleanse the filthiest floor o'er which the disgusted members of a political caucus expectorated their contempt and chagrin, in tobacco juice. Here are cradles, in which may be rocked into dreamland the future savours of their commonwealth; and here are revolving lounges, upon which the fathers of these precious creatures may gyrate, as they study the problems of statecraft and of the Stock Exchange. Here are materials for the printing press, and for the circulation of opinions that are reformations in embryo, and revolutions in the germ. And here are organs and pianos—for man longs for rest, and yearns to forget his woes; and would find voice his hopes, and antedate his immortality, in that ethereal speech called music. And here is our "gallery of the fine arts." For man is made for "the beautiful." Nor is he satisfied with the provision for his craving, furnished in the forms, and colors, and motions of creation. There is no stint, it is true, in nature's supplies. There is the tint of the fox-glove, and the gleam of the gem—and the pomp of the cloud-storm, and the grandeur of the snowy peak, and the mirror-like repose of the land-locked lake, and the plumage of tropic bird, and the majesty of sunset, and the swell of the foam-wreathed billow, and the serenity of eve, and the valley all afire with morning sunbeams, steeped in pearls of dew. Yet, this is not enough. And the artist must extract from these their fairest, their purest, their noblest; and of the fairest fashion scenes not more true to nature than they are true to the loftier ideals with which imagination loves to commune.

## THE PERFECTION OF NATURE'S WORKS.—

Upon examining the edge of the sharpest razor with the microscope, it will appear fully as broad as the back of a knife—rough, uneven and full of notches and furrows. An exceedingly small needle resembles an iron bar. But the sting of a bee seen through the same instrument exhibits everywhere the most beautiful polish, without a flaw, blemish or inequality, and ends in a point too fine to be discerned. The threads of a fine lawn are coarser than the yarns with which ropes are made for anchors; but a silkworm's web appears smooth and shining, and everywhere equal. The smallest dot that is made with a pen appears irregular and uneven; but the little specks on the wings of insects are not only found to be perfect and regular, but to often show elaborate designs of a detail which is the admiration of the microscopist.



## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

PETER SAXE & SON, 520 Bush St. S. F. Importers and breeders of all varieties of thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

## SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

## POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Doves, etc. Eggs for hatching. Send for price list.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Thoroughbred Berkshire and Poland-China Swine. Light Brahma and Black Cochon Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

## BEES.

JOS. D. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## Nurserymen.

## A New Forage Plant.

## THE GREEN VALLEY GRASS.

The WONDER of the NINETEENTH CENTURY, yields 10 to 14 tons of hay per acre, and from 3,000 to 4,000 bushels of roots, which far exceeds artichokes as feed for hogs.

## Grows without Irrigation.

For price list of seed and roots, address

ARTHUR TAYLOR,

Watson, Atchison Co., Mo.

## Phylloxera-Resisting Vines.

Vineyard Proprietors desiring to plant American Grape Vines, which with resist to the attacks of the Phylloxera, either as Grafting Stock, or for direct production, which proves to be the only salvation and means of reconstructing the destroyed Vineyards of France, will do well to address

BUSH & SON & MEISSNER,

Bushberg, Jefferson Co., Mo.

## RASPBERRY PLANTS Early Prolific and Reliance the best. All the STRAWBERRY PLANTS newest and best.

In pots or strong layers. Stock pure and first class. Prices low. See new list. Address,

GIBSON & BENNETT, Woodbury, N. J.

## BERRIES! LARGEST AND BEST. Longfellow, Warren, Huddellston's Favorite, Black Giant, Sharpless, and Queen of the Market. Pomona Nursery. 100 acres devoted to small fruits. Price-List free. Send 3c. stamp for colored illustrations and testimonials. WM. PARRY, Cinnaminson, N. J.

## TREES A large assortment of FRUIT, SHADE, ORNAMENTAL TREES and SHRUBS, ROSES, GREENHOUSE PLANTS, etc.; GRASS, RASPBERRY, SNYDER BLACK-BERRY, APPLE SEEDLINGS. New Fall Catalogue free. Established 1852. BAIRD &amp; TUTTLE, Agents, Bloomington Nursery, Illinois.

## F. A. ROBBINS.

MANUFACTURER OF

Canners and Soap Makers' Presses and Dies

JEWELERS' TOOLS.

ELECTRICAL and MODEL MACHINERY.

No. 7 First St., San Francisco.

50 Perfumed, gilt edge & chromo Cards, elegant case, name in gold, 10c. ATLANTIC CARD CO., E. Wallingford, Ct.

## Nathaniel Curry &amp; Bro.,

113 Sansome Street, San Francisco.

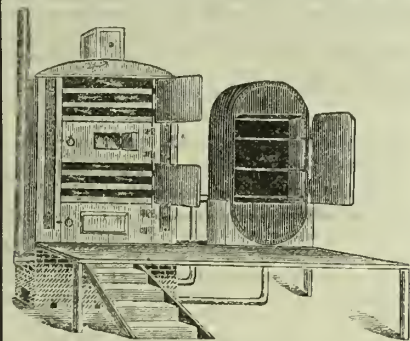


Sole Agents for the

## Sharps Rifle Co., of Bridgeport, Conn.

FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO.

Also Agents for W. W. GREENER'S Celebrated Wedgefast, Chokebore, Breech-loading DOUBLE GUNS; and all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America. AMMUNITION of all kinds in quantities to suit.



## BUTTS'

IMPROVED ANTISEPTIC "CHALLENGE"

## Fruit, Vegetable and Hop Drier AND CANNING APPARATUS.

The cheapest, quickest and greatest labor-saving Drier ever introduced. Retains the quality, color and flavor of the fruit. The Canning Apparatus has a capacity of from 500 to 4,000 cans per day. Machines varying from 500 lbs. to 10 tons capacity per day constantly on hand. For Circulars, prices, etc., address

WM. BUTTS, Patentee,

S. E. Cor. Spear and Mission Sts., San Francisco. P. O. BOX 1,859.

State, County and Individual Rights for Sale.

In consequence of spurious imitations of

## LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

## Educational.

## Washington College.

The Fifteenth Semi-Annual Term of this institution will commence on

Thursday, July 31st, 1879.

Catalogues can be had at Bancroft & Co.'s Bookstore, San Francisco, and at Hardy's Bookstore, Oakland.

For further information address

S. S. HARMON,

Washington, Alameda County, Cal.

## HEALD'S BUSINESS COLLEGE,

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

E. CHAMBERLAIN, JR.

THOS. A. ROBINSON



SEND FOR CIRCULAR.

## Seedsmen.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses.

RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco



B. K. BLISS & SONS,

Importers, Growers and dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address

B. K. BLISS & SONS, 34 Barclay Street, N. Y.

## EXOTIC GARDENS. F. A. MILLER &amp; CO., Mission St., opposite Woodward's Gardens. Send for Catalogue and Price List.

## MONEY TO LOAN

AT LOWEST RATES

On Country Real Estate and Grain in Warehouse.

McAFEE BROTHERS.

202 Sansome Street, San Francisco.

## California Inventors

Should consult DEWEY & CO., AMERICAN AND FOREIGN PATENT SOLICITORS. Established in 1860. Their long experience as journalists and large practice as patent attorneys enables them to offer Pacific Coast inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS, No. 202 Sansome St., San Francisco.

## Lands for Sale and to Let.

## BERKELEY PROPERTY.

## Residence and Business Lots

FOR SALE VERY LOW AND ON EASY TERMS.

The Cheapest and most Desirable Property for Investment or for Home-steads in the State.

Lots worth \$200 sold on installments of \$5 per month. Lots worth \$300, \$10 down; installments of \$5 per month. Lots worth \$500, \$50 down; installments of \$10 per month. Lots worth \$1,000, \$100 down; installments of \$20 per mo.

Within 40 minutes of the business center of San Francisco, reached at an expense of 15 cents for single trips or \$3 for monthly tickets, being a point at which all the important railroads of the State will center, and where the University and other educational institutions of the coast are located. With fine view and delightful climate and its present rapid improvement, all combine to make this the most desirable place to locate.

Give us a call and we will give entire satisfaction, as we have property in all parts of Berkeley, and can sell cheaper than any others. Call on

S. A. PENWELL,

652 Market Street, San Francisco,

Or at residence, cor. 6th and Bristol Sts., West Berkeley.

## Farm For Sale.

Yields an Income of \$4,000 a Year.

Price, \$10,500.

My Farm and Poultry Business yield over \$4,000 a year. The place—116 acres—with orchard, vineyard and improvements, has cost me \$15,000. The good will of the business is worth fully \$6,000. I will sell the business and farm for \$10,500, half cash, or exchange for San Francisco property. It is a bargain such as is seldom offered.

M. EYRE, Napa, Cal.

Law Office in San Francisco, No. 636 Clay St., Room 25. I am in Napa each Saturday and Sunday; other days in San Francisco.

## FOR SALE.

700 Acres. The Finest Stock and Grain Farm in Northern California.

Price, \$25,000, including Farming implements. The whole under fence.

The Stock upon this farm, all thoroughbred and graded, embracing some of the finest in the State, will be sold at private sale. Among the stock is some that has been awarded different premiums at State and County Fairs.

This is one of the finest opportunities for a man of means in the State. For full particulars apply to

D. B. HAYS,

Real Estate Agent, Oroville, Cal.

## C. C. RODGERS, CALIFORNIA LAND AGENCY,

Office, 276 First St., San Jose, Cal.

GENERAL LAND, REAL ESTATE, U. S. PENSION AND BOUNTY AGENT.

Will buy and sell Land Warrants; Locate and Survey Public Government Land, Pre-emption Homesteads, Soldier's and Sailor's Homesteads, Timber and Wood Lands, Desert Lands, Etc.

## FARMING LAND

For Sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$2,500,000,

In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

## OFFICERS:

PRESIDENT.....G. W. COLBY.

MANAGER AND CASHIER,

ALBERT MONTPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

## Grangers' Co-operative Business Association, of Sacramento Valley.

Location: K & 10th Sts., Sacramento, Cal

Dealers in GENERAL PRODUCE, RETAIL GROCERIES, and sale of FRUITS. Desire the co-operation and trade of farmers in general. Pay the highest market rates for all produce, and sell for the smallest profit. Our orders are cash on delivery. Goods shipped; marked C. O. D. W. H. HEVENER, Manager.



## The Mechanics' Fair.

## Electric Light Exhibit.

We refer to the electric light generated in the pavilion by the California Electric Light Co., of 427 Montgomery street, as an exhibit, although the splendor of the Brush electric light used needs no special mention. It manifests itself to the senses in all its beauty and mellowness, and we may say that its absence would seriously detract from the attractiveness of the whole display. Near the great Corliss engine are stationed two generators, the large one of which supplies light for the interior of the pavilion, while the small one supplies the lamps outside the main entrance. The workings of these generators are so beautiful and so perfect, and the scintillations of the electric sparks so spontaneous and uninterrupted, that the visitor stands fascinated, and going away, returns again, as if impelled by some supernatural attraction.

Although Europe is still pondering the utilization of this sun-like element, drawn by man's mechanical genius from nature's mysterious workshop, the United States has made great strides toward the perfection of the system, and our Pacific coast stands on the line as to its adaptation. The perfection of this Brush light is something wonderful. It responds accurately to the perfect working electro dynamic generator, and vies with it in furnishing ocular demonstration of the use to which may be adapted that grand, powerful and mysterious element, electricity. The photographs taken in the art gallery by the aid of this light present nearly all of the characteristics of sunlight, and the strong contrast between a few electric lights and innumerable gas jets places beyond all cavil the superiority of the former. The inquiring mind must feel amazement at this sign of progress, and we, on this coast, can have naught but feelings of satisfaction and words of encouragement for the California Electric Light Co. in its endeavor to introduce to our notice and use the most complete and brilliant artificial light at present known. It is not long since the markets of London were lighted with electricity. The best European lamps and generators were used, yet the light cast a deadly pallor over the produce, and was withdrawn. The light at the pavilion is certainly perfect. Not the slightest disagreeable tinge is cast upon the most delicate fabrics or articles, but tends rather to enhance their beauty, and bring out pleasing characteristics which the gas light, or even diffused light of day, would conceal. It is, withal, pleasant and refreshing to the eye, and we hope soon that it will be within the power of all to dispense with all other means of artificial illumination.

## Frank Bros.' Exhibit.

The display of agricultural implements by Frank Bros., at the Mechanics' fair, merits a more extended notice than the allusion which we made to it two weeks ago. The senior member of the firm, Mr. F. A. Frank, is one of the managers of the Institute, and an active promoter of its fairs, believing that they exert a marked influence upon the development of the industrial interests of the coast.

The exhibit of agricultural implements made by Frank Bros. is tastefully arranged, and the material is handsome, although the implements have the usual finish, and are not adorned for the occasion. The tools which most interest the agriculturist at this season of the year are plows, and in this respect the exhibit is excellent. The Browne gang and the Browne sulky plows are very handsome, and designed well for effective work. They are made entirely of iron and steel. The Browne gang has a wrought-iron arch and double lever. The plow can be lifted out of the ground very easily. Its strength will permit it being put to plow any depth, and it can be easily controlled and adjusted for any kind of work. It is furnished either with or without circular cutters. The horses are hitched in pairs. The Browne sulky plow is also entirely of iron and steel, has high wheels, light draft, and is easily operated. It has been widely introduced over the coast, and is put forth by the agents with full confidence in its merits. It is adapted for all conditions of soils. The exhibit includes a large number of patterns of the Clipper Walking plows, both iron and wooden beams. These are trim and strong, the steel mold-boards and shares polished like mirrors and shaped for a clean turn of the soil.

Another leading feature of Frank Bros.' exhibit is the reaping and mowing machinery. The machines are of the well-known Walter A. Wood manufacture. The new "Enclosed Gear" mower, which was introduced last spring, has now had a season's tests, and has, according to all accounts received, given great satisfaction. The "Sweep Rake reaper" has also been approved by wide use, and has been found effective in handling the most obstinate grain. The Walter A. Wood self-binding reaper was put into use last year, and received many testimonials from purchasers. A second season's tests has led them to express still greater satisfaction. In all ordinary grain it works to a charm. Occasionally there are weedy and lodged grain which has not been satisfactorily handled. This is, doubtless, owing to the

fact that the manufacturers were not fully posted as to the rough work which is sometimes required in our harvest fields. Next year there will be introduced extra heavy machines, especially built for this coast, embodying the same principles which have been shown fully correct in practice.

An item of the exhibit which commends itself both to city and rural folk, is a new lawn mower, the "Ajax," which is shown in the engraving on this page. In addition to other advantages in construction, this lawn mower has a style and adjustment of knives which enables it to cut with far less force on the handle than other lawn mowers. It also will cut either long or short grass with equal facility, and the cutting edges are so arranged that they will keep themselves sharp. We have used this mower on our own lawn with perfect satisfaction. A resident of Berkeley, personally known to us, who has large lawns and has had several mowers, says that the "Ajax" enables him to do in half an hour what he used to work half a day over with other mowers.

Other features of the exhibit of Frank Bros. may be summarized as follows: The McSherry improved force feed grain drill, which has been found excellent for sowing all kinds of grain and grass seed. It is easily regulated to sow just the quantity desired, and is contrived so that obstructions are thrown out and do not interfere with the feed. There are also shown the Defiance cultivators, both riding and walking. These are very simple in construction, and are adjustable to a great variety of uses. The California La Belle farm and freight wagon is also a feature of the exhibit. It has been largely sold during the last four years, and has given good satisfaction. The wagons are made from the best Eastern lumber, but are constructed with especial reference to use on this coast. They are very strong and durable.

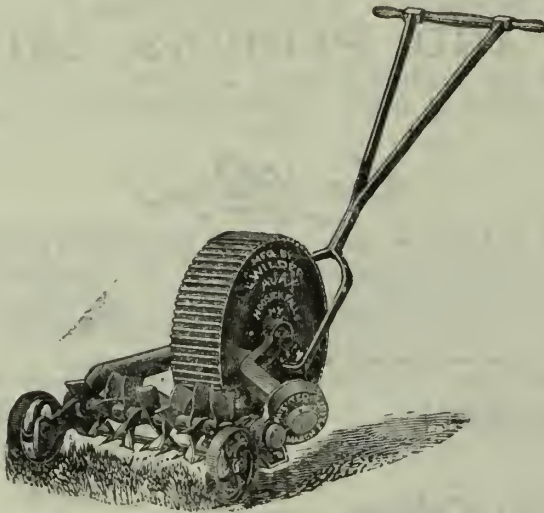
The machines shown at the fair are but a part of the list handled by Frank Bros. At their warerooms, at 349 Market street, S. F., and

its interesting features, is beautiful, and will repay a visit.

## Incubation.

For three weeks past the incubator exhibited at the Mechanics' fair in this city by the Eclipse Incubator Co. has been quietly performing its duty, and now it teems with new life. On Sunday last the first batch came out, 10 fine healthy chicks from 13 eggs, the three others proving bad. On Monday 11 more hatched out, and each succeeding day the machine has turned out a new brood and at this writing the artificial mother has charge of as healthy and vigorous a brood of chicks as we ever saw, and the incubator has another brood out of their shells but not quite strong enough to be removed to the mother. Such successful hatching, considering the unfavorable circumstances under which this machine has been placed, is very gratifying. The eggs were mostly bought in the city market and the machine has been open to show to visitors a large part of the time. During the weeks of incubation it has been left at about 10 p. m. each day, and no attention paid it until about 10 a. m. on the following day; so that for 12 consecutive hours of each day it has been left entirely to itself; proving that it is, as claimed, perfectly self regulating. This is the incubator now advertised in the Press by Mr. Wickson, the agent for the Pacific coast.

HOP-PICKING MACHINE.—An ingenious labor-saving device for picking hops has recently been invented, the arrangement consisting chiefly of two rubber rollers, so constructed as to draw in the branch of the vine, while two steel rollers, having an opposition action, pick the hops from it. The machine is about the size of an ordinary wringer of clothes, is propelled by means of a treadle, and runs as easily as a light sewing-machine. From the picker the hops run into a sack, and this, when filled, is taken to a separa-



THE "AJAX" LAWN MOWER.

104 Front street, Portland, Oregon, there may be found almost everything needed in implements and machines for farm work.

## Silk Manufacture in San Francisco.

California is peculiarly adapted to the cultivation of the silk worm has been demonstrated so thoroughly that there is no room for doubt. The *morua alba*, the true food of the silkworm, is easily cultivated, and the temperature is uniform enough to remove many of the diseases of the worms engendered by variations of temperature. The reaction consequent upon the *morua multicaulis* craze of several years ago, left the silk industry of this coast at zero, with the exception, perhaps, of several men of nerve and capital who knew that silk could be grown and manufactured on this coast as well as anywhere else, and the result at the present time, both in quantity and quality of silk, has realized their expectations. Calaveras county produces an excellent quality of cocoons, the silk of which compares favorably with imported silks, favorably with the Chinese and Italian silk. The California Silk Company, of San Francisco, have some beautiful specimens of the silk of Calaveras county, in large, lustrous hanks. This silk company has an extremely beautiful display of silk goods—silk thread of 250 different shades of color, embroidery, train and cord silk. The silk used by them is the re-reeled Isatlee silk, which is used in preference to the Italian silk on account of its strength. They are in hopes that silk raising will become one of the permanent industries of the State. At present the price of labor or the low price of silk will not justify it. It is certain, however, from experiments now being tried that it would not pay. The company has been organized about nine years, constantly investing large sums of money to make the business a success, and have now established the business of silk manufacture upon a paying basis. Considerable time has been devoted to the training of home labor, until now 120 girls, skilled in the manufacture, are employed by them. The exhibit, aside from

tor, which sorts the hops from all leaves or stems which may have gone into the sack, and from thence to the hop-house. The apparatus is estimated to pick as many as 20 to 30 boxes per day; and one separator is ample for a large number of the machines.

REPEATING MATCHES.—A patent has been taken out for a repeating match—that is, a match that may be struck a great many times, and yield a light each time. The match consists of two rods of inflammable composition, placed side by side in two compartments, with a suitable case. In order to strike the light, a scraper is moved by hand along a platform across the open ends of the two rods. The scraper removes a certain quantity of its substance from each rod, and mixing these together the light is produced. One stick is composed of three parts chlorate of potash and one part of clay, thoroughly mixed and formed into a thick paste by the addition of water, then dried. The other stick is made of three parts amorphous phosphorus and one part of clay, prepared in the same manner.

HEMP-SOFTENING MACHINE.—The Mohawk and Hudson Manufacturing Company, of Watford, Massachusetts, has recently built and shipped to the hemp region in Kentucky, a hemp-softening machine, which is believed to be the largest and heaviest in the country. It has two fluted rolls. The lower one is 12 inches in diameter and 6 feet long. The upper one is 24 inches by 6 feet. The lower one is driven by gearing from the back shaft, and in turn it drives the upper. The shafts are 6 inches in diameter. The upper roll and shaft weighed about 8,500 lbs., and the complete machine about 15,000. Other hemp-softening machines have been built at these works, but none as large and heavy as this.

AMERICAN ENGINES.—Locomotives of American manufacture are rapidly conquering those of European make in economy and favor. They are much less in cost than English engines in South America and Russia, and are gaining in favor.

## SOUTHERN CALIFORNIA HORTICULTURAL FAIR.

The indications are that the fair of the Southern California Horticultural Society, which will be held in Los Angeles during the week beginning October 20th, will be an unusually interesting exhibition. The fair last year showed that the co-operation of the agriculturists and manufacturers of the southern counties had been secured by the society, for the display was large, diversified and praiseworthy. This year the southern county producers will doubtless bring forward still better exhibits, and in addition to these there has been an effort made to secure interesting displays from other parts of the State and beyond. L. M. Holt, Secretary of the society, was in this city last week, and engaged some of the leading exhibitors at the Mechanics' fair to transfer their collections to Los Angeles. This movement, we understand, includes the exhibit of California productions, including the leaves of the Victoria Regia, and of Oregon productions, and of others. We believe also that one of San Francisco's best drilled and equipped military organizations will visit Los Angeles during the fair and take part in the exercises. A general invitation is extended to exhibitors of meritorious articles to be present at the October exhibition. The premium list is liberal, and the rules are quite favorable to exhibitors. Competition is open to all the world. The premium list and rules will be sent to any intending exhibitor who addresses the Secretary, L. M. Holt, at Los Angeles.

## METEOROLOGICAL SUMMARY FOR AUGUST.—

The report of the United States Signal Service officer, of San Francisco, for the month of August is summarized as follows: The mean height of barometer for the month was 29.876; mean temperature, 59.6; mean humidity, 78.1; prevailing winds, west; highest barometer, 30.043; lowest, 29.72; highest temperature, 89°; lowest, 50°; monthly range, 39°; greatest velocity of wind, 32 miles per hour; total number of miles traveled by wind, 8,264; total rainfall, .02 inches. Rainfall in August during former years: 1872, .00 inches; 1873, .08 inches; 1874, .00 inches; 1875, .00 inches; 1876, .01 inches; 1877, .00 inches; 1878, .00 inches.

PERSONAL.—Publishers and others will learn something to their advantage by communicating with us before having any business transactions with C. Stephenson, lately connected with newspapers in Auburn, Elko, Omaha, Chicago, New York, etc.

## OUR AGENTS.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. L. THARP—San Francisco.  
B. W. CROWELL—California.  
A. C. KNOX—Pacific Coast.  
S. V. BLAKESLEE—State of Nevada.  
G. W. MCGREW—Santa Clara county.  
MILTON KENNEDY—Kern and Inyo counties.  
J. B. BACHELDER—Shasta County, Cal.  
H. H. MESSENGER—Arizona.

## Books on Agriculture, Etc.

The following among other books will be sent post-paid on receipt of publishers' prices, annexed.—Tobacco, its culture, manufacture and use, 500 pages, \$3.50.—The Patrons of Husbandry, 500 pages, \$3.75.—The Women of the Bible, 77 engravings, \$4.—Wells' Every Man His Own Lawyer, 612 pages, \$2.75.—American Husbandry, 2 vol., \$1.50.—Gray's Agricultural Essays, \$1.—Langstroth's Honey Bee, \$1.50.—Rural Sheep Husbandry, \$1.50.—Agricultural Engineering, \$1.50; New Bee-Keepers' Text Book, \$1.—Pacific Rural Handbook, \$1.—Ropp's Easy Calculator, \$1.—U. S. Land Law, 50 Cts.—Woodward's Grapes, Etc., \$1.—Sugar from Melons, 25 Cts.—Strawberry Culture, 50 Cts.—Layres' Belles Lettres, \$1.—Holt's Map of California and Nevada, to subscribers, \$1.—Back Volumes PACIFIC RURAL PRESS (bound) \$3; unbound, \$3.—Picturesque Arizona, \$2. Address DEWEY & CO., Publishers, 202 Sansome St., S. F.

PACIFIC RURAL HANDBOOK.—By Chas. H. Shinn. Published by Dewey & Co., San Francisco, Cal. This little volume, priced at \$1 (post-paid), contains 122 pages of entertaining and instructive matter. It is written for local conditions and local use, but will afford many a hint to dwellers far from the western coast. The subjects are suggestively treated, and will be of evident service in building up amongst its readers that love of rural life and rural affairs which is so conducive to happy living and the pleasant home. It treats of laying out the grounds about the house, the improving of the soil, of irrigation, wind-breaks and hedges, fruit trees and small fruit, shade trees, shrubs, vegetables, flower gardens, propagation, window plants, etc., and contains several tables of desirable plants. This book well deserves its title; it is a rural handbook of horticulture and gardening, and we trust it will be one of a series.—Scientific Farmer, Boston, Mass.

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

BACK NUMBERS WANTED.—One copy of the following Nos. of the PACIFIC RURAL PRESS are wanted at this office, for which 10 cents a copy is offered by "W." viz. Vol. 14, No. 21—Nov. 24th, 1877. Vol. 15, No. 7—Feb. 16th, 1878. Vol. 15, No. 8—Feb. 23d, 1878. Vol. 16, No. 24—Dec. 14th, 1878.

HOW TO STOP THIS PAPER.—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate the copy sent.

EXTRA COPIES can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.



## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, September 3d, 1879.

Trade, industry, and even amusements have paled before the attractions of the political arena, and there has been more talk than traffic for several days past. To-day business is generally suspended and quotations are uncertain quantities. We shall, however, make such remarks upon the markets as seem justified by facts, referring readers to next week's report for more definite particulars.

The grain is still arriving quite freely and going aboard ship. Quite large sales are reported at current rates.

## The Foreign Review.

LONDON, September 2.—The *Mark Lane Express* says: The damage done is irreparable. No subsequent weather can prevent the outcome of this season's wheat crop proving most disastrous, both in quality and quantity. Happily the weather the last day or two has been well suited to harvest operations. Many fields are still quite green, while in others wheat, though more forward, is of bad color. Root crops are choked with weeds. Potatoes have gone from bad to worse. In fact, in no single instance can agricultural prospects be said to have improved. During the past fortnight, in consequence of foreign supplies, the bad weather had little effect on the wheat trade. The most that can be said is in occasional instances holders have submitted to an advance of a shilling per quarter, and even that has been obtained with difficulty. It is estimated that similar agricultural disasters 10 years ago would have entailed an advance of 10s per quarter. The supply for the moment has completely distanced the demand, owing to the outward movement from American Atlantic ports. The trade, however, cannot be expected to remain in its present inert condition for any length of time, and a marked advance may be expected. When the attention of buyers, now engrossed by excessive foreign arrivals, is given to the fact that, taking into consideration the diminished acreage sown, and the wretched results of the home crop, the amount of foreign wheat required to supplement our deficiency is something like 4,000,000 quarters more than is required in ordinary seasons. Off coast wheat during the earlier part of the week ruled firm, owing to the wet weather. Old No. 2 Spring Wheat advanced a shilling per quarter, whilst Red Winters were firmly held for full prices; but, with better weather at the close of the week, a quieter tone prevailed, and there has been a good continued demand. Maize has been dull, and 3d to 6d per quarter cheaper. There has been a fair business in wheat for forward delivery at rather better prices, but the demand has again fallen off. Maize is quiet, buyers continuing to operate very cautiously. Sales of English Wheat last week 17,759 quarters, at 48s 1d, against 33,442 quarters, at 45s 8d, the previous year. Imports into the United Kingdom for the week ending August 23d, 1879, were 1,705,631 cwt of wheat, and 106,439 cwt of flour. In Mark Lane, Monday, wheat was slow at the last day's quotations. Flour and barley were unanimated. Maize rather favored buyers. Oats advanced 6d to 9d per quarter.

## Freights and Charters.

The *Commercial News* says: There has been a steady demand for tonnage since our last which has been freely met, resulting in a large number of charters being drawn, and recalling to mind forcibly the activity of a few years ago. The iron ships have showed a much greater desire to charter than the wooden vessels, and have accepted proportionally lower rates—22 5s to Liverpool direct against 23 3d to the same port for first-class wood. The tonnage now on the way amounts to 164,155 tons, against 154,355 tons at this time in 1878. We have 41,307 tons loading wheat, and 31,415 tons disengaged, as against 59,008 tons last year.

## Eastern Grain and Provision Markets.

NEW YORK, August 30.—In the Merchandise markets there is a fair business doing for the season, and the indications are that the fall trade will be a good one. Prices of nearly all kinds of goods are steady, and in instances very firm, with an upward tendency. Flour is in light demand, steady. Wheat is quiet, easy. Pork is dull, steady. Lard is quiet, irregular.

CHICAGO, August 30.—Wheat opened firm on Monday and closed weak, with a trifling decline to-day, and a tendency to fall in value still more. Corn took exactly the opposite turn, being firm at the close, although during the week the lowest prices ever recorded were reached. Oats were weak and heavy. The crop of corn is in splendid condition, with a promise of a late fall to enable farmers to secure it in good shape. Provisions were firm at the opening of the week, but gradually declined until to-day, when there was a reaction and increased activity. Operators, building on low prices of corn and reports of the hog crop, have allowed prices to go almost to bedrock without taking hold to any considerable extent for a rise, and many are predicting a still further decline. Sales, October option, were: Wheat, 80,000 bushels; Corn, 32,000 bushels; Oats, 22,000 bushels; Pork, 37,874 bushels; Lard, 55,000 bushels. Rye, for cash, sold at 48 1/2c. Barley, for September, 70¢. Closing cash prices were: Wheat, Winter, 90¢; Spring, 86¢; Corn, 32¢; Oats, 21¢; Rye, 43¢; Pork, 87 1/2¢; Lard, 55¢. Receipts for the week: Wheat, 919,000 bushels; Corn, 1,853,000; Oats, 689,000. Shipments: Wheat, 759,000 bushels; Corn, 1,882,000; Oats, 449,000. Receipts same time last year: Wheat, 910,000 bushels; Corn, 2,614,000; Oats, 903,000. Shipments: Wheat, 895,000 bushels; Corn, 2,189,000; Oats, 779,000.

## Eastern Wool Markets.

NEW YORK, August 30.—Wool is in fair demand and firmly held. Sales of 78,000 lbs Spring California at 22 1/2¢; 5,000 lbs Southern California at 20 1/2¢.

Boston, August 30.—The demand for wool continues good, sales of the past week amounting to 2,631,900 lbs, of which 1,873,900 was domestic. There is considerable inquiry for fine fleeces, and holders are quite firm, a number of large buyers being in market, and prices are tending strongly upward. Medium Wools sustain the advance previously noticed, and the indications point to higher figures soon. A fair business was done in Combings and Delaine selections, and desirable grades of domestic Combings were held with firmness. Sales comprise Ohio and Pennsylvania fleeces, XXX, medium, and No. 1, at 35¢; Michigan X and No. 1, 35¢; Wisconsin X, 37¢; Maine and New Hampshire fleeces, 30¢; Combings and Delaine fleeces, 37¢; unwashed Combings, 25¢; Missouri fine washed and unwashed fleeces, 22¢; Missouri fine and medium, 23¢; Oregon, Eastern and Valley, 23¢; Georgia, 32¢; Territories, 25¢; scoured, 40¢; Texas, 23¢; Super and X pulled, 29¢; California Wool not sold to any extent, and transactions were weak, comprising only 107,000 lbs of Spring, at from 21 1/2¢ to 32 1/2¢.

PHILADELPHIA, September 2.—Wool is firm, with a good demand for most descriptions. Colorado washed, 18¢; unwashed, 17¢; extra and Merino pulled, 33¢; No. 1 and Super pulled, 33¢; No. 2 and Super pulled, 33¢; No. 3 and Super pulled, 33¢; No. 4 and Super pulled, 33¢; No. 5 and Super pulled, 33¢; No. 6 and Super pulled, 33¢; No. 7 and Super pulled, 33¢; No. 8 and Super pulled, 33¢; No. 9 and Super pulled, 33¢; No. 10 and Super pulled, 33¢; No. 11 and Super pulled, 33¢; No. 12 and Super pulled, 33¢; No. 13 and Super pulled, 33¢; No. 14 and Super pulled, 33¢; No. 15 and Super pulled, 33¢; No. 16 and Super pulled, 33¢; No. 17 and Super pulled, 33¢; No. 18 and Super pulled, 33¢; No. 19 and Super pulled, 33¢; No. 20 and Super pulled, 33¢; No. 21 and Super pulled, 33¢; No. 22 and Super pulled, 33¢; No. 23 and Super pulled, 33¢; No. 24 and Super pulled, 33¢; No. 25 and Super pulled, 33¢; No. 26 and Super pulled, 33¢; No. 27 and Super pulled, 33¢; No. 28 and Super pulled, 33¢; No. 29 and Super pulled, 33¢; No. 30 and Super pulled, 33¢; No. 31 and Super pulled, 33¢; No. 32 and Super pulled, 33¢; No. 33 and Super pulled, 33¢; No. 34 and Super pulled, 33¢; No. 35 and Super pulled, 33¢; No. 36 and Super pulled, 33¢; No. 37 and Super pulled, 33¢; No. 38 and Super pulled, 33¢; No. 39 and Super pulled, 33¢; No. 40 and Super pulled, 33¢; No. 41 and Super pulled, 33¢; No. 42 and Super pulled, 33¢; No. 43 and Super pulled, 33¢; No. 44 and Super pulled, 33¢; No. 45 and Super pulled, 33¢; No. 46 and Super pulled, 33¢; No. 47 and Super pulled, 33¢; No. 48 and Super pulled, 33¢; No. 49 and Super pulled, 33¢; No. 50 and Super pulled, 33¢; No. 51 and Super pulled, 33¢; No. 52 and Super pulled, 33¢; No. 53 and Super pulled, 33¢; No. 54 and Super pulled, 33¢; No. 55 and Super pulled, 33¢; No. 56 and Super pulled, 33¢; No. 57 and Super pulled, 33¢; No. 58 and Super pulled, 33¢; No. 59 and Super pulled, 33¢; No. 60 and Super pulled, 33¢; No. 61 and Super pulled, 33¢; No. 62 and Super pulled, 33¢; No. 63 and Super pulled, 33¢; No. 64 and Super pulled, 33¢; No. 65 and Super pulled, 33¢; No. 66 and Super pulled, 33¢; No. 67 and Super pulled, 33¢; No. 68 and Super pulled, 33¢; No. 69 and Super pulled, 33¢; No. 70 and Super pulled, 33¢; No. 71 and Super pulled, 33¢; No. 72 and Super pulled, 33¢; No. 73 and Super pulled, 33¢; No. 74 and Super pulled, 33¢; No. 75 and Super pulled, 33¢; No. 76 and Super pulled, 33¢; No. 77 and Super pulled, 33¢; No. 78 and Super pulled, 33¢; No. 79 and Super pulled, 33¢; No. 80 and Super pulled, 33¢; No. 81 and Super pulled, 33¢; No. 82 and Super pulled, 33¢; No. 83 and Super pulled, 33¢; No. 84 and Super pulled, 33¢; No. 85 and Super pulled, 33¢; No. 86 and Super pulled, 33¢; No. 87 and Super pulled, 33¢; No. 88 and Super pulled, 33¢; No. 89 and Super pulled, 33¢; No. 90 and Super pulled, 33¢; No. 91 and Super pulled, 33¢; No. 92 and Super pulled, 33¢; No. 93 and Super pulled, 33¢; No. 94 and Super pulled, 33¢; No. 95 and Super pulled, 33¢; No. 96 and Super pulled, 33¢; No. 97 and Super pulled, 33¢; No. 98 and Super pulled, 33¢; No. 99 and Super pulled, 33¢; No. 100 and Super pulled, 33¢; No. 101 and Super pulled, 33¢; No. 102 and Super pulled, 33¢; No. 103 and Super pulled, 33¢; No. 104 and Super pulled, 33¢; No. 105 and Super pulled, 33¢; No. 106 and Super pulled, 33¢; No. 107 and Super pulled, 33¢; No. 108 and Super pulled, 33¢; No. 109 and Super pulled, 33¢; No. 110 and Super pulled, 33¢; No. 111 and Super pulled, 33¢; No. 112 and Super pulled, 33¢; No. 113 and Super pulled, 33¢; No. 114 and Super pulled, 33¢; No. 115 and Super pulled, 33¢; No. 116 and Super pulled, 33¢; No. 117 and Super pulled, 33¢; No. 118 and Super pulled, 33¢; No. 119 and Super pulled, 33¢; No. 120 and Super pulled, 33¢; No. 121 and Super pulled, 33¢; No. 122 and Super pulled, 33¢; No. 123 and Super pulled, 33¢; No. 124 and Super pulled, 33¢; No. 125 and Super pulled, 33¢; No. 126 and Super pulled, 33¢; No. 127 and Super pulled, 33¢; No. 128 and Super pulled, 33¢; No. 129 and Super pulled, 33¢; No. 130 and Super pulled, 33¢; No. 131 and Super pulled, 33¢; No. 132 and Super pulled, 33¢; No. 133 and Super pulled, 33¢; No. 134 and Super pulled, 33¢; No. 135 and Super pulled, 33¢; No. 136 and Super pulled, 33¢; No. 137 and Super pulled, 33¢; No. 138 and Super pulled, 33¢; No. 139 and Super pulled, 33¢; No. 140 and Super pulled, 33¢; No. 141 and Super pulled, 33¢; No. 142 and Super pulled, 33¢; No. 143 and Super pulled, 33¢; No. 144 and Super pulled, 33¢; No. 145 and Super pulled, 33¢; No. 146 and Super pulled, 33¢; No. 147 and Super pulled, 33¢; No. 148 and Super pulled, 33¢; No. 149 and Super pulled, 33¢; No. 150 and Super pulled, 33¢; No. 151 and Super pulled, 33¢; No. 152 and Super pulled, 33¢; No. 153 and Super pulled, 33¢; No. 154 and Super pulled, 33¢; No. 155 and Super pulled, 33¢; No. 156 and Super pulled, 33¢; No. 157 and Super pulled, 33¢; No. 158 and Super pulled, 33¢; No. 159 and Super pulled, 33¢; No. 160 and Super pulled, 33¢; No. 161 and Super pulled, 33¢; No. 162 and Super pulled, 33¢; No. 163 and Super pulled, 33¢; No. 164 and Super pulled, 33¢; No. 165 and Super pulled, 33¢; No. 166 and Super pulled, 33¢; No. 167 and Super pulled, 33¢; No. 168 and Super pulled, 33¢; No. 169 and Super pulled, 33¢; No. 170 and Super pulled, 33¢; No. 171 and Super pulled, 33¢; No. 172 and Super pulled, 33¢; No. 173 and Super pulled, 33¢; No. 174 and Super pulled, 33¢; No. 175 and Super pulled, 33¢; No. 176 and Super pulled, 33¢; No. 177 and Super pulled, 33¢; No. 178 and Super pulled, 33¢; No. 179 and Super pulled, 33¢; No. 180 and Super pulled, 33¢; No. 181 and Super pulled, 33¢; No. 182 and Super pulled, 33¢; No. 183 and Super pulled, 33¢; No. 184 and Super pulled, 33¢; No. 185 and Super pulled, 33¢; No. 186 and Super pulled, 33¢; No. 187 and Super pulled, 33¢; No. 188 and Super pulled, 33¢; No. 189 and Super pulled, 33¢; No. 190 and Super pulled, 33¢; No. 191 and Super pulled, 33¢; No. 192 and Super pulled, 33¢; No. 193 and Super pulled, 33¢; No. 194 and Super pulled, 33¢; No. 195 and Super pulled, 33¢; No. 196 and Super pulled, 33¢; No. 197 and Super pulled, 33¢; No. 198 and Super pulled, 33¢; No. 199 and Super pulled, 33¢; No. 200 and Super pulled, 33¢; No. 201 and Super pulled, 33¢; No. 202 and Super pulled, 33¢; No. 203 and Super pulled, 33¢; No. 204 and Super pulled, 33¢; No. 205 and Super pulled, 33¢; No. 206 and Super pulled, 33¢; No. 207 and Super pulled, 33¢; No. 208 and Super pulled, 33¢; No. 209 and Super pulled, 33¢; No. 210 and Super pulled, 33¢; No. 211 and Super pulled, 33¢; No. 212 and Super pulled, 33¢; No. 213 and Super pulled, 33¢; No. 214 and Super pulled, 33¢; No. 215 and Super pulled, 33¢; No. 216 and Super pulled, 33¢; No. 217 and Super pulled, 33¢; No. 218 and Super pulled, 33¢; No. 219 and Super pulled, 33¢; No. 220 and Super pulled, 33¢; No. 221 and Super pulled, 33¢; No. 222 and Super pulled, 33¢; No. 223 and Super pulled, 33¢; No. 224 and Super pulled, 33¢; No. 225 and Super pulled, 33¢; No. 226 and Super pulled, 33¢; No. 227 and Super pulled, 33¢; No. 228 and Super pulled, 33¢; No. 229 and Super pulled, 33¢; No. 230 and Super pulled, 33¢; No. 231 and Super pulled, 33¢; No. 232 and Super pulled, 33¢; No. 233 and Super pulled, 33¢; No. 234 and Super pulled, 33¢; No. 235 and Super pulled, 33¢; No. 236 and Super pulled, 33¢; No. 237 and Super pulled, 33¢; No. 238 and Super pulled, 33¢; No. 239 and Super pulled, 33¢; No. 240 and Super pulled, 33¢; No. 241 and Super pulled, 33¢; No. 242 and Super pulled, 33¢; No. 243 and Super pulled, 33¢; No. 244 and Super pulled, 33¢; No. 245 and Super pulled, 33¢; No. 246 and Super pulled, 33¢; No. 247 and Super pulled, 33¢; No. 248 and Super pulled, 33¢; No. 249 and Super pulled, 33¢; No. 250 and Super pulled, 33¢; No. 251 and Super pulled, 33¢; No. 252 and Super pulled, 33¢; No. 253 and Super pulled, 33¢; No. 254 and Super pulled, 33¢; No. 255 and Super pulled, 33¢; No. 256 and Super pulled, 33¢; No. 257 and Super pulled, 33¢; No. 258 and Super pulled, 33¢; No. 259 and Super pulled, 33¢; No. 260 and Super pulled, 33¢; No. 261 and Super pulled, 33¢; No. 262 and Super pulled, 33¢; No. 263 and Super pulled, 33¢; No. 264 and Super pulled, 33¢; No. 265 and Super pulled, 33¢; No. 266 and Super pulled, 33¢; No. 267 and Super pulled, 33¢; No. 268 and Super pulled, 33¢; No. 269 and Super pulled, 33¢; No. 270 and Super pulled, 33¢; No. 271 and Super pulled, 33¢; No. 272 and Super pulled, 33¢; No. 273 and Super pulled, 33¢; No. 274 and Super pulled, 33¢; No. 275 and Super pulled, 33¢; No. 276 and Super pulled, 33¢; No. 277 and Super pulled, 33¢; No. 278 and Super pulled, 33¢; No. 279 and Super pulled, 33¢; No. 280 and Super pulled, 33¢; No. 281 and Super pulled, 33¢; No. 282 and Super pulled, 33¢; No. 283 and Super pulled, 33¢; No. 284 and Super pulled, 33¢; No. 285 and Super pulled, 33¢; No. 286 and Super pulled, 33¢; No. 287 and Super pulled, 33¢; No. 288 and Super pulled, 33¢; No. 289 and Super pulled, 33¢; No. 290 and Super pulled, 33¢; No. 291 and Super pulled, 33¢; No. 292 and Super pulled, 33¢; No. 293 and Super pulled, 33¢; No. 294 and Super pulled, 33¢; No. 295 and Super pulled, 33¢; No. 296 and Super pulled, 33¢; No. 297 and Super pulled, 33¢; No. 298 and Super pulled, 33¢; No. 299 and Super pulled, 33¢; No. 300 and Super pulled, 33¢; No. 301 and Super pulled, 33¢; No. 302 and Super pulled, 33¢; No. 303 and Super pulled, 33¢; No. 304 and Super pulled, 33¢; No. 305 and Super pulled, 33¢; No. 306 and Super pulled, 33¢; No. 307 and Super pulled, 33¢; No. 308 and Super pulled, 33¢; No. 309 and Super pulled, 33¢; No. 310 and Super pulled, 33¢; No. 311 and Super pulled, 33¢; No. 312 and Super pulled, 33¢; No. 313 and Super pulled, 33¢; No. 314 and Super pulled, 33¢; No. 315 and Super pulled, 33¢; No. 316 and Super pulled, 33¢; No. 317 and Super pulled, 33¢; No. 318 and Super pulled, 33¢; No. 319 and Super pulled, 33¢; No. 320 and Super pulled, 33¢; No. 321 and Super pulled, 33¢; No. 322 and Super pulled, 33¢; No. 323 and Super pulled, 33¢; No. 324 and Super pulled, 33¢; No. 325 and Super pulled, 33¢; No. 326 and Super pulled, 33¢; No. 327 and Super pulled, 33¢; No. 328 and Super pulled, 33¢; No. 329 and Super pulled, 33¢; No. 330 and Super pulled, 33¢; No. 331 and Super pulled, 33¢; No. 332 and Super pulled, 33¢; No. 333 and Super pulled, 33¢; No. 334 and Super pulled, 33¢; No. 335 and Super pulled, 33¢; No. 336 and Super pulled, 33¢; No. 337 and Super pulled, 33¢; No. 338 and Super pulled, 33¢; No. 339 and Super pulled, 33¢; No. 340 and Super pulled, 33¢; No. 341 and Super pulled, 33¢; No. 342 and Super pulled, 33¢; No. 343 and Super pulled, 33¢; No. 344 and Super pulled, 33¢; No. 345 and Super pulled, 33¢; No. 346 and Super pulled, 33¢; No. 347 and Super pulled, 33¢; No. 348 and Super pulled, 33¢; No. 349 and Super pulled, 33¢; No. 350 and Super pulled, 33¢; No. 351 and Super pulled, 33¢; No. 352 and Super pulled, 33¢; No. 353 and Super pulled, 33¢; No. 354 and Super pulled, 33¢; No. 355 and Super pulled, 33¢; No. 356 and Super pulled, 33¢; No. 357 and Super pulled, 33¢; No. 358 and Super pulled, 33¢; No. 359 and Super pulled, 33¢; No. 360 and Super pulled, 33¢; No. 361 and Super pulled, 33¢; No. 362 and Super pulled, 33¢; No. 363 and Super pulled, 33¢; No. 364 and Super pulled, 33¢; No. 365 and Super pulled, 33¢; No. 366 and Super pulled, 33¢; No. 367 and Super pulled, 33¢; No. 368 and Super pulled, 33¢; No. 369 and Super pulled, 33¢; No. 370 and Super pulled, 33¢; No. 371 and Super pulled, 33¢; No. 372 and Super pulled, 33¢; No. 373 and Super pulled, 33¢; No. 374 and Super pulled, 33¢; No. 375 and Super pulled, 33¢; No. 376 and Super pulled, 33¢; No. 377 and Super pulled, 33¢; No. 378 and Super pulled, 33¢; No. 379 and Super pulled, 33¢; No. 380 and Super pulled, 33¢; No. 381 and Super pulled, 33¢; No. 382 and Super pulled, 33¢; No. 383 and Super pulled, 33¢; No. 384 and Super pulled, 33¢; No. 385 and Super pulled, 33¢; No. 386 and Super pulled, 33¢; No. 387 and Super pulled, 33¢; No. 388 and Super pulled, 33¢; No. 389 and Super pulled, 33¢; No. 390 and Super pulled, 33¢; No. 391 and Super pulled, 33¢; No. 392 and Super pulled, 33¢; No. 393 and Super pulled, 33¢; No. 394 and Super pulled, 33¢; No. 395 and Super pulled, 33¢; No. 396 and Super pulled, 33¢; No. 397 and Super pulled, 33¢; No. 398 and Super pulled, 33¢; No. 399 and Super pulled, 33¢; No. 400 and Super pulled, 33¢; No. 401 and Super pulled, 33¢; No. 402 and Super pulled, 33¢; No. 403 and Super pulled, 33¢; No. 404 and Super pulled, 33¢; No. 405 and Super pulled, 33¢; No. 406 and Super pulled, 33¢; No. 407 and Super pulled, 33¢; No. 408 and Super pulled, 33¢; No. 409 and Super pulled, 33¢; No. 410 and Super pulled, 33¢; No. 411 and Super pulled, 33¢; No. 412 and Super pulled, 33¢; No. 413 and Super pulled, 33¢; No. 414 and Super pulled, 33¢; No. 415 and Super pulled, 33¢; No. 416 and Super pulled, 33¢; No. 417 and Super pulled, 33¢; No. 418 and Super pulled, 33¢; No. 419 and Super pulled, 33¢; No. 420 and Super pulled, 33¢; No. 421 and Super pulled, 33¢; No. 422 and Super pulled, 33¢; No. 423 and Super pulled, 33¢; No. 424 and Super pulled, 33¢; No. 425 and Super pulled, 33¢; No. 426 and Super pulled, 33¢; No. 427 and Super pulled, 33¢; No. 428 and Super pulled, 33¢; No. 429 and Super pulled, 33¢; No. 430 and Super pulled, 33¢; No. 431 and Super pulled, 33¢; No. 432 and Super pulled, 33¢; No. 433 and Super pulled, 33¢; No. 434 and Super pulled, 33¢; No. 435 and Super pulled, 33¢; No. 436 and Super pulled, 33¢; No. 437 and Super pulled, 33¢; No. 438 and Super pulled, 33¢; No. 439 and Super pulled, 33¢; No. 440 and Super pulled, 33¢; No. 441 and Super pulled, 33¢; No. 442 and Super pulled, 33¢; No. 443 and Super pulled, 33¢; No. 444 and Super pulled, 33¢; No. 445 and Super pulled, 33¢; No. 446 and Super pulled, 33¢; No. 447 and Super pulled, 33¢; No. 448 and Super pulled, 33¢; No. 449 and Super pulled, 33¢; No. 450 and Super pulled, 33¢; No. 451 and Super pulled, 33¢; No. 452 and Super pulled, 33¢; No. 453 and Super pulled, 33¢; No. 454 and Super pulled, 33¢; No. 455 and Super pulled, 33¢; No. 456 and Super pulled, 33¢; No. 457 and Super pulled, 33¢; No. 458 and Super pulled, 33¢; No. 459 and Super pulled, 33¢; No. 460 and Super pulled, 33¢; No. 461 and Super pulled, 33¢; No. 462 and Super pulled, 33¢; No. 463 and Super pulled, 33¢; No. 464 and Super pulled, 33¢; No. 465 and Super pulled, 33¢; No. 466 and Super pulled, 33¢; No. 467 and Super pulled, 33¢; No. 468 and Super pulled, 33¢; No. 469 and Super pulled, 33¢; No. 470 and Super pulled, 33¢; No. 471 and Super pulled, 33¢; No. 472 and Super pulled, 33¢; No. 473 and Super pulled, 33¢; No. 474 and Super pulled, 33¢; No. 475 and Super pulled, 33¢; No. 476 and Super pulled, 33¢; No. 477 and Super pulled, 33¢; No. 478 and Super pulled, 33¢; No. 479 and Super pulled, 33¢; No. 480 and Super pulled, 33¢; No. 481 and Super pulled, 33¢; No. 482 and Super pulled, 33¢; No. 483 and Super pulled, 33¢; No. 484 and Super pulled, 33¢; No. 485 and Super pulled, 33¢; No. 486 and Super pulled, 33¢; No. 487 and Super pulled, 33¢; No. 488 and Super pulled, 33¢; No. 489 and Super pulled, 33¢; No. 490 and Super pulled, 33¢; No. 491 and Super pulled, 33¢; No. 492 and Super pulled, 33¢; No. 493 and Super pulled, 33¢; No. 494 and Super pulled, 33¢; No. 495 and Super pulled, 33¢; No. 496 and Super pulled, 33¢; No. 497 and Super pulled, 33¢; No. 498 and Super pulled, 33¢; No. 499 and Super pulled, 33¢; No. 500 and Super pulled, 33¢; No. 501 and Super pulled, 33¢; No. 502 and Super pulled, 33¢; No. 503 and Super pulled, 33¢; No. 504 and Super pulled, 33¢; No. 505 and Super pulled, 33¢; No. 506 and Super pulled, 33¢; No. 507 and Super pulled, 33¢; No. 508 and Super pulled, 33¢; No. 509 and Super pulled, 33¢; No. 510 and Super pulled, 33¢; No. 511 and Super pulled, 33¢; No. 512 and Super pulled, 33¢; No. 513 and Super pulled, 33¢; No. 514 and Super pulled, 33¢; No. 515 and Super pulled, 33¢; No. 516 and Super pulled, 33¢; No. 517 and Super pulled, 33¢; No. 518 and Super pulled, 33¢; No. 519 and Super pulled, 33¢; No. 520 and Super pulled, 33¢; No. 521 and Super pulled, 33¢; No. 522 and Super pulled, 33¢; No. 523 and Super pulled, 33¢; No. 524 and Super pulled, 33¢; No. 525 and Super pulled, 33¢; No. 526 and Super pulled, 33¢; No. 527 and Super pulled, 33¢; No. 528 and Super pulled, 33¢; No. 529 and Super pulled, 33¢; No. 530 and Super pulled, 33¢; No. 531 and Super pulled, 33¢; No. 532 and Super pulled, 33¢; No. 533 and Super pulled, 33¢; No. 534 and Super pulled, 33¢; No. 535 and Super pulled, 33¢; No. 536 and Super pulled, 33¢; No. 537 and Super pulled, 33¢; No. 538 and Super pulled, 33¢; No. 539 and Super pulled, 33¢; No. 540 and Super pulled, 33¢; No. 541 and Super pulled, 33¢; No. 542 and Super pulled, 33¢; No. 543 and Super pulled, 33¢; No. 544 and Super pulled, 33¢; No. 545 and Super pulled, 33¢; No. 546 and Super pulled, 33¢; No. 547 and Super pulled, 33¢; No. 548 and Super pulled, 33¢; No. 549 and Super pulled, 33¢; No. 550 and Super pulled, 33¢; No. 551 and Super pulled, 33¢; No. 552 and Super pulled, 33¢; No. 553 and Super pulled, 33¢; No. 554 and Super pulled, 33¢; No. 555 and Super pulled, 33¢; No. 556 and Super pulled, 33¢; No. 557 and Super pulled, 33¢; No. 558 and Super pulled, 33¢; No. 559 and Super pulled, 33¢; No. 560 and Super pulled, 33¢; No. 561 and Super pulled, 33¢; No. 562 and Super pulled, 33¢; No. 563 and Super pulled, 33¢; No. 564 and Super pulled, 33¢; No. 565 and Super pulled, 33¢; No. 566 and Super pulled, 33¢; No. 567 and Super pulled, 33¢; No. 568 and Super pulled, 33¢; No. 569 and Super pulled, 33¢; No. 570 and Super pulled, 33¢; No. 571 and Super pulled, 33¢; No. 572 and Super pulled, 33¢; No. 573 and Super pulled, 33¢; No. 574 and Super pulled, 33¢; No. 575 and Super pulled, 33¢; No. 576 and Super pulled, 33¢; No. 577 and Super pulled, 33¢; No. 578 and Super pulled, 33¢; No. 579 and Super pulled, 33¢; No. 580 and Super pulled, 33¢; No. 581 and Super pulled, 33¢; No. 582 and Super pulled, 33¢; No. 583 and Super pulled, 33¢; No. 584 and Super pulled, 33¢; No. 585 and Super pulled, 33¢; No. 586 and Super pulled, 33¢; No. 587 and Super pulled, 33¢; No. 588 and Super pulled, 33¢; No. 589 and Super pulled, 33¢; No. 590 and Super pulled, 33¢; No. 591 and Super pulled, 33¢; No. 592 and Super pulled, 33¢; No. 593 and Super pulled, 33¢; No. 594 and Super pulled, 33¢; No. 595 and Super pulled, 33¢; No. 596 and Super pulled, 33¢; No. 597 and Super pulled, 33¢; No. 598 and Super pulled, 33¢; No. 599 and Super pulled, 33¢; No. 600 and Super pulled, 33¢; No. 601 and Super pulled, 33¢; No. 602 and Super pulled, 33¢; No. 603 and Super pulled, 33¢; No. 604 and Super pulled, 33¢; No. 605 and Super pulled, 33¢; No. 606 and Super pulled, 33¢; No. 607 and Super pulled, 33¢; No. 608 and Super pulled, 33¢; No. 609 and Super pulled, 33¢; No. 610 and Super pulled, 33¢; No. 611 and Super pulled, 33¢; No. 612 and Super pulled, 33¢; No. 613 and Super pulled, 33¢; No. 614 and Super pulled, 33¢; No. 615 and Super pulled, 33¢; No. 616 and Super pulled, 33¢; No. 617 and Super pulled, 33¢; No. 618 and Super pulled, 33¢; No. 619 and Super pulled, 33¢; No. 620 and Super pulled, 33¢; No. 621 and Super pulled, 33¢; No. 622 and Super pulled, 33¢; No. 623 and Super pulled, 33¢; No. 624 and Super pulled, 33¢; No. 625 and Super pulled, 33¢; No. 626 and Super pulled, 33¢; No. 627 and Super pulled, 33¢; No. 628 and Super pulled, 33¢; No. 629 and Super pulled, 33¢; No. 630 and Super pulled, 33¢; No. 631 and Super pulled, 33¢; No. 632 and Super pulled, 33¢; No. 633 and Super pulled, 33¢; No. 634 and Super pulled, 33¢; No. 635 and Super pulled, 33¢; No. 636 and Super pulled, 33¢; No. 637 and Super pulled, 33¢; No. 638 and Super pulled, 33¢; No. 639 and Super pulled, 33¢; No. 640 and Super pulled, 33¢; No. 641 and Super pulled, 33¢; No. 642 and Super pulled, 33¢; No. 643 and Super pulled, 33¢; No. 644 and Super pulled, 33¢; No. 645 and Super pulled, 33¢; No. 646 and Super pulled, 33¢; No. 647 and Super pulled, 33¢; No. 648 and Super pulled, 33¢; No. 649 and Super pulled, 33¢; No. 650 and Super pulled, 33¢; No. 651 and Super pulled, 33¢; No. 652 and Super pulled, 33¢; No. 653 and Super pulled, 33¢; No. 654 and Super pulled, 33¢; No. 655 and Super pulled, 33¢; No. 656 and Super pulled, 33¢; No. 657 and Super pulled, 33¢; No. 658 and Super pulled, 33¢; No. 659 and Super pulled, 33¢; No. 660 and Super pulled, 33¢; No. 661 and Super pulled, 33¢; No. 662 and Super pulled, 33¢; No.



## Agricultural Articles.

## The Famous "Enterprise."

PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.



These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babbitted boxes.

Positively self regulating, with no coiling spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs.

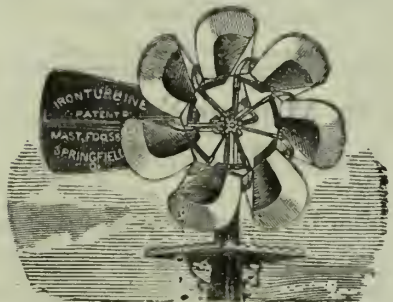
All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

**HORTON & KENNEDY,**

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

## Iron Turbine Wind Engine



## AND BUCKEYE FORCE PUMP.

This machine made of iron, wheel, vane, etc., made of No. 24 sheet iron, bound and braced with best quality of wrought bar iron, gives more power than any other wheel of same diameter. No wood to swell, shrink, rattle or be destroyed by the wind. The most durable and the best Windmill ever invented. For particulars, price lists, etc., address

D. E. GOLDSMITH, State Agent,  
419 Sansome street, San Francisco.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

**MATTESON & WILLIAMSON,**  
STOCKTON, CAL.

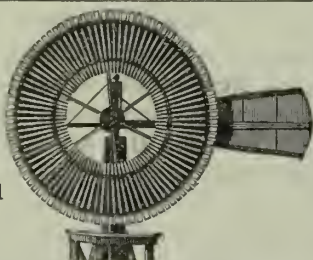
\$50.

The New

Worthington

Windmill

Manufactured by



W. D. PARSON,  
1364 San Pablo Avenue, Oakland, Cal.

Also, maker of the "Colorado Wind Engine," Wind Grist Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern of Deep Well and Artesian Lift Pump Cylinders. Circulars free.

**Anderson's Springs,**  
LAKE COUNTY, CAL.

Nineteen miles from Callstoga, five miles from Middletown, and ten miles from the Great Geysers; between which and Anderson's Springs there is a good stage road.

## HOT SULPHUR WATER

For Rheumatism, Paralysis, etc.; Cold Sulphur for Dyspepsia, Diseases of the Stomach and Bowels. Scenery unsurpassed. Climate mild and equable. Consumptives generally improve in health, and asthmatics are invariably relieved.

## TROUT FISHING ON THE GROUNDS.

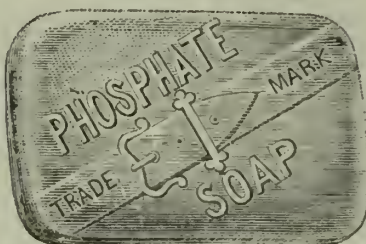
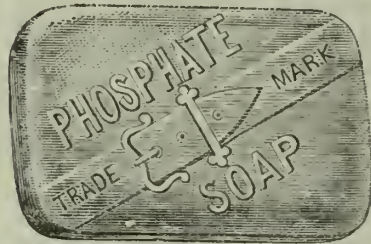
Deer Hunting in the Immediate Vicinity.

Accommodations and Cookery good. Board from \$10 to \$12 by the week.

**ANDERSON & PATRIQUIN, Prop's.**

THE BEST  
**TOILET SOAP**  
Ever Made.

**PHOSPHATE SOAP**



A superb article for the toilet, beneficial to the skin, giving it a soft, velvety appearance, and leaving a soothing, pleasant sensation after use, imparting a healthy natural and lasting beauty to the complexion. It eradicates the poisonous effects of cosmetics; prevents skin diseases by acting as a constant purifier and disinfectant; if used constantly will cure skin diseases of long standing; is superior to any other article for bathing infants; cleansing and healing for all eruptions on the scalp or face of children; good for the teeth; produces a soft, creamy lather, nicely adapted to shaving or shampooing, removes dandruff, and gives health to the scalp without injuring the hair.

Phosphate Soap is a scientific preparation manufactured from the best toilet soap with potent medicinal agents, which unite chemically with other ingredients. It is cheap, because it wears longer and combines more cleansing, healing and soothing qualities than any other article in the market.

Cheap toilet soaps, manufactured from rancid and refuse grease, injure the skin, and are really more expensive than PHOSPHATE SOAP, which retails for 25 cents per cake. One cake will last longer than three of cheap, inferior soaps.

Natural beauty surpasses anything which can be imparted by artificial means. PHOSPHATE SOAP gives health to the skin simply by removing impurities and eradicating the poisons which give rise to skin diseases.

Not only for daily use on the face and hands, but for bathing the entire body, there is nothing equal to PHOSPHATE SOAP. It is a thorough disinfectant and removes offensive odors of every kind.

Thousands of articles are palmed off on the public, which have no genuine merit, but PHOSPHATE SOAP is the result of modern discoveries of celebrated chemists.

PHOSPHATE SOAP costs no more than other good toilet soaps, while its medicinal qualities make it worth ten times its price to every man, woman and child.

For chapped hands, the constant use of PHOSPHATE SOAP will be recommended by all who give it one fair trial.

If you want a nice article of Toilet Soap and something that is beneficial to the skin, buy PHOSPHATE SOAP.

Sensible girls avoid cosmetics, but use PHOSPHATE SOAP for the toilet, because it is fragrant, pure and pleasant.

Ladies who wish to make the skin look beautiful and natural, should use PHOSPHATE SOAP.

It should be in every house. Sold by all dealers. One cake sent by mail on receipt of 30 cents in postage stamps. A neat box containing 3 cakes sent by mail, postpaid, on receipt of 80 cents. Manufactured by the

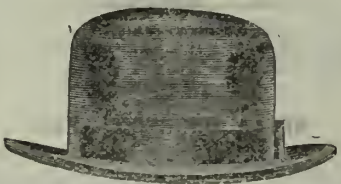
**STANDARD SOAP COMPANY,**  
204 Sacramento Street, San Francisco.

**WELLS, RICHARDSON & CO'S**  
**PERFECTED**

**BUTTER COLOR**

Gives Butter the gilt-edge color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. **WELLS, RICHARDSON & CO.,** Proprietors, Burlington, Vt.

**HERRMANN'S HATS**  
ARE THE BEST!



Try one and you will Wear no other.

Spring and Summer Styles,

— AT —

336 Kearny St., bet. Bush and Pine,

— AND —

910 Market St., above Stockton.

Send for Illustrated Spring Style Catalogue.

**Contents of Pamphlet on Public Lands of California, U. S. Land Laws, Map of California and Nevada, Etc.**

Map of California and Nevada; The Public Lands; The Land Districts; Table of Railroad in California; Counties and Their Products; Statistics of the State at Large.

Instructions of the U. S. Land Commissioners.—Different Classes of Public Lands; How Lands may be Acquired; Fees of Land Office at Location; Agricultural College Scrip; Pre-emption; Extending the Homestead Privilege; But One Homestead Allowed; Proof of Actual Settlement Necessary; Adjoining Farm Homesteads; Lands for Soldiers and Sailors; Lands for Indians; Fees of Land Office and Commissions; Laws to Promote Timber Culture; Concerning Appeals; Returns of the Register and Receiver; Concerning Mining Claims; Second Pre-emption Benefit.

Abstract from the U. S. Statutes.—The Law Concerning Pre-emption; Concerning Homesteads; Amendment Act Concerning Timber; Miscellaneous Provisions; Additional Surveys; Land for Pre-emption; List of California Post Offices. Price, post paid, 50 cts.

Published and sold by DEWEY & CO., S. F.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. **STEVENS BROS.,** Northford, Conn.

## Stock Notices.



**SPANISH MERINO SHEEP.**

Choice stock of thoroughbred Bucks and Ewes, guaranteed free from disease. Purchasers are invited to examine. About 10 minutes' walk from the Railroad terminus, adjoining State University.

E. W. WOOLSEY,  
Berkeley, Alameda County, Cal.

**BERKSHIRE A SPECIALTY.**



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,  
18th and A Streets, Sacramento City, Cal.

**ANGORAS AT THE FAIRS.**

The undersigned would announce to those interested in ANGORA GOATS, and the public generally, that he will have a lot of

**Choice Angora Bucks**

On Exhibition at the State and District Fairs

This fall, namely: At the State Fair at Sacramento, the Golden Gate Fair at Oakland, the Nevada State Fair at Reno, and the Oregon State Fair at Salem.

These Bucks will be sold at fair rates.

JOHN S. HARRIS,  
Hollister, San Benito Co., Cal.

**RAMS FOR SALE.**

400 THOROUGHbred

And Graded

**SPANISH MERINO**

Rams For Sale.

Bred from the first importation of Spanish Merino Sheep to California, in 1859.

Prices to suit the times. Residence, one mile north of McConnell's Station, Western Pacific Division C. P. R. R. P. O. address, **MRS. E. McCONNELL-WILSON,** Elk Grove, Sacramento Co., Cal.

**JOHN ROGERS & SONS,**  
**GENERAL STOCK AND SALE YARD,**  
Corner Market and 9th Sts., San Francisco.

HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN.  
Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

**STEAM ENGINE.**

For sale, a second hand engine in perfect order, mounted on good wagon. Suitable for a shingle mill or a portable saw mill, or for mining purposes. It is the LARGEST PORTABLE ENGINE IN THE STATE, too large for threshing. Will be sold very cheap, with reasonable time for payment if properly secured. Call and see it at

**RICE'S ENGINE WORKS.**

56 Bluxome Street,  
Near C. P. & S. P. R. R. Offices.

**ROOMS TO RENT.**

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.



**LITTLE'S CHEMICAL FLUID.**

The New Non-Poisonous Sheep Dip and Disinfectant. Price, \$2 per gallon. For directions and testimonials, apply to **FALKNER, BELL & CO.,** Sole Agents, 430 California Street, S. F.

**AGENTS, READ THIS**

We will pay Agents a salary of \$100 per month and expenses, or allow a large commission, to sell our new and wonderful inventions. We mean what we say. Same free. Address **SHERMAN & CO.,** Marshall, Mich.

20 Best Chrono Cards, no 2 alike, 10c, or 25 fancy mixed, 10c, name on all. J. B. Husted, Nassau, N.Y.



## THE TEMPLE !!

THE TEMPLE is for SINGING CLASSES.

THE TEMPLE is for CONVENTIONS.

THE TEMPLE is for CHOIRS.

\$9.00 per dozen.

Single copy \$1.00

At this season, when music teachers, choir leaders, etc., are quietly making up their minds as to the best books for use during the coming musical season, it is a pleasure to introduce to their notice so fresh, good and useful a book, as this one by W. O. PERKINS, who now, by the act of Hamilton College, takes on the well-deserved title of Musical Doctor. From the elegant title to the last page, the space is most acceptably filled.

The Elementary Course is ample in quantity, and has numerous new tunes for practice, which practice, indeed, may extend over the whole book.

Abundance of good Sacred Music, in the form of Metrical Tunes and Anthems fills a large proportion of the book, and renders it a good Collection of Church Music.

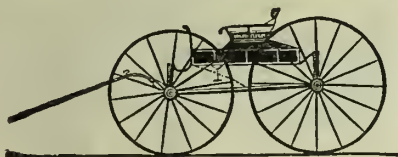
The numerous Glee and Harmonized songs add to the attraction, and make this an excellent work for Musical Societies and Conventions.

Specimen copies mailed, post free, for \$1.00.

OLIVER DITSON & CO., BOSTON.

C. H. Ditson & Co., 843 Broadway, N. Y.

## H. J. HASKELL,



MANUFACTURER OF

CARRIAGES,

BUGGIES,

— AND —

SPRING WAGONS,

At the Lowest Rates.

Corner of Alameda and White Streets,

SAN JOSE, CAL.

## THE WILSON ADJUSTABLE CHAIR,

With 30 Changes of Position.

Patented in the United States and Foreign Countries.

BEST CHAIR IN THE WORLD.

Parlor, Combining  
LIBRARY, Beauty,  
Invalid Chair, Lightness,  
Rocker, Strength,  
BED or Simplicity  
LOUNGE, and  
Comfort.

READING POSITION.

Same Chair in Cane Seating, very desirable for summer. Manufactured of the best of wrought iron and rivets. Castors made purposely for the Chair. Everything to an exact science. **WILL LAST A LIFE-TIME.**

Has been awarded Medals, Prizes and Diplomas for its superiority and merit wherever it has been exhibited.

Orders by mail promptly attended to. Goods shipped to any address. C. O. D. Send for Illustrated Circular.

Address the WILSON ADJUSTABLE CHAIR MFG CO.,  
535 Washington St., Boston

J. P. JONES. J. THOMPSON.

JONES & THOMPSON.

Wholesale and Retail Dealers in

Hay, Grain and Feed.

Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,

1535 Mission St., San Francisco.

M. COOKE. R. J. COOKE

## PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,

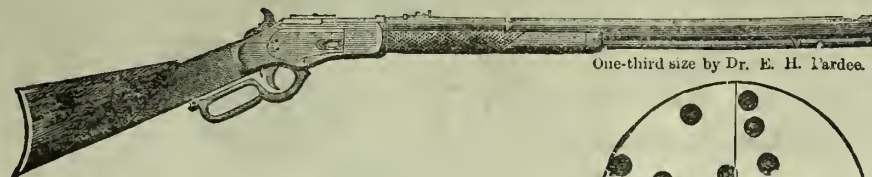
AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREGORY.

# Winchester Repeating Rifle,

MODEL 1873.



One-third size by Dr. E. H. Lardee.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blue. Octagon barrel, plain, 24 inch—blue. Octagon barrel, set, 24, 26, 28, 30 inch—blue. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blue. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blue, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder.

JOHN SKINKER, No. 115 Pine Street, San Francisco

SOLE AGENT FOR THE PACIFIC COAST.

— OFFICE OF THE —

## BLACK POINT PACKING AND SLAUGHTER HOUSE.

MERRY, FAULL & CO., Proprietors.

## TO OWNERS OF LIVE STOCK!

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

## SQUARE DEAL and FULL MARKET PRICES

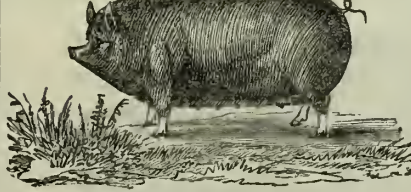
For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices.

Please address our

Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.

## A BARCAIN IN BERKSHIRES.

The undersigned offers for sale for the next 30 days a limited number of Pure Bred Berkshires, aged from 3 to 18 months. These pigs are all bred by myself from stock imported from some of the most noted breeders in the United States, and include several Boars fit for service, and a few choice Sows in farrow, to imported Boars. These pigs are not calls, but the choice pigs of their respective litters.



PRICE LOW FOR CASH.

A perfect and complete pedigree, and a written guarantee they are as represented sent with each animal sold. Correspondence solicited. Among purchases of my stock are the following gentlemen well known as men of careful discrimination: Dr. G. A. SHURTLEFF, Superintendent State Insane Asylum; FRANK I. TAGGART, Oakland; J. D. SMITH, Prof. Livermore College; LELAND STANFORD, by R. H. COVEY; Col. PETER Saxe, San Francisco; L. U. SHIFFER, President S. J. V. Ag. Society; W. HESICK, Sacramento; W. C. HOPPING, P. M., Sacramento. For further particulars address

ALFRED PARKER,

Bellota, San Joaquin Co., Cal.

## MISSION ROCK DOCK AND GRAIN WAREHOUSES.

SAN FRANCISCO, CAL.

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

GRAIN consigned to us by water insured in open policy at Special Rates. Wheat shipped by railroads via Stockton, care of the CALIFORNIA STEAM NAVIGATION CO. will be received by them at Stockton and delivered at Mission Rock Warehouse at same rate of freight as to Oakland Wharf. Freight paid, Fire Insurance and Loans effected and proceeds forwarded free of commission. Money advanced at bottom rates, interest payable at end of loan. Fire Insurance 1% per annum. Short Rates of Storage—First month, 30 cents per ton, or 40 cents per ton if delivered. Each month thereafter 20 cents per ton. Weighing in, free. Weighing out, 10 cents per ton.

CHAS. H. SINCLAIR, Superintendent,

Or to the California Dry Dock Co., Office, No. 318 California Street, San Francisco.

## A Card to Grangers and Farmers.

HAY, GRAIN, HORSES and CATTLE.

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nos. 11 and 13 Bluxome St., San Francisco.

## SEND FOR THE

\$1.50

## Homœopathic Medicine Case.

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address

BOERICKE & TAFEL,

Homœopathic Pharmacy, San Francisco.



Pyrethrum Cinerariæ Folium—A California Production.

THE MOST WONDERFUL DISCOVERY OF THE NINETEENTH CENTURY.

This wonderful Insect Powder will exterminate Flies, Weevils, Caterpillars, Mosquitoes, Crickets, Cock-roaches, Spiders, Tarantulas, Scorpions, Ants, Hawk-bugs, Phylloxera, Plant Lice, Moths, Beetles, Grasshoppers, Locusts, Bed-bugs, Fleas, and every species of Insects. Remember that none is genuine unless my Trade-Mark is attached to every package.

\$100 WILL BE PAID IF IT FAILS TO KILL ANY INSECT.

Endorsed by Prof. E. W. Hilgard, of the University of California, and by Prof. C. V. Riley, Chief Entomological Commissioner at Washington, D. C., and pronounced superior to any imported article, and perfectly harmless to man and beast.

G. N. MILCO,

Patentee and Sole Manufacturer, Stockton, Cal.

CHARLES LANGLEY & CO., Wholesale

Druggists, Sole Agents, S. F.



## MENTAL HYGIENE.

Proprietor of the Hygienic Medical and Phrenological

Institute, 633 California Street, above Kearny.

This Institute has of late been entirely refitted, and is now far more healthful and conveniently arranged for the reception of patients and boarders than ever before, and by combining medical hygiene with the various Water Cure treatments and the most powerful Electricized Horseshoe Magnet in the world, claims to cure speedily and permanently all forms of acute or chronic nervous derangements, Brain, Spinal and Heart diseases, St. Vitus Dance, Palsy, Epilepsy and all Rheumatic. Liver and Kidney troubles. The institution has for the past 20 years made a specialty of treating all forms of weaknesses and diseases peculiar to males and females. By the use of hygienic remedies and electro-motopathy the worst forms of impotency and seminal weakness in males and sterility in females are speedily and permanently overcome. Hygienic board, with or without rooms. Terms moderate. Electro-therapeutic, Russo-Turkish and Medicated Baths given daily. Mrs. Dr. Smith as Matron has charge of the female bathing department.

DR. SMITH has practiced Phrenology the past 30 years, and during the last 20 years has been constantly using the science connected with Physiognomy, in examining or diagnosing disease in this city, and claims to have made discoveries in the SCIENCE of Phrenology that enables him, by an examination of the head, even blindfolded, to determine the disease to which the person is constitutionally subject, or whether the disease at the time afflicting the person, is the result of accident or hereditary weakness, whether CONSUMPTIVE, DYSPYPTIC, RHEUMATIC, APOPLECTIC, NEURALGIC, LEUCORRHOIC, or SEMINAL. Especially does the form of the head indicate the strength of the uterine, genital or reproductive system. The head is also an index of the natural strength of the lungs, heart, stomach, liver, kidneys, spleen, back or vertebra, and it determines the power of the system in warding off and overcoming disease of all kinds.

Ladies or gentlemen, desirous of obtaining a thorough and correct Phrenological examinations with Fowler and Wells' charts, will meet with a respectful reception at his consulting rooms. Parties can depend upon a reliable delineation of the character of their intimate male or female friends, by presenting a clearly defined photograph.

Phrenological or Physiognomical examinations without charts, \$1.50; with charts, from \$2 to \$3.

## INVITATION TO INVALIDS

And all persons who are in any way out of health, who desire to know the nature and causes of their disease, may avail themselves of an examination through phrenology in regard to health free of charge, between the hours of 9 A. M. and 8 P. M. Sundays from 9 A. M. to 12 M.

## PLEASANT SUMMER READING.

## THE NEW PENELOPE

— AND —

## Stories of California Life.

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. For sale by

A. L. BANCROFT & CO.

PRICE, \$2 00.

## Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.

50 CHROMO, Gold Border, etc., 10c., no 2 alike, or 20 Cupid Cards, 10c. J. B. HUSTED, Nassau, N. Y.



## Commission Merchants.

DAVIS &amp; SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger &amp; Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk &amp; Co., San Francisco, Cal.

BRYANT &amp; COOK,

Commission Merchants,

AND DEALERS IN

GRAIN, FLOUR, ETC.

No. 8 Davis St., near Market, San Francisco.

CHARLES NAUMAN.

FRANK NAUMAN.

C. &amp; F. NAUMAN &amp; CO.,

Wholesale Commission Merchants

— AND DEALERS IN —

GRAIN, POTATOES, FRUIT, BUTTER, POULTRY, EGGS, GAME, ETC.

227 &amp; 229 Washington St., San Francisco.

Consignments Solicited.

A. GALLI &amp; CO.,

General Commission Merchants,

AND WHOLESALE DEALERS IN

Tropical, California and Oregon Fruits, Nuts, Produce Butter, Cheese, Poultry, Eggs, Honey, Hides, Potatoes, Grain, Wool, Etc.

516 and 518 Sansome St., San Francisco.

Cash can be drawn for immediately upon receipt of account of sales.

## NEW EDITION.



## WEBSTER'S UNABRIDGED.

1928 Pages. 3000 Engravings.  
Four Pages Colored Plates.

Now added, a SUPPLEMENT of over 4600 NEW WORDS and Meanings, including such as have come into use during the past fifteen years—many of which have never before found a place in any English dictionary.

ALSO ADDED, A NEW

## Biographical Dictionary of over 9700 NAMES

of Noted Persons, ancient and modern, including many now living, giving Name, Pronunciation, Nationality, Profession and Date of each.

GET THE LATEST.

NEW EDITION contains a Supplement of over 4600 new words and meanings. Each new word in Supplement has been selected and defined with great care. With Biographical Dictionary, now added, of over 9700 names of Noted Persons.

GET THE BEST

Edition of the best Dictionary of the English Language ever published. Definitions have always been conceded to be better than in any other Dictionary. Illustrations, 3000, about three times as many as in any other Dictionary. The Dict. recommended by State Supts of 35 States, and 50 College Pres'ts. In Schools, — about 32,000 have been placed in Public Schools in the U.S. Only English Dictionary containing a Biographical Dictionary.—this gives the same with Pronunciation, Nation, Profession and Date of over 9700 persons. Published by G. &amp; C. MERRIAM, Springfield, Ma.

ALSO

WEBSTER'S NATIONAL PICTORIAL DICTIONARY.  
1040 Pages Octavo. 600 Engravings.

## R. J. TRUMBULL &amp; CO.,

SUCCESSORS TO

R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock

EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

\* "Guide to the Vegetable and Flower Garden" will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL & CO.,  
419 and 421 Sansome Street, S. F.

## Engraving.

Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the MINING AND SCIENTIFIC PRESS, San Francisco, at favorable rates. Send stamp for our circular and samples

50 Perfumed, Snowflake, Chromo, Motto Cards, name 1 gold and jet 10c. G. A. SPRING, E. Wallingford, Ct

## READING RANCH,

Shasta Co., Cal.

Good Land!

Sure Crops!

HEALTHY CLIMATE!

Prices Low. Terms Easy.

TITLE PERFECT.



The Reading Ranch, in the Upper Sacramento valley, originally embracing over 20,000 acres of choice grain, orchard and pasture land, is now offered for sale at low prices and on favorable terms of payment, in subdivisions to suit purchasers.

The ranch was selected at an early day by Major P. B. Reading, one of the largest pioneer land owners in California. It is situated on the west side of the Sacramento River and extends over 20 miles along its bank.

The average rainfall is about 30 inches per annum, and crops have never been known to fail from drought.

The climate is healthy and desirable. The near proximity of high mountain peaks give cool nights during the "heated term" which occurs in our California summers.

Pasturage, wood and good water are abundant. The tillage land is mostly level, with complete drainage.

Figs, Grapes, Peaches, Prunes, Almonds, English Walnuts, Oranges and other temperate and semi-tropical fruits can be raised with success on most of the tract without irrigation. Also, Alfalfa, Vegetables, Corn and all other cereals ordinarily grown in the State.

The soil throughout the tilled portions of the ranch proves to be of great depth and enduring in its good qualities. It is quite free from foul growths. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

The title is U. S. patent. Prices range principally from \$5 to \$30 per acre.

The California and Oregon railroad traverses nearly the entire length of the tract. There are several sections, stations and switches, besides depots at the towns of Anderson and Reading, all of which are located within the limits of the ranch.

The Sacramento River borders the whole tract on the southeast. Its clear waters are well stocked with fish. Good hunting abounds in the surrounding country.

Producers have a local market, which enhances the value of their produce. The railroad transportation route is level throughout to San Francisco. A portion of the land is auriferous and located near rich mines now being worked. Land suitable for settlers in colonies can be obtained on good terms.

Town lots are offered for sale in Reading, situated on the Sacramento river, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

Purchasers are invited to come and see the lands before buying here or elsewhere. Apply on the ranch, to the proprietor.

EDWARD FRISBIE,

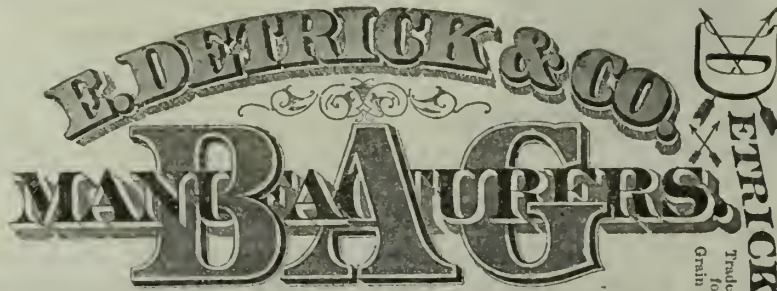
Anderson, Shasta Co., Cal.

P. S.—Send postage stamp for illustrated paper containing information about Shasta county and these lands, and say advertised in this paper.

## Location of Shasta County.

Shasta County lies not far from midway between the two most important ports on the Pacific shore, i. e., San Francisco and Portland, Oregon, and directly on the overland route, which in the future will become the grand thoroughfare from Mexico to British Columbia. The town of Reading, at present, and probably for years to come, the head of railroad transportation on the California side of the mountains intervening below Oregon, is distant from San Francisco by railroad (via Vallejo) 255 miles; from Sacramento City, 169 miles; from Marysville, 117 miles.

## LAND FOR SALE OR RENT IN SUB-DIVISIONS.



SOLE PROPRIETORS AND MANUFACTURERS

## Celebrated Detrick "E W" 22x36 Grain Bag.

CALCUTTA, DUNDEE and PACIFIC JUTE HAND-SEWED BAGS always on hand. OUR No. 1, No. 2 and No. 3 SECOND HAND GRAIN BAGS selected and graded with care.

## TWINES.

3, 4 and 5-ply for Grain Bags, 6 and 8-ply for Potato Gunnies, 3-ply EXTRA FINE for Flour Bags, made expressly for our trade and QUALITY GUARANTEED.

FLOUR BAGS Printed to Order WITHOUT EXTRA CHARGE. POTATO GUNNIES, Wool, Bean, Ore and Salt and Seamless Cotton Bags.

## Tents, Awnings and Hydraulic Hose.

ORDERS PROMPTLY FILLED AT LOWEST MARKET RATES.

119, 121 and 123 Clay St., and 118 and 120 Commercial St., San Francisco.

60 Chromo, perfumed, Snowflake &amp; Lace cards name on all 10c. Game Authors, 15c. Lyman &amp; Co., Clintonville, Ct

60 Elegant Perfumed Cards, Chromo, Motto, Lily, Etc., 15c. Gift with each pack. H. M. SMITH, Clintonville, Ct

Rosecomb Brown Leghorns for Sale.

PURE BREED COCKERELS and PULLETS from 3 to 5 months old. Address P. E. MONAGHAN, Alcatraz Island, Cal.

## Baling Fencing Telegraph Telephone Galvanized

## WIRE

## Barbed Fence Wire.

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the Trademark.



A. S. HALLIDIE

Wire Mills.

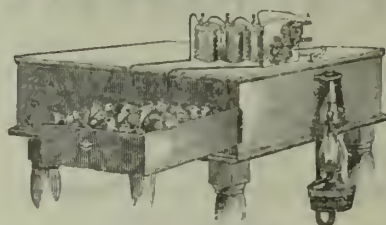
Office, No. 6 California St.

SAN FRANCISCO.

## WIRE ROPE and CORDAGE

Of every kind on hand or Made to Order.

## MONEY in CHICKENS



If You Want to Make Money

By raising any number of Chickens at any season of the year without setting hens, look for the

## ECLIPSE INCUBATOR

(E. A. SAMUEL'S Patent)

Which will be on exhibition at the MECHANICS' FAIR in this city, STATE FAIR, at Sacramento, SANTA CLARA VALLEY FAIR, at San Jose.

The Incubator will be shown in operation, and its method of working fully explained.

H. W. CALDWELL,

Manufacturer, Waltham, Mass.

G. G. WICKSON, 349 Market Street, S. F.

Agent for the Pacific Coast

## PIANOS

## LARGEST MUSIC HOUSE

On the Pacific Coast.

WHOLESALE AND RETAIL

Lowest Prices and Best Goods.

Write for information concerning any Musical Instrument, and terms of sale. It will be given with pleasure.

ESTABLISHED IN 1850.

## KOHLER &amp; CHASE,

137 and 139 Post Street, San Francisco.

## CHEAPER YET!

## Tension Sewing Machines!

A large number of nearly new genuine SINGER, WHEELER &amp; WILSON, HOWE, WOOD, WILSON, GROVER &amp; BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

NO TENSION MACHINE.

## Wilcox &amp; Gibbs' S. M. Co.,

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal

## Patents

OBTAINED IN U. S. AND FOREIGN COUNTRIES; trademarks, labels and copyrights registered through DEWEY &amp; CO.'S MINING AND SCIENTIFIC PRESS PATENT AGENCY, San Francisco. Send for free circular

This paper is printed with Ink furnished by Chas. Eneu Johnson &amp; Co., 509 South 10th St., Philadelphia &amp; 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 120 Sutter St., S. F.





Volume XVIII.]

SAN FRANCISCO, SATURDAY, SEPTEMBER 13, 1879.

Number 11.

### The Large in Farm Machinery.

The land-covering ability of many machines which have been built to work in the light friable soils of the San Joaquin valley has been the subject of frequent comment. It is also an interesting fact that many of these large machines are built by local mechanics, under the direct guidance and direction of the farmers themselves, and are not the productions of the large manufacturing establishments. Some of the largest threshers, headers, cultivators, plows, etc., have sprung up beside the country forge and work-bench. This is an interesting phase of our industrial progress, and indicates, we believe, the possession of a higher degree of mechanical skill and inventive genius among our farmers than among farmers generally throughout the world. The agriculturists of most countries are prone to stick to their old style of tools, even though they are ill suited for the work, and they protest continually against "new fangled notions." They are induced to substitute a good implement for a poor one only after the most perfect demonstration of its superiority. American farmers generally, and California farmers especially, are wide awake to the chance for improving their appliances, and the result is, as we have said—the farmers become their own mechanical engineers and often times their own mechanics as well. Mistakes are made it is true. The strength of materials is not always perfectly estimated, and designs are sometimes faulty in shape and size; but improvements are soon made, and the long season of rest from field work enables the industrious men to labor in their shops to reach the successful embodiment of their ideas.

We are led to these general remarks upon one trait of our agricultural progress by an article which we find in the *Merced Argus* descriptive of home-made machinery in use on the ranch of M. D. Atwater. One machine is a harvester, which we infer is something like the "Centennial harvester," of which we have had descriptions before. It consists of a 24-foot header, thresher and straw-wagon, all run by five men and 24 horses, in full operation, finishing up the harvesting—including the housing of the straw for feed—cutting, threshing, sacking and housing 50 acres per day. It does the work of cutting, threshing, and sacking the grain and depositing the straw in a header-wagon, to be housed in the barn. The one now used by Mr. Atwater was built in his own shop upon the farm, using an old 16 foot header, enlarged to 24 feet, and a second-hand thresher, and so combining the machinery as to make the whole a complete, harmonious working harvester.

In order to make the cultivation of the thin sandy soils of the San Joaquin valley profitable, farmers have for years been experimenting upon gang plows, seed-sowers and harrows, all of which Mr. Atwater has been using upon his level, sandy farm upon a stupendous scale. With a large team of from 16 to 20 heavy draft animals hitched to a plow, or rather cultivator, consisting of 30 plows, with a seed-sower attached, all drawn by the same team and managed by one man, some 50 acres of land are plowed well and sowed to wheat or barley in a single day, and requires no further cultivation or attention, except perhaps, being run over with a harrow when the seeding is done in dry weather, until the crop is ready for the harvester, to come along and cut, thresh and sack the product of the field ready for transportation to the market or shipping point. Of course these immense gang plows or cultivators, with seeding attachments cannot be used upon the heavier soils, or upon the more uneven sandy lands, but are just the thing for the profitable cultivation of the smooth, level, sandy plains upon which the farm above mentioned is situated.

**SEEDLING ALMONDS.**—Mr. A. T. Hatch, of Cordelia, has shown us samples of soft shell seedling almonds which he is confident will prove excellent bearing varieties. They are certainly of good flavor.

### The Coquita Palm.

The Coquita palm (*Jubaea spectabilis*) is a Chilean species, but is also cultivated in New Granada and other parts of South America. It affords the *Miel-de-Palmo*, or palm honey, so much esteemed and used throughout that country. The beautiful trees are felled in great numbers yearly, and their graceful crowns of feathery leaves lopped away, to catch the sap running from the wound. By cutting a thin slice from the end every day the flow is kept up



THE COQUITA PALM—*Jubaea spectabilis*.

for several months. A good tree will yield 90 gallons. The sap is boiled down to the consistency of treacle, and used instead of sugar. The small nuts which the tree bears are also edible, and are exported in considerable quantities. The Chileans let their cows and oxen do the husking in a peculiar manner, as follows: The cattle are very fond of the green husks, and being allowed to feed upon them, swallow the nuts whole. Afterward, when chewing the cud, they eject the nuts, which are found in small heaps, entirely free from husks, in places where the animals have ruminated.

**CAPT. GOLDSMITH** and wife, who attempted to cross the Atlantic in the skiff *Uncle Sam*, were compelled to abandon their effort in mid-ocean, after terrible hardships.

**FLORAL PERFUMES.**—We have alluded from time to time to different fragrant industries consisting in extracting floral scents for the use of the perfumer. In some parts of the world whole communities derive their livelihood from these gentle arts, and it seems assured *a priori* that where the blossoms arrive at such perfection as in California the material could be largely obtained. We are glad to know that in Santa Barbara an experiment is now under way, which may promise something in this direction. The *Press* of that city says that the cultivation of roses and other flowers largely used in the manufacture of perfumes, is now having a fair

### Boarding Houses on Wheels.

In a letter just received from a threshing-machine man, who is in active duty in the harvest field, he discourses as follows: "In the estimation of the ranchers, we are what we call 'way up,' and have everything our own way. The cook house is certainly a great convenience to all concerned, and I heartily approve of it; at all times, providing farmers are willing to pay the difference. It inspires a man with an abundance of home independence. It is your own vine and fig-tree, where none dare molest or make afraid. Here we are at home out on the open plains, and we all enjoy it, I assure you." The traveling boarding house is indeed a great convenience to the farmer, as well as to the thresher, and in the last few years it has come into use in many places. It brings many blessings to farmers' wives, who used to worry and lie awake nights thinking how they would manage to cook for thirty men and be up in the morning to have breakfast ready at five o'clock. With this convenient arrangement, which may be considered a part of the machine, the farmer's house is not turned upside down and inside out; everything goes on as usual at the ranch house, and the machine man can feed his men as he chooses, have meals at his own hours, and employ a cook to suit his own purposes. The house always stands near the machine, and saves long journeys to meals, besides being near by to prevent accidents, and the men are handy by to do repairs. So far, the experience with these cook houses is favorable, according to all accounts we have received.

**WHEAT EATING IN FRANCE.**—It appears that the French are learning to eat more wheat, and this joined with the succession of indifferent harvests has led France into her present position as a wheat importer. A Paris newspaper the *Debats*, takes the ground that France cannot grow enough wheat to satisfy her own people. Formerly there might have been a surplus, but the peasants and poor people in general no longer eat herbs and roots, as under Louis XV., but call for wheat like their richer countrymen. In 1826, not to go farther back, the harvest produced 184 quarts of wheat per inhabitant, and the consumption was 181 quarts, showing a surplus of three quarts per head. In 1836 the respective figures were 189 and 188. From this date downwards, with the exception of abnormally good years, the harvest presents a deficit. In 1856 the production was 236 quarts, and the consumption 240 quarts per head. In 1866 they were 223 and 241 respectively, showing a deficit of 7,000,000 hectoliters. In 1876, 4,000,000 hectoliters had to be imported. The average consumption of France is at present 95,000,000 hectoliters; 20 years ago it was no more than 80,000,000; whilst 50 years back it was only 60,000,000. No doubt great progress has been made in the production of wheat; but, according to the *Debats* writer, it has not kept pace with the consumption. This is a good indication for outside producing regions, and would indicate that shipments from San Francisco to Havre may be expected to continue, and that France will continue in the list with England as a competitor for foreign wheat.

**CALIFORNIA SALTED HERRING.**—Another illustration of the infinite variety of material in California, for the practice of nearly all the industries known to a world of workers, may be found in the production of salted and smoked herring around Monterey bay. The *Monterey Democrat* has been given a sample by John Parker, and the editor pronounces them excellent eating, reminding him in flavor and consistency of the famous Dutch herring. Millions of these fish enter Monterey bay every year, their shoals being measured by thousands of yards on the surface and swimming 16 or 20 feet deep, close as the fish can manœuvre their bodies. They might be the source of inexhaustible wealth, if salted or smoked, as on the coasts of northern Europe.

THERE are 900 tons of standard silver dollars stored in the Treasury at Washington.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds

### The High Sierras.

EDITORS PRESS:—We had been having a prolonged spell of extremely hot weather, and wife, baby and I, to get away from it, started for our eastward horizon of snow, the high Sierras. The ascent of the mountain is made by an excellent wagon road, constructed for hauling lumber from the four large mills, which, from the immense mountain forests, have supplied our valley with lumber.

Our first half day of mountain travel took us to an altitude of some 6,000 feet; here at Stevenson's dairy ranch, a beautiful meadow of green native grass, surrounded by a dense, untouched forest, mostly of the larch timber (*Larix Americana*), we spent our first night in the mountains. The next day, five hours' travel, 15 miles in an easterly direction, over altitudes varying from 5,000 to 7,000 feet, took us, to the end of all the wagon road here on the mountains, to Dusy's sheep ranch on Dinkey creek. Mr. Dusy is one of the pioneers of this county. He is one of our county's most successful sheep men. His thousands of sheep find abundant, excellent summer pasturage under his personal supervision and direction, in the numerous small mountain meadows along the headwaters of King's river. He is an artist and has taken numerous views of the most noted and picturesque scenery in the mountains. His family spends a portion of their summer at Dinkey creek. Here I left wife and baby and started out for a day's botanizing. I went eastward a dozen miles across Dinkey and up the North Fork of King's river; then I went northward to an altitude of between 800 and 900 feet.

### Fruits of the Sierras.

The common, red, thornless thimbleberry abounds here. And, notwithstanding their fine flavor, I ate till my fruit-appetite was fully cloyed. Delicious gooseberries of large size are plentiful, but mostly very thorny, so that before eating, one has to burn off the thorns in a blazing fire. Huckleberries of fine size and flavor, but shy bearers, grow along the edges of several meadows. Dewberries of inferior quality grow along some of the creeks. A mountain ash (a shrubby tree, growing in bunches) is occasionally met with, but whether the fruit is edible or not, I had no means of knowing, as none of these are eatable except by keeping till mid-winter. I found the "service berry" in one place, variety *oligocarpa* (few fruit), truly named, as neither here nor elsewhere have I ever seen more than a taste of the fruit. Strawberries abounded everywhere in and around all the mountain meadows. Inferior in size to my cultivated Wilsons, Monarchs, Crescents, etc., but surpassing even the Monarch in flavor. The vines had the firm, thick leaflets, with the soft, silky surface of the *Fragaria Chilensis*; the color of the fruit was also the same, but instead of the fruit being erect, as in that species, it all lay flat upon, or was half imbedded in the ground. They were just in perfection of ripeness. I wished that I had a hundred friends with me to do justice to their excellence and abundance.

Chinquapins were so plentiful in some places that I could have filled a barley sack from a square rod of ground. Hazelnuts were very plentiful in many places. Mrs. Dusy is making most excellent jelly from the abundance of elderberries. Indeed, when the superiority of elderberries for jelly-making shall become known, they will be largely used for that purpose; but these and all other fruits must in time give way to that king of all jelly-making fruits—the jujube, from which that perfection of all jellies, the jujube-paste of commerce is made.

Added to the above, which I saw, Mr. Dusy told us of wild plums of good size and flavor; of black-cap raspberries, that from his description must closely resemble the celebrated Gregg black-cap; of currants, different from any that I ever saw or heard of, of creeping habit and abundant bearers of acid fruit; and of our genuine American beech—all growing in this region of the Sierras.

### Dusy's Grove of Big Trees.

Many persons speak and write of the "Big Trees," as though there were but a single grove. The truth is, there are about a dozen groves of them. I had before seen over a half dozen groves in Tulare county; the Mariposa grove, the Calaveras grove, and now we were to visit Dusy's grove, one of the two noted groves that I'd not yet seen, the other being further north on the head of Fresno river.

This grove of sequoias is about four miles down Dinkey creek from Mr. Dusy's place, is on the opposite side from Mr. D.'s, and about a half a mile from Dinkey creek, and I should think nearly a thousand feet higher than the creek, which here runs in a canyon.

There are over 100 trees (my estimate) in the grove. The smallest, a foot in height, were brought away. The largest, named Gen. Washington, by Mr. Dusy, the discoverer, is nearly half burned away at the butt, but it shows an original diameter of 44 feet at the surface of the ground. Some of the trees of a diameter from 20 to 25 feet, are the most symmet-

rical of all sequoias that I have ever seen. They show a scarcely varying uniformity in size of trunk for a height of over 100 feet.

### Vandalism.

This sub-head may sound harsh, but no milder one will express the way that some of these trees have been mutilated. There is an abundance of bark and wood obtainable from fallen trees; this ought to suffice; but it does not. Visitors have mutilated some of the finest trees in the grove for relics to carry away. I believe that, had the body of Washington, the revered "Father of our Country," been embalmed, so that we could look upon his features as in life, there are people who would not be content without breaking off a piece of an ear or digging out an eye to carry off as mementoes of their visit to his tomb.

This ought to be stopped. One of these forest giants must soon yield its life to the rapacity of these relic hunters. But that is not the end. Other trees will follow in disfigurement and destruction, as the number of visitors increases, until all will be deformed and dead; victims to a practice which, by statute, ought to be made criminal.

### Hospitality.

During the last dozen years a great number of tourists have visited this grove. Mr. Dusy has furnished free use of inclosed pastures to the many hundreds of horses that have been ridden, and driven by these excursionists. I asked him if he intended for future years to bestow a like favor gratis to all visitors to the grove. "Yes," said he, "tell everybody to come, while I'm proprietor here; in the future as in the past, no visitors to the grove will be charged for pasturage of work animals."

He then related circumstances pertaining to visits of different tourists. Notably among them John Muir, who made this his starting point on that long trip of extensive explorations in this "Switzerland of America."

Fresno, Cal.

W. A. SANDERS.

### Poisoned Water.

EDITORS PRESS:—Much has been said and written in regard to the poisoning of water by the use of lead pipe. It is now asserted in some quarters that galvanized iron pipe, now extensively used in place of lead, is equally poisonous, or more so; also that the brass (or other composition) rods used in force pumps are open to the same objection.

It is also asserted, by physicians and others, that the water from the elevated tanks in common use throughout the country is poisonous and unfit for drinking. As these are matters of great importance, not only to individuals and families, but to the whole community, please enlighten us in regard thereto, chemically or otherwise; and also state in what the process of galvanizing iron consists, and what is the best pipe for the conduct of drinking water.—PURE WATER.

EDITORS PRESS:—It would be easy to write a volume in giving a full reply to the above inquiry, the subject being one whose importance is only equalled by the difficulty of giving rules applicable to all cases, and avoiding the jumping to hasty conclusions.

First, as regards the use of zinc, whether in independent sheets or covering the surface of sheet-iron ("galvanized"), I have for many years past warned and protested against the tendency to its use in place of tinned iron (tin-sheet) for almost all purposes. We have seen "galvanized" tanks and evaporators for acid juices; ditto preserve kettles, milk pans, and finally, even churn-dashers, warmly recommended as cheap and innocent substitutes for tinned sheet, copper and brass, as well as for iron, and even wood. I claim some merit in disposing of the zinc churn-dasher, by publishing an analysis of some of the resulting buttermilk, which was thick with the zinc compounds formed in its corrosion by the sour cream; but then, it made the butter (and such butter!) come in the twinkling of an eye. However, I still see the "galvanized" preserve-kettles and cooking-pots for sale in the shop windows, and often feel curious how the consumers of their contents stand it.

It is not altogether easy to explain to the unprofessional reader just when and where zinc, or zinc-covered iron, must not be used in connection with substances designed for eating and drinking. As for copper and brass, they may be considered unobjectionable for water pumps and for vessels used in ordinary culinary operations, provided the latter are kept perfectly bright and acid or salty messes are not allowed stand (or in the case of fruit even to cool) in them, especially when exposed to the air. It is at the edge of the fluid, where it meets both the metal and the air at the same time, that corrosion of these metals occurs; hence there is little danger in boilers kept close, and none at all in the case of copper bottoms to kettles, etc., unless they are allowed to stand dirty when empty; when they must be scoured bright before using again. The fact, however, that the safety of the family depends so much on the cook's cleanliness, has caused copper kitchen pots to be largely discarded in favor of tinned sheet iron; both because tin "rusts" but very slowly, and when it does so the product is hardly to be classed as a poison. Yet when acid fruits, for instance, stand in open tin vessels for a length of time, tin will be dissolved and manifests itself in a change of color, progressing from the margin inward.

It is quite otherwise with zinc surfaces. Zinc dissolves readily in any acid, or even saline liquid, in the absence as well as in presence of air; and boiling, which in the case of copper diminishes the action, on the contrary greatly accelerates the solution of zinc. Any one making currant jelly in a zinc or "galvanized" preserve-kettle, must have noticed the froth that

quickly gathers around the edges, and continues to rise while the juice is in the vessel, accompanied by a peculiar odor like that of impure hydrogen gas. Of course the operation leaves the kettle beautifully bright, for the dissolution of the metal goes on steadily so long as it lasts. As all fruits, vegetables, meats, etc., are more or less acid, and as salt water exerts a similar action, it is clear that the use of "galvanized" cooking utensils involves a steady consumption of zinc on the part of the family.

It has been contended by some that zinc is so bland and genial a metal, that the small amount thus conveyed into humanity may be viewed in the light of the administration of a gentle tonic like iron. Homeopathic believers would, however, consider it a pretty heavy dose; and few but interested persons will recommend to the general public the habitual administration of even small doses of any medicine whatsoever. The alleged blandness, however, is but illy illustrated in the most common compound—white vitriol or zinc sulphate—which not unfrequently gives rise to severe cases of poisoning, being easily mistaken for epsom salt. When it is considered that the habitual taking of such small doses of even the latter as are contained in the water of some regions, is sufficient to affect the health of the population most seriously, we must conclude that the use of zinc or "galvanized" vessels for kitchen, dairy or any similar purposes, involving the use of acid or saline fluids, is absolutely and unqualifiedly unsafe, and the lead frequently contained in it renders it doubly so.

The fact that some of its compounds are given medicinally in doses as large as those of iron compounds, lacks cogency in that the soluble iron salts (for example, coppers) have such an intensely disagreeable taste that no one will consume them unperceived. As is well known to housekeepers who have tried to stew or preserve fruit, etc., in iron vessels, and have seen the mess assume the color and taste of ink, no such safeguard exists in the case of zinc salts; the metal is more readily corroded than iron, and large quantities may pass unperceived into the system.

The case is not so clear, however, in regard to cold water pipes and tanks. The action of pure water on zinc surfaces is very slight, even in the presence of air; but the ordinary drinking waters are far from pure, and, at the same time, the kind of impurities they contain is exceedingly various, and these are very diverse in their action upon zinc. I think it may be said in general that good drinking water, especially that from streams, may, without danger to health, be passed through "galvanized" service pipes. Unfortunately, a good deal of the water actually used would not come under the above head; and, such as is naturally objectionable, whether on account of the presence of decaying substances or of mineral salts, is precisely that which also exerts a strong influence on the zinc surfaces of pipes and tanks.

The use of bare zinc surfaces in tanks is much more objectionable than in pipes, because of the free access of air and of the decaying matter that will accumulate and ferment there. Some waters will eat through an ordinary zinc sheet near the water surface of a tank in the course of a year; and the zinc so removed will, of course, have been swallowed by the consumers. There can scarcely be an excuse for not disposing of all trouble, expense and danger in this case, by giving the tank a good inside coat of asphaltum, paint or varnish, in every case. It is proper to say, that, from experiments made with sea water, it appears that "galvanized" sheet is much less acted upon by saline liquids than simple sheet zinc.

As for the water in the common elevated wooden tanks of the country, it is hard to say anything that would be absolutely true of all. The larger the tank, or rather the more slowly the water passes through it, the more liable it is to become foul; and, in general, all water from large tanks ought to be filtered through a charcoal filter before using it for drinking. This simple process disposes not only of all decaying matter, but also, in a great measure, of whatever metallic impurities may have been introduced by the pipes or pumps. Such filters are so simple and cheap, and so readily kept in order, that wherever there is any possible danger of water contamination, they ought to be used continually; as is actually done in many parts of the United States. And most users will be both surprised and edified when, at the semi-annual or annual cleaning out of the filter, they contemplate the array of filth, including bugs, maggots and nastiness of all kinds, from the virtual consumption of which this simple device has preserved them.

E. W. HILGARD.

University of California, Sept. 2d, 1879.

TO BLEACH STRAW.—Straw goods are bleached by submitting them to the action of the vapor of burning sulphur—or better, to the vapor of burning bisulphide of carbon. The straw, which must be perfectly clean, must be well moistened with pure soft water before submitting to the sulphuric oxide. The bleaching is carried on in tight wooden sheds. Straw may be bleached by chlorinated lime, but the fiber is liable to be somewhat injured thereby. Moisten the goods thoroughly in a strong aqueous solution of the bleaching powder (defecated), and then pass them through a bath of sulphuric acid diluted with about 20 parts of soft water. Repeat if necessary, and finally rinse thoroughly in water containing a small quantity of sulphur or hyposulphite of soda.

## THE DAIRY.

### Peas as Dairy Feed.

The following remarks from the *Live Stock Journal* may interest our dairymen living in counties where peas grow to perfection, as in Humboldt county, for instance: Fodder-corn is almost universally raised to feed cows while on short pasture in the fall, and is so valuable an addition to their food that every dairyman should raise about one-eighth of an acre of it for each cow kept; but it should also be remembered that cows require a variety of food. It is not good economy to depend upon one kind of green food, and especially one containing so little albuminoid matter as fodder-corn. Clover and a mixture of meadow grasses may be relied upon alone, but corn should always be fed with some more nitrogenous food. It does very well with half pasture, for the grasses will supply the albuminoid matter.

There are other green crops that should be raised to be fed with corn; and we know of none better than peas and oats, sown together—one-third oats and two-thirds peas—three bushels of the mixed seed per acre, with a drill. On land in good condition, a large crop may be raised, having a value second to no other. Peas and oats are equal to clover, and may be raised on a great variety of soils—a most important consideration. We have raised 12 tons of this green food to the acre, and this would feed 24 cows 10 days, without any other food. The pea is rich in caseine—just what is required to make milk—and the oat is also rich in the elements of milk. These two crops grow well together, for the oats hold the peas up and prevent them from lying too flat on the ground. They mature so near together that they are both ready to cut at the same time. But the crop should always be cut when the pea pod is full and the grain in the milk. It is then very succulent and palatable, and will produce as much milk as any food we know of, aside from a large variety of pasture grasses in their most succulent state. If the dairyman has green fodder-corn also, let him feed the corn, peas and oats together. He need never fear giving too much variety at once. In an old pasture, cows find from 20 to 50 varieties of grass, to be eaten at the same time. This is what gives such fine flavor to the milkers on old pastures; it gathers and concentrates the aroma of all these plants, and it must have a more delicious flavor than that made from one kind of food, such as corn or rye, or even red clover, alone.

## FLORICULTURE.

A PROFITABLE HELIOTROPE.—A correspondent of the *Gardeners' Monthly* writes as follows: I have noticed that you invite descriptions of large or interesting plants, and therefore send you a description of a large and productive heliotrope; I have had it 19 years. It is trained espalier-fashion under three sashes of my greenhouse within six inches of the glass, and covers a space to 10 feet high and 14 feet wide. It attained these dimensions the second year. I have frequently taken off at one cutting 300 trusses of flowers. There are seldom less than 100. It is of the old "Souvenir de Liege" variety, and is light lavender in color, but by keeping one sash whitewashed it gives me all I want of blooms nearly white. It is planted in a bench three feet wide, ten feet long and eight inches deep. The bench is covered with pots of other plants all winter, that will do in the shade so that the under space is occupied. I dry it off from June till August. Prune it back to five old canes one inch in diameter and five feet long. Take out all the earth and cut off all the roots to within a foot of the trunk, which is five and a half inches through it. Fill with new composts and start again, allowing no shoots to grow for two feet from the root. It might be grown to double the dimensions, but I have not the space to spare or sale for the flowers. I have two other varieties under similar treatment, but shall discard them as they are not nearly so productive.

AN ANCIENT ROSE TREE.—Herr Leunis, a well-known botanist of Hildesheim (Hanover), thus describes a remarkable rose tree (or rather climber, for it is supported against the wall of a church) growing in his town, and which was in existence when Christianity itself was little more than 1,000 years old; and, if tradition is to be believed, had even then been blooming nearly 300 summers. "The oldest known rose tree in the world," he says, "is one at present growing against the wall of the cathedral of this town (Hildesheim), remarkable alike for its extreme age and for the scanty nourishment with which it has supported itself for many centuries. It varies but slightly from the common dog rose (*Rosa canina*): the leaves are rather more ovate, the pedicels and lower leaf surfaces more hairy, and the fruit smaller and more globular. The stem is two inches thick at its junction with the root, and the whole plant covers some 24 square feet of the wall. Bishop Hezilo, who flourished between 1054-1079, took special interest in this rose as being a remarkable monument of the past; and when the cathedral was rebuilt, after being burned down in 1601, he had it once more trained against the portion of the wall which had been spared by the fire.



## HORTICULTURE.

### Points on Berry Planting.

EDITORS PRESS:—Previous to the planting out season, I would like to hear from any of your valuable correspondents as to whether in the planting out of raspberry, blackberry and strawberry plants, a distinction should be made in the selection of the fruit-bearing vines in preference to the non-producing plants, whether the same rule applies to above descriptions as to the planting out of hop, a male plant to so many female vines.—THOS. B. HINDS, Anaheim, Cal.

EDITORS PRESS:—Your correspondent, whose communication you have referred to me asks, in substance, two questions. First. Should a distinction be made in the selection of stock in planting out the berry fruits; i. e., should the stock be taken from the producing plants "in preference to the non-producing plants?" I answer affirmatively, where it can be practically done. "Like produces like," and "the survival of the fittest" should be the rule; for the same rule holds in the vegetable as in the animal kingdom. If we wish to keep up and improve the character of the fruit, we must select the best plants.

Rev. Mr. Knox, who was known as the "strawberry king of America," said that one good plant is worth 10 poor ones. A strong, healthy plant is infinitely better than a feeble one. But still we must observe that in a thrifty plantation of strawberries, for example, (and this will illustrate all varieties of fruit), some plants will fruit better than others that are more thrifty. Perhaps the shy bearers may bear the better the following year, while the best bearing plants of the former year will fall behind. Much will depend on the character and condition of the soil and the season, as well as on the treatment of the plants. As a general rule, if the plants are allowed to make all the runners and new plants they can, they are apt to bear light crops the following year, and in some cases they never recover from the injury thus entailed upon them. An over-production of foliage in plants, as well as an over-production of wood in growing trees is apt to retard the production of fruit.

Mr. Knox never allowed his bearing plants to produce new plants. He cut off the runners as fast as they appeared with the thumb nail. If this rule were followed and continued, the habit of the plant would eventually be to make less of runners, and the fruit would become improved in size, and perhaps might pay in the end. Indeed, I see no reason why it would not, when I consider that the growing of fruit, as well as the growing of runners, will fix the habit for reproducing their kind to an indefinite extent. But where we grow large fields of berries for market by means of irrigation, we are apt to shirk the extra labor and expense of attending to details.

The best practical rule I know of in the raising of plants and fruits combined, is to grow one or two new plants from each bearing one. If the parent plant is healthy and vigorous, it will suffer no apparent injury, while the young plants will be strong, with an abundance of roots. I have an abiding conviction that the best plants have the best roots; and these roots being so small are very liable to be injured in tilling the soil and hoeing the plants, and, although new roots may be produced, the plant is temporarily, if not permanently injured. All plants having small roots should have them near the surface when there is sufficient moisture in the ground to admit it. To danger which the roots must always have from careless tillage, must be added the liability of their drying out during the intervals in irrigating.

I have gone beyond the purview of your correspondent's questions, as I wished to show the grounds on which rests the non-productiveness of the plants. This I could not well do without showing the conditions that, practically speaking, we must consider of paramount importance. To illustrate: If I were asked to describe the best plants I would select from a lot of blackberries, I would reply that they must be vigorous plants and those having the best roots; and as the young plants are grown from pieces of roots or from established bearing plants, the question is, which is the better of the two? If the roots are young, the plant is good; if old, with rootlets, so much the better, if properly handled. If not, they will be next to worthless. If the soil is moist and firm and the plants can be moved in a moist atmosphere free from sunshine and wind, I prefer the old plants. But no nurseryman will recommend the large in preference to the small plants for the mass of customers, to be handled in the usual way or to be shipped a long distance, where they must bear greater exposure.

To recur to the strawberry: It must not escape the annual pruning, which should be done in a warm time after the growing season and after the fall frosts, else the plants may be injured and become non-productive the following spring.

But I presume your correspondent wished particularly to know whether there are negative or female plants requiring the presence of others to fructify them. I answer, yes, among certain varieties, but generally not. Among the strawberry plants are the pistillate and the staminate varieties, and I may add those belonging to

neither of these classes. The latter never bear, as they are destitute of pistils. The term staminate, from the Latin, *stamen*, is defined in the original as "a chive, or little thing that stands out like threads in flowers." The pistillate varieties have no stamens, and do not bear fruit unless the pollen dust is in some manner deposited on the pistils, and this is naturally done by dropping from the anthers or knobs at the end of the stamens. It can be readily seen, therefore, that if the stamens are removed from a plant, and the dust be deposited from some other variety, a new seedling may be produced from this berry seed, as it will be the product of two different plants, and may partake of the nature and character of either or neither. Insects, which are continually traveling across these plants, are supposed to aid in the deposit of this pollen-dust on the pistils. It follows that, if from any cause this dust is destroyed by rainstorms, as is frequently the case in the East, or by hailstorms, the fruit will not appear until a new setting of blossoms.

In conclusion, let me add, that most of the varieties of strawberries now grown on this coast, belong to the bi-sexual class. All the blackberries with which I am acquainted, with the exception of some of the native wild sorts, are of that kind. All the best raspberries are also bi-sexual.

Among 40 varieties of strawberries, embracing all that laid special claim to merit in the East, I have found but one or two of the kinds needing impregnation from other plants, that paid for growing. The Russell's Prolific was the best. But one difficulty attends this class of berries. They require the growing of kinds among them that blossom at the same time. Part of the season my Russells were monstrous beauties, but the impregnation was not always perfect, and I discarded them, after finding out that the theory and the practice did not always contribute alike towards replenishing the purse.

Hovey's seedling, grown so successfully in Massachusetts for the Boston market, is a pistillate variety, and is there grown with the Boston Pine, a berry unworthy of our market on account of its diminutive size. But I found another objection to it; it did not blossom here at the same time with the Hovey, and neither is an improvement on the kinds so long established here.

If your correspondent will take a look at the strawberry when in blossom, after the fruit has formed, he will see the embryo strawberry in the center of the bi-sexual plant, which contains the pistils, and he will also see the stamens which surround it. They are longer, and the yellow pollen dust can be plainly seen on their tips. And it will afford him much gratification to watch its development by means of a magnifying glass, which every intelligent farmer should carry with him in the field.

Now, Mr. Editor, as you have requested me to say whatever else might occur to me in this connection, I will further digress by opening up a new question, which I believe originated with me, and that is, "Are plants of the bi-sexual character affected beneficially or otherwise by other varieties growing near them?" I would like to elicit discussion in the *RURAL PRESS* on this subject, when I will promise to respond.

I. A. WILCOX.

Santa Clara, September 5th, 1879.

### Tree Labels.

Every tree in an orchard, says the *Journal of Horticulture*, should be clearly and plainly labeled, so that not only the proprietor, but any one who may go into it can tell the variety of every tree in it. It should also be recorded in a book for that purpose. This is important that the owner may know the kind of fruit he raises, and where to find it. Fruit will often sell better if the name of the variety is well known and attached to it. It is also important when a tree dies, that the owner may know what kind to get to fill up the vacancy, and to keep up the assortment. A difficulty that many labor under is to get a good label, one that will last and retain the writing. If wood is used, the writing soon becomes dim, and if twine is used for tying material, it soon rots, and the label is lost; but if wire is used for this purpose, it will not give with the growth of the tree, and is liable to cut into and injure the tree if it does not ruin it. The following has proved the most satisfactory as a tree label with us: Take a piece of common sheet zinc five inches wide. Across this cut pieces three-fourths of an inch wide at one end, and tapering to a point at the other. Near the wider end, write plainly with a common lead pencil the name of the variety. This will get brighter by exposure to the weather. The small end may be coiled around a branch of the tree; it will yield as the tree grows, and do no injury. Such labels will last a life time, and the writing will get plainer all the time. After being used ten years, they are far plainer than when first written. Such labels cost but little, and are permanently reliable.

A cheaper, but very efficient label, can be made of tin cut in the form suggested for the zinc ones, with the name written, or rather scratched, on it with a sharp awl. This will scratch through the tin to the iron, which, on exposure to the weather, will soon rust, thus making the letters quite distinct. These may be procured at any tin shop, and almost any tinner will cut them from scraps, at a few cents a hundred. These will last many years before becoming dim.

## POULTRY YARD.

### Production and Keeping of Eggs.

A writer in the *Country Gentleman* makes the following points: Oftentimes it is a matter of importance to keep eggs for a time. When prices rule low, they may be preserved in comparative freshness for several weeks, even in July and August, if care be taken to place them on end as soon as brought in from the nest. One not accustomed to the handling and care of eggs can form no idea of the shortness of time required for the yolk of an egg to settle on one side, where it adheres to the shell and quickly spoils in warm weather. Always place the egg on the big end. I have tried both ends, and have decided in favor of the former position. Eggs should be gathered from the nest every day, and where there are many hens kept, twice in a day. It matters not for what purpose we desire eggs, the hens that produce them should always be young and healthy. Eggs that are to be kept for any length of time should always be those from young hens, or if two years old, only from those in perfect health. If this rule is closely observed by breeders who export eggs for hatching, from one locality to another, there will be better satisfaction given. It is of much importance that the eggs have perfect shells, and a hen not in perfect health may drop her eggs regularly, yet the shells may possess imperfections that render them unfit either for keeping or hatching.

A hen in perfect health will not drop an egg daily for more than three days in succession. Fowls that are confined in narrow enclosures for any length of time cannot be in perfect health. They are forced out of their natural habits, and the restraining of nature tells on the system, sooner or later. For immediate use, their eggs, perhaps, are as good as any. With increasing age, the egg-shells grow thinner, and some drop them with no shells at all. Strength and stamina of the system, supported by good wholesome food, produce the shell. It is a calcareous substance that forms around the egg after it is perfected in the oviduct. The completed egg consists of several component parts, each one of which draws on the vital energy and stamina of the bird, which is so formed that its body performs its natural functions in regular order when in health. We must consider that they are forced out of their natural order when we feed them up for great egg production. Did any one ever hear of a wild bird that dropped a soft egg, or ever see a shellless egg that was dropped by a wild bird? We have produced poultry that do not sit. Nature intended the hen to sit on her eggs for three weeks, and afterwards to nurse and run with her chicks for four or five weeks longer. In this interval the system gains tone and strength. It is an entire change; a division of labor, and the fowl gathers strength and tone for future egg production. The regular sitters seldom drop more than 16 eggs in a clutch, and then comes broodiness.

Our non-sitters are the result of successful breeding from fowls which had manifested little desire to sit. It was a great achievement. They are a manufactured race, and must be cared for differently from the old common breeds much given to sitting and little laying.

### Poultry Keeping by Women.

We number many women among our successful poultry growers, and to lead them to communicate to the *PRESS* their own experiences, we quote from a correspondent of the *Poultry World* as follows: "My husband is a professional man," she writes, "and I passed the early years of my life in a large city. But when we came to reside permanently upon our plantation, I became interested in the poultry upon the place, and now have an interesting flock of upward of 100 Light Brahmas, White Leghorns, Spangled Polish, and some exquisite little Bantams, which I attend to myself, and enjoy the pleasure vastly. I am sure the ladies whose household cares do not absolutely prevent them from giving to this rural pastime the attention required to render it successful, will find real satisfaction in this agreeable work, and I only wonder that more American women do not believe this, and act upon it."

And so do we! When there is so much solid enjoyment to the appreciative mind in this occupation; when it is attended with so little hard labor; when it returns, proportionately to its cost, are so liberal; and when the work can be so easily and pleasantly accomplished—we, too, are surprised that our American country ladies do not all of them undertake this pleasureable and profitable occupation of fowl-culture to a greater or less extent.

The housewife who is disposed to aid in supplying herself with surplus spending money, can lay up a good many dollars in this way, if she begins aright and learns how to breed good poultry, nowadays.

Modern fowl stock is quite as susceptible to improvement as in any other live stock on the farm or plantation. We know of individual women who annually clear nearly \$100 over all expenses, simply by the care of a few dozen fowls, and by disposing of the eggs the hens lay.

This is a trifle, to be sure; but there is more good money earned (to say nothing of the pleasure enjoyed in the prosecution of the work) than women generally acquire by any other means, where so little arduous care or manual toil is involved.

And any woman can do this. Aided by the

children, who will also greatly enjoy their share of the daily routine duties of caring for the fowls, any lady can make as much or more, if she has the leisure which the average American country woman enjoys.

SOFT EGGS.—Sometimes, in spite of every known remedy and preventive, certain hens continue to drop soft eggs; to-day in the nest, or to-morrow under the perch the skinny apology is to be found. A valuable hen is rightly regarded as in a bad way when she becomes troublesome in this manner, and not without just cause is there serious apprehension of hens becoming weaker and weaker. But, then, is not the failing to be found in weakness. A thoroughly sound, healthy bird, which enjoys her liberty, and consequently can find mortar, shells, etc., generally goes to nest and deposits a satisfactory offering. It is just when the bird or its functions fail that the shell of the egg fails. For soft eggs I generally find that some known stimulating food is the best remedy. Occasionally is found a pullet that begins to lay soft eggs, and continues to do so. When such a fowl is recognized, if not unusually valuable for show or stock, she should be killed.

## THE FIELD.

### Pumping for Irrigation.

EDITORS PRESS:—I noticed in your paper some weeks ago an article about the Heald & Sisco pump for purposes of draining and irrigation. I have something to say about the use of this pump for the latter purpose, having one on my ranch at work at the present time. I have lived here for four years, and have been convinced for the whole of that time that water was a *sine qua non*; in fact, that my ranch, except for a grain crop (which for the last three years has been anything but a success) was practically useless without water; but the question was how to supply this want. I am too far from the city of Los Angeles to get the city water, and even if the authorities would have allowed me the use of it (which they would not, as I am too far out), there is so much waste land between me and the water limits that the wastage would be far more than any supply I could get on my land.

I tried for flowing water next, which at a depth of 395 feet I failed to obtain, although at a depth of 79 feet, we struck a very strong water stratum, which ran down to 119 feet, or 40 feet in all. I had the pipe perforated all the way up and down this 40 feet, and having seen one of the Heald & Sisco pumps at work on a neighbor's ranch, got one (No. 2) and put it down over the well. I also purchased a 10 horse-power steam engine, which I placed some 50 feet from the pump, so as to allow of a good long belt being used.

The water in the well pipe stood 13 feet from the top of the ground, and to shorten the length of suction, I sank the pump three feet below the surface. The effect produced was beyond my most sanguine expectations. The pump worked like a charm, throwing 15,000 gallons per hour, which makes a very fair irrigating head.

In sounding the well, which I did on the second day that the pump was at work, I found to my surprise that the water was only lowered three and one-half feet while the pump was in full swing, and the more the pump is worked, the less it seems to be able to lower it. For when I parted with the No. 2 for one a size larger, the water would lower three feet, but no more.

One thing puzzled me, and that was that the No. 2 took a great deal more power to work it than stated in the book issued about these pumps. I wrote to Messrs. Parke & Lacy, Market street, San Francisco, who are the agents, stating how I had my pump fixed and asking the reason for the extra power being required, also requesting them to change my No. 2 for the next larger size, 2½. They very kindly granted my request as to the change, and informed me that if the pump was put down close to the water, the power required to run it would be considerably lessened, as these pumps force better and easier than they draw. Accordingly, when I got my No. 2½, I had a pit made round the well pipe and have got the pump within three feet of the water. This pump has a capacity of 24,000 gallons per hour, and works with little more than half the power required to run the No. 2 when only sunk three feet in the ground, consequently being 10 feet away from the water. Another reason for the extra strain was, I had on 32 feet of 3½-inch suction pipe, and the friction of the water passing through this must have been considerable.

I have now got the No. 2½ fairly started, and the stream from it is as much as two good men can handle on level ground and sufficient to flood five acres of ordinary level ground in a day of 10 hours pumping, if the water is properly handled. I take great pleasure in recommending these pumps to any farmers who wish to raise water for irrigation, as they are the simplest things imaginable, nothing in them to get out of order, very little power required, and have a most enormous capacity for the size and price. The cost of running my pump for 10 hours is about three dollars.

EDWARD P. TOMPKINSON.  
Green Meadows, Los Angeles, Cal.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### Ho! For the State Grange.

"I've just come in from the meadow, wife, where the grass is tall and green; I hobbled out upon my cane to see John's new machine; it made my old eyes snap again to see that mower mow, and I heaved a sigh for the seiyho I swung some twenty years ago."

"There's a difference in the work I done and the work my boys now do; Steady and slow in the good old way, worry and fret in the new."

**EDITORS PRESS:**—See the plaintiveness of the old man's song, as in feebleness he totters to the field seeing his sons work for an hour, only to remember that in his prime he could but do the same in a day; yet with this, to him, humiliating retrospection is heaved a sigh for the good old days, and triumphantly he exclaims

"Steady and slow in the good old way, worry and fret in the new."

Contrast this good, tired old farmer of the long ago with him who lives in this new era of farm life, machines, with metallic clatter, untinglingly "reap, rake and put in bundles neat," tillers of the soil have ceased to be "mere hewers of wood and drawers of water," and have organized into a little world with their own peculiar laws and ties circling them in one great brotherhood; not selfishly segregating themselves from the great mass, or only binding like to like, for, as every human drop is added, the law of sympathy widens, and the great ocean of life ripples from shore to shore, even as the smallest pebble disturbs the placid waters of the great deep.

In the steady times ago, think you that industrious, stirring old man would have harnessed "old Charlie" and, with his equally good wife, set off, on a Saturday afternoon, for Grange for a few hours' recreation and neighborly intercourse. Ah, no! The flying moments were far too precious to dwindle away in that seemingly useless manner. But old things have passed away, and the old man sadly says: "The old tools are shoved away; they stand a gathering rust."

Not so speak the old people of to-day as they don their Sunday best, and with light hearts and sometimes light pockets hasten to the *Grange Home*; there experience meets experience, and brotherly love is exemplified in the willingness of each to put shoulder to shoulder to the wheel of educational reform. There, too, old life tools are not shoved away, neither do they gather rust, for their ripeness of experience must counterbalance the more lightly poised judgment of younger life. The friction of this progressive day upon old and young life causes bright sparkling scales of light and knowledge to fly from even the most obscure human life-foe—hence a mutual benefit alike to young and old.

Farm life, from the very nature of its surroundings, partakes of that isolation and loneliness that tends to make us selfishly home-tending; a good fault when indulged to a certain degree, but beyond that its tendencies are narrowly contracting in their nature. Then say we, Ho! for the State Grange. The history of your farm year being almost told, what better or cheaper recreation can you and yours wish than to hie to the "*City of Oaks*," to meet sister and brother face to face, compare notes, relate experiences, and renew fealty to Grange principles in obedience to *Pomona*; lastly the *love feast*, which is not by any means the least reward of the pilgrimage of the patron.

Hear now the ringing, exultant tones of the old man as he says, "Well, wife, I am going to the State Grange; get your best black silk ready, the one, you know, you wore to John's and Hetty's wedding, and we will go and see what our brothers do; we old-fashioned people must see if there is a sprinkling of old Puritanical good sense left to guide our grand-children; we would see and hear for ourselves if everything of the good old times when we were young is classed under the head of old fogyism. If so, wife, my feeble cracked voice will cry out, how in our happy and contented past as gain and loss were noted in simple day-book and ledger, no partial payments with interest, or mortgages with big per cent. was recorded against us. Yes, wife, I never made a speech, but I think this fast age needs checking, and I will do my duty."

The placid, quiet face of the dear home mother lighted with real pleasure and joy as she brightly said, "Yes, husband, we will go; our babies are now strong men and women and will not miss us,"—and then peaceful quavers of that good old hymn, "*Come, thou fount of every blessing*" rang in that quiet, childless home, as those old hearts, once more made young by anticipation, brought to light and brushed best clothes, that they might in that "cleanliness that is akin to godliness" grasp the hand of sisters and brothers from the rocky fastnesses of Del Norte and southern plains of San Diego, or from the wave-ribbed shores of the Pacific board, to that long extended line reaching from the lava beds of Modoc to the sterile soil of Arizona. Within the sacred precincts of the State

Grange together they will compare notes, not in dollars and cents, but in that fullness of experimental knowledge by which young farmers may be initiated into the mysteries of soil and seed.

Grangers of California, will you not meet our sister and brother this coming October; mayhap 'twill be their last earthly Grange communion, and, in the words of this aged brother, "tis good to measure axes, that strength may be approximated," then will our young brotherhood more knowingly guide muscle and mind, thus avoiding the mishaps that beset the pioneer men and women who have been blazing the forests of middle-men, that have shaded almost to darkness the great chaos world of co-operation!

MRS. MARIA E. LANDER,  
Sec'y of Alhambra Grange.

Martinez, September 1st, 1879.

### The Grange Meeting at Martinez.

Our representative at the Martinez meeting of August 22d and 23d did not arrive until the second day, so that his report last week did not include the first day's proceedings. Therefore we quote from the *Patron* as follows:

J. Strentzel, Worthy Master of Martinez Grange, called the meeting to order promptly at one o'clock p. m. On motion, Bro. I. C. Steele, Worthy Master of the State Grange, was elected President, and Amos Adams Secretary. The attendance comprised members from San Mateo, Alameda, Contra Costa, San Joaquin, Solano, Napa, Sacramento and San Francisco.

N. Jones, of Lafayette, being called for, came forward and delivered a stirring address of 20 minutes' duration. He argued that at no time in the history of California was there so great a necessity for unity of action among our farmers as at present. He argued the great necessity of prompt attendance at Grange meetings, that a day spent once in two weeks, on such occasions, was not as bread cast upon the waters, to return after many days; but it was like money put out at compound interest, the benefits of which could be ascertained with mathematical accuracy. The social benefits of frequent meetings is beyond computation; it assisted in wearing off the rough edges from the characters of farmers, caused by the isolated condition of their calling, and gave them a better opinion of themselves and their fellow-men.

J. H. Gardner, Master of Rio Vista Grange, addressed the meeting in a speech replete with common sense suggestions, and timely advice to farmers in regard to the great necessity of unity of action, and harmonious feeling among the producers of the State.

W. L. Overheiser, of Stockton, was called for, but excused himself from making a speech, on the ground that he was somewhat of a Quaker; that at present the spirit did not move him, but hoped to have something to say before the conclusion of the meeting.

The President impressed upon his hearers, the necessity of a greater freedom of speech, that the lack of a desire to speak in public assemblies placed farmers at great disadvantage, and as this was a Grange re-union, all ought to speak with perfect freedom on any subject of interest, without regard to the flow of diction or the beauty of language with which their thoughts are clothed.

J. Strentzel very feelingly chided the brothers for their many excuses for not speaking. He saw a brother present (Overheiser) who said he could not speak, but could talk eloquently, describing the best breeds of cattle, sheep and poultry; another brother (W. B. West, of Stockton) who had recently returned from Southern Europe, who could tell us all about the most successful mode of growing grapes for making raisins. Still another brother, J. Lewelling, one of the oldest and most successful horticulturists in the State, could draw from his storehouse of experience information which would be of great value to his hearers. He saw many others present who were able, and ought to take a prominent part in discussions.

By request, Sister M. B. Lander read an essay, which like all contributions from Sister Lander's pen, is filled with good advice and sound practical common sense.

Bro. I. G. Gardiner, of San Francisco, moved the thanks of the meeting be tendered to Sister Lander, for her able and interesting essay, and that she be requested to furnish a copy to the *California Patron* for publication, which was carried by a rising vote.

C. Bagge, Past Master of Temescal Grange, spoke very earnestly in favor of a more vigorous movement on the part of the farmers, for a greater unity through the Grangers for Grange purposes, and the welfare of the producing classes.

Sister McHarry, of Martinez Grange, favored the meeting with some music on the piano, which was rendered in a style that spoke well for the musical accomplishments of the young lady.

The discussion then turned to horticulture, the points of which we shall give next week.

**GRANGERS' BANK MEETING.**—A notice in our advertising columns calls attention to the annual meeting of the stockholders of the Grangers' Bank, for the election of officers and the transaction of other business. The meeting will be held on Tuesday, the 14th of October, at the bank.

T. H. MERRY, formerly a farmer at Healdsburg, is one of the Assemblymen elected from this city.

### In Memoriam.

TEMESCAL GRANGE, P. of H., Oakland, Cal. WHEREAS, Our esteemed Brother and Charter member, W. B. Ewer, has been passing through deep afflictions in the death of his almost life-long companion—his most estimable wife.

Resolved, That those of us who knew her most intimately cannot speak too highly of her true Christian character, her strict integrity to principle, outspoken under all circumstances in defense of the right, never fearing to defend the helpless either by words or acts of benevolence. A true, loving, devoted Christian wife and mother has passed on through months of intense suffering to her final rest.

Resolved, That we, as members of Temescal Grange, extend to our Brother and his family our warmest sympathy in this their darkest hour of sorrow.

Resolved, That this heartfelt expression of the Grange be inscribed on our records and a copy sent to the family, also to the *California Patron* and *PACIFIC RURAL PRESS* for publication.—[Sarah H. Dewey, M. A. Frink, J. V. Webster, Committee.]

### Causes of Hard Times.—No. 5.

It is not to be expected that the views advocated in these articles will be universally accepted and pass unopposed. In every age wrong doers and oppressors have fought hard to retain their power to oppress their fellow men. And the devil helps them to many a plausible argument and specious plea. Never was there so bad a cause—but somebody was found to defend it. In a paper published in this county (Ventura) less than two years since, a woman volunteered to defend the character of the devil, and claimed that he was a benefactor to our race when he tempted Eve to eat the forbidden fruit! So also men will be found who will declare it great oppression to pass laws restraining money lenders from a course which starves the poor, breaks down the middle classes and brings ultimate ruin upon themselves.

But waiving objections for the present, let us conceive a good strong usury law, already passed and put into execution. What then? Very likely for a little while, less money will be loaned. A few capitalists will say: I will not loan at 6%, I will invest. All right, this will give us a few more purchasers, and business men and new producers. Property will rise and the hive will have less drones and more working bees. Besides to have a little less money loaned and borrowed will be a benefit. But second, a great deal of money will be loaned at 6%. Nine-tenths of the capitalists know well that 6% is all we can afford to pay, and that it is better to loan at that rate than for them to invest in business. Third, loans at such rates will be far more secure, because the borrower pays his interest, whereas the higher rate would break him down. Fourth, a low rate of interest encourages and stimulates to the highest degree the producer to be industrious and frugal, because he has now the prospect of paying his interest and laying up something for a rainy day. Fifth, there would be no more such breaking down of market values, as we now witness, so disastrous to all classes, rich and poor; because the prime cause of bankruptcy is estopped. Sixth, pass the 6% usury law and enforce it, and real estate will rise and all kinds of industry and enterprise revive. Who will buy land now on time, if he has to pay from 1% to 2% a month? Will not men prefer to hire land or keep out of business? What honest business will stand such rates? But drop interest to 6% per annum, and buyers will spring up on every side. For example, a neighbor of mine has for sale 4,000 acres, valued at \$30 an acre. The proposed purchaser reasons thus: "I can hire this land at \$2 an acre and crop it and take off the cream for a series of years, and pay no taxes. But if I buy on time at 12% per year, the interest on each acre will amount to \$3.60 and the taxes will amount to 40 cents the acre, and that acre will cost me \$4 a year! No, I will not buy, I will rent." It is difficult to see how business is to revive in our State unless the present all-destructive rates of interest are suppressed. They have broken up the farmers and that great middle class of producers without whose products and patronage the business of the State is ruined. Do the capitalists indeed know how completely the industry of the State is disheartened, how thoroughly broken down are the farmers, that vast numbers are en-route for Oregon and Washington Territory? What other multitudes are preparing to go? And what crowds at present quiet, only wait for an opportunity to sell out at half price to go there too, or elsewhere? A little more pressure of this sort, and a few men will own the lands, but where will be the people? Alas! for California, its glory will have departed. California's climate is peculiar. Its oft-recurring dry years necessitate borrowing to tide over the barren years; then the high rates do the rest—use him up and make him a slave. When once we get our feet in this bird line we are ruined! So it has been, so it will be. Let the coming Legislature look to it and act promptly. Sixth, a strong and thoroughly executed usury law will prevent the rise of fierce antagonism between the rich and the poor. The middle classes, getting money at low rates, can give better wages and employ more hands on farms and in other industries, thus drawing from the cities and sand lots the dangerous elements now massing there and increasing year by year. Are not capitalists alarmed at this augmenting danger? And ought they not cheerfully to submit to such a law as a measure of public policy indispensable to the security of their property and persons? If they oppose it, they are crazy. Seventh, the usury law proposed will help to make strong that great middle class of producers and farmers, which is

at once the chief support and glory of the State. This class is infinitely more important to the State than the rich on the one hand or the extremely poor on the other. On this great pillar the State rests for support in peace and power in war. To nourish this class and guard its integrity and growth is the first duty of government. With that part safe and prosperous, the State is strong; that demoralized, the State topples and falls. Let, then, our legislators look at the effects of the high rates of interest upon this class and act so as to protect it, and so protect itself and all. A wise State policy demands it. Eighth, a usury law of the character suggested is adapted to a wise diffusion of property into many hands and prevents the absorption of its lands into few hands. The vast estates of the Von Ronsseclacs, of New York, agitated that State for a generation, and cost immense sums and many lives. We should forestall such an issue here by such a usury law as shall prevent the rich, in times of distress, from absorbing the lands and property of the poor. Ninth, the money lenders, who in general may be regarded as the capitalists of the country, ought gracefully to submit to such a usury law as is proposed, because of their personal inability to protect their possessions from either foreign foes or domestic insurrection. In both these dangers, they have to call upon the middle classes and the poor to arm for the protection of their property, and they do protect it at such times often by the sacrifice of vast sums of public money and many valuable lives. Is it any more than fair that they should be asked, as a meet return for such protection, that they submit to a usury law indispensable to the life and strength of the classes on which they lean? The assertion that "the rich are independent of the poor and the middle classes" is eminently false. Try it once. Let the middle classes and the poor leave the rich to the tender mercies of thieves, robbers and outlaws. How soon they would cry, like the Roman Emperor Caesar, "Help me, Cassius, or I sink!" The more a man has, the more he needs help to defend it and the more he owes to that great strong-armed middle class, which, as we have seen, has been well nigh ruined by the excessive interest it has been obliged to pay capitalists for the use of their money. S. BRISTOL.

San Buenaventura, Cal.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### FRESNO.

**FEED.**—*Expositor*, Sept. 3: We are informed by John Foster that the mountain feed is growing lighter and poorer every season. This is undoubtedly occasioned by overstocking, and by the immense bands of sheep being driven over it before it has an opportunity to mature seed. Every season thousands of head of sheep are driven to the mountains, and the scramble for range is so great that the hands are kept moving ahead as fast as the snow melts away, trampling and destroying the vegetation almost as soon as it springs from the ground.

**WATER RISING.**—The effects of irrigation are perceptible in all the surface wells on the plains. The water level is gradually rising, that in irrigated districts being very near the surface, while at distant points it has risen but a foot. It seems probable that as soon as the Upper San Joaquin Canal Company shall commence to pour its wealth of water on the thirsty plains west of Fresno, the whole plains will be permeated and that it will require but little rain or irrigation to produce good crops every season.

#### KERN.

**ITEMS.**—*Courier Californian*, Sept. 4: It is a good time to prune the lively cockle-burr close to the ground. It is spreading all over the valley. A disease of the eyes of young cattle and calves is reported throughout the Kern River valley. In many cases one or both eyes have been entirely lost, the eye ball protruding three inches from the socket. In the closed office of the lumber yard, on Sunday, the thermometer stood at 116°. Alfalfa hay is being delivered in Bakersfield at \$3 per ton. The whole surplus of the Kern River mills flour is being shipped along the line of the Southern Pacific railroad, and to its terminus in Arizona. Sheep shearing has commenced in earnest. Mr. Rose and others have brought in their flocks from the mountains. A good deal of summer-fallowing has been done this season, and more than usual of the high land will be put in small grain this fall. Mr. A. Lenox, who has about 50,000 sheep in his charge, has just returned from the coast in Santa Barbara county, where he has placed a number of his flocks. He has faith in the sheep business still.

#### LOS ANGELES.

**DEATH FROM BEE STINGS.**—*Herald*, Sept. 6: A 15-months-old child of Mr. J. F. Pullee, who lives near Santa Ana, went out among the bees the other day and was stung so badly about the head and neck that death ensued in about 10 minutes.

**WINE-MAKING.**—*Gazette*, Sept. 5: Some of the Anaheim vineyardists will commence wine-making next week. Wine-making has already begun at San Gabriel, and it is said that some of the growers have gone back to the revolting process of "stamping out" the juice instead of using the grape press. Such a proceeding is altogether behind the age, and people will be loth to partake of wine which they think has been made in any such manner. Here in Anaheim the grape press is exclusively used.



## MARIN.

**APPLE SHIPMENT.**—Petaluma *Argus*, Sept. 4: The Messrs. De Long of the Novato ranch, last week made a shipment of some 600 boxes of apples to Australia, to fill an order received direct from that point. The varieties selected were the Roxbury Russets and the Talpahawkins. They were all carefully picked from the tree and each apple nicely wrapped in paper. It is confidently believed that the fruit will reach its destination in good condition, and if such should prove to be the case, large orders are expected to follow. Messrs. De Long inform us that they have received proposals from parties in San Francisco, for making extensive shipments of winter apples to Liverpool and London markets, where it is claimed that prices will rule very high this season.

## MENDOCINO.

**MOWING POTATO TOPS.**—Point Arena Cor. Santa Rosa *Times*, Sept. 4: The potato crop has been blighting badly for a few weeks past. One man took his scythe and cut the tops off a small patch and they went to growing beautifully. This may be a good plan, at least it is worthy of a trial. We had a very nice shower of rain on Wednesday, the 20th of August.

**MORE FINE SHEEP.**—Ukiah *Press*: Mark York brought in 10 head of very large fine French Merinos last Friday, for his own use. Same day Geo. Henley arrived here with 40 fine ewes and 160 thoroughbred and graded bucks. They were purchased at bankrupt breeders' sale in the southern counties. Only 54 head of thoroughbred sheep appear on the present year's assessment roll, but we look for them to increase in time for next year's list. Mr. York obtained his bucks from the Cotate ranch, near Petaluma.

**EARLY RAIN.**—On Thursday of last week came the first shower of the season. It misted and sprinkled for two or three hours, and altogether gave us .12 of an inch. Reports from Potter indicate a much heavier fall there, making the roads muddy and stopping the threshing machines for some days. Dry feed is seriously injured, and unless we soon have another shower heavy enough to start the young grass, what we already have had will prove damaging to stock interests.

**CORN.**—Round valley can boast of some of the largest corn raised anywhere in the county. I think the claim is well founded, for the stalks are from 13 to 16 feet in height, caring out much above the height of the average man, and from four to six ears on the stalk. This corn is raised by Mr. G. B. Walker. The seed, six grains, was sent from Washington, D. C., to John Thompson in the spring of 1878. Mr. Asbill first planted it and it returned an immense yield. It is justly called the "mammoth" corn.

**GOOD WORK.**—Richmond Carner reports grain rather thin but remarkably plump and heavy headed. He run his header 37 days, cut a little over 600 acres, and came out with his team in good order and nothing broken. A good average on small fields.

## MERCED.

**CROP PREPARATIONS FOR 1880.**—*Argus*, Sept. 6: The farmers of Merced county are better prepared for pitching a large crop of grain for next summer's harvest than ever before since the county was settled. The late spring showers enable them to summer-fallow an extraordinary breadth of land, which, added to the lands that were plowed during the winter and sowed too late to make a crop, and which are now in nearly as good condition for planting as the summer-fallow, will enable them to seed a very large proportion of their lands before the rains set in, and enabling them to devote the whole of the winter and spring to winter planting and sowing and summer-fallowing for the following year, and thus the failure of this year will enable most of them to sow a large percentage more of land with a good prospect for a heavy yield next year. The lands have had a year's rest, and are in good condition for seeding this fall, and with early rains we may look for the most prosperous time next year that Merced has ever witnessed.

## MONTEREY.

**ITEMS.**—*Democrat*, Sept. 6: All the available stubble in these parts has been taken up for stock, sheep principally, and its price under the demand has advanced several hundred per cent. The oaks in this portion of the county are covered with acorns. Some say it is a sign of a dry winter, and it is certainly a sign of plenty of wild pigeons.

**THE RESULT.**—*Index*, Sept. 4: The crops in the Salinas valley have, as a general thing, turned out better than was expected the fore part of the season. Harvest is about over for this year. Both grain warehouses at this place are full to overflowing with wheat and barley.

**NAPA.**  
**CHERRY WINE.**—St. Helena *Star*: August Jean Monod, wine maker at Oakville, has tried the experiment of flavoring wine with cherries, putting 50 pounds of the fruit into 20 gallons of wine. It makes a very strong wine, with a sherry flavor, and will make your head buzz about as quick as so much brandy.

**ST. HELENA.**—*Star*, Sept. 5: Wine-making has not commenced yet, properly speaking, though Thomann, at Vineland, crushed one lot of grapes for Frank Stetzel, this week, to save them from the birds. He expects to begin in the regular way next week. Crabb, at Oakville, intends to begin a week from Monday. Brun & Chais, Oakville, in about 10 days. A. Jean-monod, Oakville, the middle of next week.

Mr. Lemme does not expect to begin wine-making under four weeks yet. Grapes up there are usually about a fortnight later, anyway, than those in the valley.

## SACRAMENTO.

**BANANAS.**—*Record-Union*, Sept. 4: We made reference last winter to the efforts made by J. C. Carroll to save from the severe weather his fine banana plant. He succeeded in keeping off the frosts, and it is now about 20 feet high and 10 inches in diameter near the ground, with leaves from five to six feet long and about two and a half feet wide and attracts a great deal of attention. C. H. Cummings, also has a fine plant of the same species a little younger. Carroll's is about 15 months old, and is expected to bud in a short time, after which it takes the fruit about nine months to be perfected. Gentlemen well acquainted with such matters say that the growth of the plants in Sacramento has been remarkable, and shows peculiarly fitted soil and climate. Their owners (the plants) are already considering how they shall protect them next winter.

## SAN BENITO.

**INCUBATION.**—*Gilroy Advocate*, Sept. 6: Mr. E. W. Bowman, of San Juan, has for some time past been hatching chickens by means of artificial heat in one of Prof. Corbett's incubators. He has so far been successful in producing the chickens; but cold nights and winds invariably kill them off. He is now engaged in building a "hover," or "artificial mother," to be heated with hot water by means of pipes, and a patent stove. The pipes will be enclosed in a box and covered with goat skin, the long hair of which hanging down, the chickens are enabled to get under it, and thus be kept warm and comfortable. The frame building is 100 feet long containing 14 pens, 6x25 feet, capable of holding 700 chickens each; one side of the pens will be composed of glass windows, and will extend into the field for forage. By this means, and regulating the heat, Mr. Bowman expects to be able to raise chickens for the market all the year round.

## SAN DIEGO.

**GRAPES WITHOUT IRRIGATION.**—*News*, Sept. 5: On Saturday evening, Mr. George Kimball of National City, brought us a basket of what we think the finest white grapes, two varieties, that we have seen this season. The bunches weighed from 2½ to 4 pounds each, and the fruit was well matured, and very luscious in taste. The beauty of the facts in connection with those elegant grapes is that, for the last two years, the vines have not been irrigated, as Mr. Kimball tells us. The growth and size of bunch has been secured solely by cultivation, the ground having been fairly cultivated five times in the two years. Mr. Kimball's vineyard occupies high mesa land of the red sort, just east of National, where, only a few years ago, it was held to be next to worthless, so far as anything outside of pasture was concerned. We begin to believe that good plowing and cultivation will dispense with much water, and those grapes seem to prove it.

## SAN JOAQUIN.

**LODI ITEMS.**—*Review*, Sept. 6: Hop-picking began last week. The yield is not as good as last year, but the prices are more than double, therefore the cash value will be considerably more than for the last two or three seasons. The roads are in a terrible condition and should be straved at once. Threshing is nearly finished in this vicinity, the yield has been more than the general average.

## SAN MATEO.

**COAST CROPS.**—*Redwood Times*, Sept. 6: The grain crops on the coast are not turning out as large as expected. When in stack there seemed to be a big crop, but when threshed it is found that the straw takes up more than its usual share. Farming on the coast the coming season will be limited. The hills, by all means, should be used for stock and grazing purposes, and more wheat should be sown. Potatoes are found to be a very risky crop, and farmers should not plant any but for their own use. Flax will be sown in large acreage, especially at Pescadero.

**OPIMUM EXPERIMENT.**—A new enterprise is being tried at Spanishtown by the gentleman from Mount Ararat. It is the raising of poppies for the opium. He is a great enthusiast on the subject, and believes money can be made at it. His poppies are growing finely and can be seen in the large space of ground fronting the Dolloff homestead. If successful, the gentleman will venture on a few acres of ground.

## SANTA BARBARA.

**EDITORS PRESS.**—Crops have been generally good in this county, but farmers are not very happy; prices are low, and we have not yet become fully accustomed to the new state of things. Where much hiring has been done, farmers have actually lost money on some of their crops, even when tolerable good. We are not yet sufficiently self-sustaining, we must raise more of the necessities of life on our farms and buy only such things as cannot possibly be raised. Then we can worry through with abundance of economy and industry until times ease up a little. God pity those in debt, for their day of relief looks far in the future. Better sell half the farm, yes, and go half naked and live on hog and hominy, than mortgage the homestead. Debt is deplorable at all times; such times as these it is fearful. Beans, a good crop are being harvested; corn is good; an insect works on the pumpkin crop, the vines grow well, but pumpkins rot.—S. P. SNOW, Santa Barbara, Cal.

## SOLANO.

**WHEAT MOVING.**—*Vallejo Chronicle*: A train of 80 cars loaded with wheat came down from the upper portion of the county to the grain wharf at South Vallejo, Thursday. This is the largest train that has ever arrived at any one time since the road has been in running order. About 50 men are employed by the company at the present time, engaged in unloading grain cars. Thursday they discharged the grain from 114 cars, and the day before 117 cars. Most of the grain is transferred from the cars on board of the ships lying at the wharf, and some of it is put in warehouses, and the rest piled on the wharf so as to be ready for shipment. A person can hardly estimate the vast amount of grain that is hauled to South Vallejo without personally inspecting it themselves. For instance, on the train that came down Thursday there were 800 tons of wheat, besides several smaller trains arriving at various hours during the day.

## SONOMA.

**THE DISTRICT FAIR.**—*Marin Journal*, Sept. 4: The Sonoma and Marin District fair will open at Petaluma, Monday, September 20th, and continue until Saturday, October 4th inclusive. It is gratifying to know that the dark shadow of hard times which is upon us, and the engrossment of the public mind in the election from which we are just emerging, have not defeated a widespread interest in the annual exhibition of our varied products and that the managers assure us a grand success is already made certain. The Directors have been obliged to provide extensive new accommodations for stock, and the pavilion has been materially enlarged by providing outside apartments for special classes. The speed programme is the most attractive ever presented, and there will be few races at any fair this fall more interesting than the best in our list. The district boasts a very large number of fine horses, and several herds of thoroughbred cattle, of the various fancy bloods. It comprises large areas of the richest grain and root lands, and its annual products would be marvelous in any exhibition in the world. Its dairy produce is famous throughout the nation.

**ITEMS.**—*Russian River Flag*, Sept. 4: O. L. Soules recommends Egyptian corn for late fodder for cows, finding that it is the most vigorous thing in that line that he can raise. Hop-picking is at its height at Grant's and will commence at Alderson's to-day. The crop will be in fair abundance of fine medium-sized hops. We have learned this week that even our Mission grapes have been blighted in some vineyards, and have not done well since they were the size of peas. Cause, either mildew or heat, or both. Blind Tucker displays an onion brought up from Santa Rosa, the weight of which is 2 pounds 13 ounces; measurement, 20 inches in circumference, or 6½ inches in diameter. The Sonoma *Index* makes its brag that Sonoma valley is hard to beat in the matter of raising plums. A Mr. Shaw there presented the editor with six, that weighed two pounds and two ounces. Cannot some of our pomologists beat that? Shearing of the fall wool-clip has begun on Russian river. The general clip will be clean and nice. The huckleberry crop is nearly all gathered and is much lighter than that of last year.

## STANISLAUS.

**RESULTS OF IRRIGATION.**—*News*, Sept. 5: Hill's Ferry shows the benefit of irrigation, this year adopted for the first time under the line of the Miller & Lux canal. As a result there has been considerable grain raised, and the town evinces a corresponding life in a business point of view.

**FAIR.**—*Modesto Herald*, Sept. 4: The third annual exhibition of the Stock Growers' Association of Stanislaus county will be held at Modesto from the 23d to the 26th of September, inclusive. The purses amount to \$2,000. Entries to close on the 15th. The track is in splendid condition, and there is no faster one in the State. A grand time is anticipated.

## TULARE.

**HANFORD NOTES.**—*Cor. Delta*, Sept. 4: A fine crop of tall weeds has grown up around Hanford in the last few weeks, which renders the town almost invisible. At a ditch meeting at Robinson's hall on Saturday, August 30th, an arrangement was effected by which the Lake-side ditch is to receive water from the Mussel Slough ditch by means of a channel from the regulator of the latter, above town.

## YOLO.

**GRAIN.**—*Democrat*, Sept. 5: The threshing season is about over, and our town is thronged with farmers every day. Most of the business men are in good spirits—money seems more plentiful, and every indication for better times is apparent. There is scarcely any wheat arriving now at the warehouse, the farmers have about finished hauling their grain to market. The trains from above pass through this place daily with several carloads of wheat, but very little is being shipped from this point.

**FRUIT.**—The shipment of fruits from the orchard and vineyard of R. B. Blowers has become such an item that the railroad company have built a side track for his accommodation. The other day we noticed two cars loaded with fruit from his vineyard for shipment. A Davisville correspondent says: G. G. Briggs, the noted pomologist, is busily engaged in converting his large grape crop into raisins.

**IMPROVEMENTS.**—*Mail*, Sept. 5: The Puget Sound Lumber Company have done a rushing business the past month in this place. They

have sold and delivered no less than 19 carloads of lumber during the month of August last, mostly for farmers and others in the immediate neighborhood of Woodland. This shows how the country is filling up and improving around here.

## NEVADA.

**WITHOUT IRRIGATION.**—*Reno Gazette*, Sept. 3: The practicability of growing grain without irrigation is gaining the public confidence. Wherever a squirrel drops a grain of wheat or barley it has been noticed that the grain comes up and grows finely. Hundreds of witnesses can testify to this. Frank Dickenson harvested his crop the other day and got 2,000 bushels of barley off 60 acres. G. W. Hepperly got 800 bushels off 20 acres. Neither crop had one drop of artificial irrigation.

**LUMBER FOR ALASKA.**—The Truckee Lumber Co. shipped two carloads of boxes for salmon cases, to Sitka, Alaska, on Monday. Last week they sent a carload to Mexico for oranges.

## News in Brief.

HEAVY, continuous rains prevail on the Island of Cuba.

THE Mechanics' fair opens at Portland, Or., October 15th.

THE yield of crops in Idaho this season is unprecedented.

THE weavers at Fall River, Mass., have voted not to strike.

WORK has been commenced on the Nevada Central railway.

THE Governor-General of Canada arrived at Toronto, Sept. 9th.

EIGHTEEN deep-water ships arrived in San Francisco Sept. 9th.

A SEVERE frost has caused immense injury to the coffee crops in Brazil.

THE steamer *Bengal*, from Montreal for London, grain laden, is ashore.

A MINISTER was beaten to death Sept. 9th at Zaleski, O., by his son-in-law.

THE inhabitants of Novi-Bazar have determined to resist Austrian occupation.

SIX miners were suffocated in a mine at Alta, Utah, last Saturday by poisoned air.

THE Memphis Odd Fellows appeal to the Brotherhood at large for material aid.

BLORE, formerly architect to Buckingham Palace and Westminster Abbey, is dead.

EIGHTY-FOUR young persons have left Moscow under sentence of hard labor in Siberia.

SILVER in London, 51½d, consols, 97 11-16; 5% U. S. bonds, 105½; 4s, 105; 4½s, 108½.

It is believed in Madrid that King Alfonso's marriage will be celebrated in December.

THE Indians have deposed their chiefs at San Bernardino without causing an outbreak.

ALL the Vancouver Island Indians have gone to Puyallup valley, W. T., to pick hops.

OF the ten-dollar refunding certificates, the Treasury Department has sold \$40,012,750.

THE surrender of Cornwallis is to be celebrated on the 19th of October at Yorktown.

CROPS in Bulgaria having failed, the government has forbidden the exportation of cereals.

LEONARD, son of Nathaniel Montefiore, of London, died last Saturday at Newport, R. I.

FULLY 1,000 silk operatives have arrived at Paterson, N. J., this year, from foreign lands.

PENNSYLVANIA is nearly clear of tramps, owing to the stringent law and the revival of business.

THE state of siege has been raised in the Bulgarian districts of Rasgrad, Simla and Osman Bazar.

SEVEN persons were drowned lately by the sinking of a yacht in Henderson bay, New York.

DR. SAMUEL A. FINLEY, ex-Surgeon General U. S. A., died in Philadelphia Sept. 9th, aged 82 years.

HIGH water prevails in St. Petersburg, and violent wind storms have done considerable damage.

AT Liverpool wheat is quoted at 8s 6d/9s 6d for average California white, and 9s 5d/9s 10d for club.

THE Mussulmans in Eastern Roumelia declare that they prefer a Russian to a Roumelian government.

AN insurrection has broken out in Kardistan.

THE Pennsylvania State fair is in progress at Philadelphia.

GENERAL GRANT is to be received in San Francisco, with a general welcome, outside of all party lines.

It is estimated that about \$100,000,000 will be sent to this country from Europe during the present year.

JAY GOULD tells the Howard Association of Memphis to keep at its noble work and he will foot the bill.

A LARGE force of men are engaged on the work of the locks and canal of the cascades of the Columbia.

A DISPATCH from Paris announces the death of Baron Isadore Taylor, the well-known author and traveler.

THE new Cassiar Mining district of British Columbia has been abandoned, the claims being worked out.

THE ship *Frank E. Curling*, from Maine to San Francisco with 2,600 tons of coal, has foundered off Cape Horn.

INDIANS raided a herd of cavalry stock recently near Ajo Caliente, N. M., killing the guard and running off the horses.

IN New York, Government bonds are quoted at 101½ for 4s of 1907; 102½ for 5s of 1881; 104½ for 4½s; sterling, \$4.82/4.84; silver bars, 111½; silver coin, ½¢ discount.





## Sing Cuckoo.

When grass is mown and bends the grain  
Before the sickle's keen caress,  
When shrilly creaks the loaded wain  
And groans the spouting cider press,  
A flying shout from the haunted wood,  
By tangled thickets and roaring flood,  
Merrily ringeth the bright day through—  
Cuckoo! Cuckoo!

When bleating lambskins seek the fold,  
And from the farm yard barks the dog,  
When rusts the sunset's wealth of gold  
And fields are drenched in river fog,  
While flits the bat in the village streets  
This unseemly, magical voice repeats  
A mournful chant 'mid the falling dew—  
Cuckoo! Cuckoo!

When stars are brightest in the sky,  
And low the spectral crescent swims,  
When from the woodland comes a cry,  
And o'er the marsh the owl skims,  
While all the life of the glad day sleeps,  
A ghostly watcher his vigil keeps,  
Bitterly weeping the long night through—  
Cuckoo! Cuckoo!

Beneath the sun my spirit sings  
Like you, oh, bird! a measure gay,  
But through the night, on leaden wings,  
It weeps o'er hopes long laid away;  
And hearing thee sobbing thy sad refrain,  
My heart cries out with a sudden pain,  
For the dead past wakes, as I list to you.  
Cuckoo! Cuckoo!

—Sidney Dickinson, in *Sunday Afternoon*.

## Woman's Influence.

[Written for the RURAL PRESS by MRS. N. C. ALGER.]

I have just finished reading "Woman's Influence in the Home," in the PRESS of August 9th, and I can seem to see the sadness with which many women will lay down the paper after they have read it. We read in the Bible that when the children of Israel journeyed in the wilderness, they sinned against the Lord and were bitten by fiery serpents. Many of them died. There was great mourning throughout the camp, for there seemed to be no escape if one was bitten. I suppose the people then loved their friends and relatives as well as we do ours, and those of us who have lost our dearest friends can imagine something of their sorrow. They saw their error and, repenting, besought Moses that he would pray the Lord to take away the serpents. God, who will always help those who turn to Him in humble faith, directed Moses to make a serpent of brass and lift it upon a pole. Whoever looked upon this serpent was healed. With what rapture must those who were well have hastened to those sick ones and moved them with all possible speed to the best position from which to view the serpent, that they might look and live. They would certainly wish them to have the benefit of the only remedy.

Now, I have the kindest feelings toward the writer of the above-mentioned article, and I do not want to think that, had she been there, she would have gone from tent to tent, and, looking upon those who had been bitten, as they lay writhing in their agony, would have said: "I am sorry, but there's no sort of hope for you. You must die a horrible death. You may have heard there was help for you, but it isn't so. All you can do is just to make up your minds to bear it, for it is not at all likely that anything will happen in this generation, or the next, or the next," that will materially better your condition."

But, had she said this, some one would have followed her, crying: "Just come and look at the serpent Moses has lifted up, and you will be made whole!" I venture to say that, had one tried to discourage the bitten Israelites in language similar to the above, he would have cheered them fully as much as the article I have spoken of has helped the weary women of California.

It is a sad fact that society has been bitten by the fiery serpents of sin, but it is equally certain that there is a remedy, and that it rests largely with the mothers, sisters and wives to help the people to see the only source of help. We read in St. John, 3-14: "And as Moses lifted up the serpent in the wilderness, even so must the Son of man be lifted up: that whosoever believeth in Him should not perish, but have eternal life." Here is the remedy.

The lack of society is the lack of simple faith in Christ, without which no "pure blood" can "sweeten the common stream of our humanity"—no "selection of the fittest" can rebuild a brighter and prouder kingdom on the ruin of the one that, according to the writer, "is going to decay." When nations forget that God is the Lord, and when God has given them time for repentance, and they repent not, they will be destroyed as surely as was Sodom. That city of old might have been saved if there had been in it ten righteous—let us hope there are enough righteous in our nation to save it from destruction. Righteousness will save a nation: "blue blood," never!

This salvation is within the reach of all, for

Christ says: "Whosoever will, may come;" and, "Him that cometh to me, I will in no wise cast out." Does any one say, "I do not know the way?" Christ is the "way, the truth and the life." The word of God, through which we learn of the way, can be bought for a few pennies; and, better far, let the mariner voyage without chart or compass, than be who sails on life's ocean without the Bible. Let the women of California take the precious legacy of our Father and learn what stores of strength and wisdom they may have by applying to the "Giver of every good and perfect gift." The only way of safety is the way of righteousness; and if parents would secure the safety and happiness of their children, they must themselves learn of Him who is "Mighty to Save." "Go" can never take the place of "come."

If, as the writer asserts, the period of six, or seven and a half, years "counts for very little," how is it that the Church of Rome announces with such positiveness to Protestants, "Give me the first seven years of childhood and you may have the rest." This early training is the secret of its power. The formation of a child's character by no means commences after he is seven years old; on the contrary these years are of the utmost importance. For instance, before he can speak, he can understand the difference between yes and no, and if a mother says "no," then yields her will to his, she helps to lay the foundation of a selfish and perverse character. I am a firm believer in the words "train up a child in the way he should go," and when he is old he will not depart from it," and know many whole families who are respectable and useful members of society.

Let religion and common sense work together in the child's training. If parents can lead their children to a firm faith in Christ, it will be far better than the wealth of the universe. If the girls have this faith, they will be willing to trust that the Lord will provide them with husbands, or help them to work in his vineyard without them.

If ladies would take a firm stand against smoking, drinking, and other vices, they would be practiced far less than now. But (to their shame be it said) a young man remarked to me a few days ago, "The young men who smoke and drink seem to be the first in the favor of the ladies." If young ladies refuse to encourage such habits, and refuse to marry those who indulge in them, they would not have to fear such influence as "Rhoda Dendron" speaks of upon their children.

Do they say, "What shall we do for husbands?" Do without them unless you can get good ones. Better live single a million years than drag out a miserable existence with a base husband. But there are those who are free from bad habits, and others who would leave them and adopt good if the ladies would firmly demand it. If, as I have heard, the Sabbath is used for worldly pleasure, and dancing is the amusement furnished the young in California, it is no wonder we have the terrible picture in the PRESS. O, brothers and sisters! if you do these things you are leading your children in the broad road, and before your Maker you must answer for your example. This generation is responsible for the misery or happiness of the next. If parents live only for this world, they must expect their children to put the standard still lower, for the less one knows of Christ the lower their life will be. If mothers refuse to co-operate with those who are trying to lead the people to Heaven, sad will be their mistake.

Napoleon once asked a noble matron of France what would make the empire prosperous and long-lived. He was answered, "Good mothers!" Let every mother place her hands to the wheel "Reform." I have a great interest in the readers of the PRESS, with whom I have passed many pleasant hours. I know many of them will disagree with the words here written, but I plead with them to "search the scriptures," and they will find that "Earth has no sorrow that Heaven cannot heal."

PREMIUM FOR CALICO DRESSES.—Among the special premiums offered by the San Joaquin Valley Agricultural Society for articles exhibited at the forthcoming fair, are two for calico dresses. The first is a premium of \$10 for the best dress for a lady over 18 years of age, made by the exhibitor, from calico costing not over 12½ cents per yard, the dress to be exhibited at the pavilion on Wednesday, Thursday and Friday of the week of the fair and worn by the maker on Friday evening. The second is a premium of \$5 for the best calico dress for a lady or miss under 18 years of age, made by the exhibitor, and to be exhibited and worn the same as the first mentioned. We call attention to these premiums that ladies desiring to compete may lose no time in procuring the calico and going to work on the dresses.—*Stockton Independent*.

TRIALS NEEDED.—Life is full of trials; it should also be full of triumphs. Difficulties should be neutralized by successes. Shall we become restive, uneasy and fretful under trials? Shall we impugn the wisdom or goodness, or both, of the all-wise and beneficent Creator of the universe for permitting this state of things—not perceiving in our weakness that these very obstacles are designed by an all-wise Creator to give strength and vigor to the mind, and tone to the moral character? They furnish the discipline necessary to the proper development of both mental and moral faculties. The human mind seems to demand difficulties to fairly develop its powers.

## "Girls" and "Young Ladies."

I call you a girl, but it is not the fashion any more. The girls are gone, and there is nobody left but young ladies. I like girls best. There used to be a flock of Carolines in Lowell, and as fair a flock as ever wore muslin. There were Caroline Collins, Caroline Northrup, Caroline Devan, and ever so many more. There were Cornelias, Janes, Elizabeths, Marys and Paulinas. They were all girls, and they never scorned the title. Now they would be Carries, and Nellies, Lizzies, Mamies, Jennies and Coruies, and young ladies withal, every daughter of them. Let us not end our names: i "ie." Let us not forget that affectation is the act of being a fool according to rule. Let us learn to work worsted cats of impossible pink, if we must, but let us know how to make Indian pudding and a golden loaf of corn bread as well. Let us talk French, if we can, but let us avoid "slang" as we would pestilence and famine. Pure and undefiled English never sounds so musically as it does from the unadulterated lips of a genuine girl. Let us learn the exquisite art of keeping young. You read of Roman ruins. I think I have heard Tyre, Tadmor and Thebes mentioned once or twice, but there is nothing so ancient in all this world as an old dilapidated heart. It is everybody's duty, especially every girl's, to keep young. Now, to you and your classmates:

Dear girls, I pray you read the book of Ruth. That old love-story beautiful as truth; Of one who lives in everlasting youth; And say with her Truth, "forever thine." "Thy God my God, and thy people mine!" So shall you keep in loving step with time, And life's sweet cadence prove a perfect rhyme, And when at last the song is done, And level shines the dying sun, Another dawn will show its early light, And bid "Good morn" though you have said "Good night."

—Benj. F. Taylor.

WHAT OUR BOYS AND GIRLS ARE READING.—*Sunday Afternoon* for September, says: The flashy newspapers that are sold upon the news-stands, and the vile publications that are hawked about more secretly, are not, however, the whole of the mischievous reading that falls into the hands of our boys and girls. The libraries, the public libraries, the Sunday-school libraries furnish them with a great deal of reading that, as they use it, is extremely hurtful to them. The statistics that our librarians give us showing the great excess of novels over all other classes of books issued to the patrons of the libraries, give us food for rather discouraging reflection. From the Hartford Public Library one boy took 102 novels in six months, and a girl, 112 in the same time. Think of the condition of these children's minds at the end of such a carnival of sensations! Even though no books of positively immoral character are admitted into the public libraries, it is clear that the provision of so much mental excitement for our young people is doing them great damage. The late convention of librarians in Boston discussed this matter very earnestly and tried to reach some practical conclusions. One radical suggestion was that a city or town has no right to tax the people for the furnishing of mere amusement to anybody, and that therefore no fiction that is not clearly educational in its character should find room upon the shelves of the public libraries. Another proposition was that school children (and the restriction need not be limited to children at school) should not be allowed to take more than one story a week. That rule ought to be immediately adopted and rigidly enforced in all public libraries. It is simple debauchery for any young person to read more than one novel a week.

A NEW BOOK BY ANNA DICKINSON.—We learn from the New York *Tribune*, that the well-known lecturer, Miss Anna E. Dickinson, has written a book entitled "A Ragged Register," of people, places and opinions, which is published by Harper & Brothers of New York. It contains the record of several journeys, partly in pursuit of recreation, and partly in the course of professional engagements, with no attempt at method or order in the composition, but pouring out the madcap effusions of the moment with the artless glee of a child, and often blended with a deep under-current of womanly wisdom and earnestness. The most attractive portions of the book are perhaps the sketches of natural scenery on the Pacific coast, which is painted with a rare power of delineation, showing the keenest sense of the wondrous beauty of the region, with a rare command of apt and picturesque language. Some of the adventures of the traveler in her "lone wanderings," are of an irresistibly comic character, others have a touch of risk, or serious peril, but in either case, she never loses her gaiety of spirit, or her indomitable pluck.

A YOUNG lady in Paris accepted an engagement at a small theater, and was cast for a *soubrette* part, where it was her business to run to the window, and clapping her hands gleefully, turn round and exclaim, "Ah, the carriage has just driven into the yard!" Night and day for six weeks, she conscientiously studied her part, so as to be perfect in her lines. At last the night of her *debut* came; her artless appearance charmed every one; the cue was given, and, tripping in with hewitching grace to the window, she looked out, clapped her hands, and cried, "Ah, the yard has just driven into the carriage!"

## Shadows.

In this matter-of-fact age, perhaps the last thing that is thought worthy of notice is a shadow, and contempt is freely thrown upon those who are occupied with them. Yet no thoughtful observer of nature can help noticing how thoroughly they are interwoven with every scene, how they lighten the beauty of every landscape, or deepen the sublimity of every grand and majestic view. All our inner sense of beauty responds to their delicate presence on hillside and valley, on the vast expanse of ocean, or the river or the peaceful lake. The artist studies them with delight, and longs to depict them faithfully on his canvas, for he knows that if his skill deserts him here his art is a failure. Then, too, how much do we owe to shadows! How grateful is their cooling and quieting presence to the heated and wearied traveler! How eagerly we seek them, and how gladly we welcome them when oppressed with the fervent sun-rays! Light and warmth, now our greatest blessings, would become curses, did not the shadow intervene to protect us from their intensity. Often, indeed, does it seem far more precious to us than the substance of which it is the reflection. True, shadows are not always blessings. Sometimes they are dark, gloomy and lowering, hiding from us the light which we crave and the warmth for which we pine. Then we are glad to creep from under them and to escape their chill. Yet in either case, viewed rightly, they cannot be described as unreal and unsubstantial as they seem; they are positive influences, from which we are never free.

In the world of human life, shadows play as important a part as in the world of matter; as in the one, they exist either to soften the light or to obscure it, so in the other they fail either to refresh and bless or to darken and chill. Just as the shadow of our figure follows us without any exercise of the will, so a subtle influence is ever emanating from our characters and feelings, over which we have no control. We are always scheming, planning, striving, doing, and we think that these exhaust the power of our lives. But there is another force, silent and unobtrusive, of which we seldom think and never count upon, yet which is more potent and vital than any which our will ever puts forth. It is the power of being; the shadow which the innermost self casts upon the world; the unspoken, unpremeditated, unconscious influence which we are ever shedding, simply by our life. In the home we find the fullest example of the uncalculated power of this shadow. Parents are generally anxious to do their best for their children; they often toil unremittingly to supply their needs; if thoughtful, they study and plan to develop their minds and establish good principles; if unselfish, they will give up ease and comfort and pleasure to secure their children's best good, and they do well. Yet after all, there is another and even more potent influence, which is seldom thought of. It is the shadow which the home casts over the child from its inmost life, which is either to be its blessing, protection and safeguard through all coming years, or a darkening and chilling presence which it can never wholly escape. When men and women look back to the home of their youth, it is this undercurrent that remains in their memories long after all special efforts have passed away. Was their home bright, sunny, full of love and simple, natural joy? Were truth, honor and duty woven into the lives of those who guided them? If so, how their hearts spring back with gratitude and joy to the spot where such holy and loving influences overshadowed and blessed them! If, on the contrary, the spirit of the home was gloomy, forbidding and austere; if nervous irritability pervaded the air, or a tone of distrust and suspicion tinted the intercourse, then the shadow has been a baleful one, and has darkened the whole life and chilled the whole nature.

So each one of us, not only in the house, but everywhere and at all times, is casting a shadow either of blessing or of blight. Over words and deeds we can exert some authority; even thoughts may be subjected to the control of a strong will; but this aroma which our characters are ever shedding, we can no more prevent than the rose can hide her perfume, or the tree withdraw its shadow. Yet we can by no means escape the responsibility of this unconscious influence, paradox though it seem. The maiden who views her face in the mirror and beholds a scowl, cannot indeed prevent the faithful reflection, but she may drive the scowl from her brow, and so create a new and more attractive image. So although our characters will throw the shadows of themselves which we can by no means alter, yet the building up of those characters rests with us. If we keep our hearts truthful, honorable, pure and loving, the shadows they cast will bless all who come under them. Martineau well says: "The noblest workers of the world bequeath us nothing so great as the image of themselves. Their task, be it ever so glorious, is historical and transient; the majesty of their spirit is essential and eternal."—*Ex.*

OLD FRIENDS.—A husband and wife of Santa Barbara county write us a joint letter, full of good words for the RURAL, from which we quote as follows: "We have taken the RURAL through thick and thin for about eight years, and have nearly every number—none ever being used for waste paper. And if we ever get time we intend to put together all the household talks and hints and keep them for the rising generation, believing they will find no better reading or more useful information anywhere else. Accept many kind wishes for the good old RURAL and its many patrons."



## Chaff.

MARRYING a woman for her beauty is like eating a bird for its singing.

A SOCIABLE man is one who, when he has ten minutes to spare, goes and bothers somebody who hasn't.

AN Irish gentleman having purchased an alarm clock, an acquaintance asked him what he intended to do with it. "Och," answered he, "sure I've nothing to do but pull the string and wake myself."

TEACHER: "What part of speech is the word 'egg'?" Boy: "Noun, sir." "What is its gender?" "Cant say, sir, till it's hatched." "Well, then, my lad, you can't tell me the case?" "Oh, yes, sir—the shell!"

ABOUT THE TRAP.—"Five or six years of married life," remarks a veteran, "will often reduce a naturally irascible man to such a condition of angelic humanity that it wouldn't be safe to trust him with a pair of wings."

"WHAT! twenty-five cents for a pound of sausages? Why, I can get 'em down at Schmidt's for twenty cents." "Vell, den, vy didn't yer?" "Cause Schmidt was out of 'em." "Vell, uv I vas out of 'em, I sell 'em for twenty cents, too."

A TRAMP had the delirium tremens in this town the other day. He said he saw angels, rats, mice, serpents, bees—almost everything, in fact; but through all his delirious harangue he never admitted seeing a good sized wood pile and a buck-saw.

ONE was a Baptist, and the other was a Congregationalist. The waiter asked them what they'd order. "A little dipped toast," said the Baptist. "You may give me toast also," said the Congregationalist, very carefully, "but don't dip it—sprinkle it with a little butter."

A MAN having fallen into a slough, his friend called loudly to another for assistance. The latter, who was busily engaged in cutting a bog, and wishing to procrastinate, inquired, "How deep is the gentleman in?" "Up to his ankles," was the answer. "Then there is plenty of time," said the other. "No, there's not," rejoined the first, "for he's in head first."

"THIS country," remarked a traveler in northwestern Iowa, "settles up rapidly." "Yaas," replied the native, nervously watching the movements of a constable dodging along the other side of the field, "country settles up a darn sight faster than the people do." And before the traveler could ask him to explain, he was making a mile a minute across the prairie, with the constable a bad second.

"HAVE you a card, sir?" asked the manservant. The visitor looked a little surprised, and answered, "Card? No, I don't carry a pack." "Where are you from?" inquired the servant. "Nothe Carliny," was the reply. "What do you do in North Carolina when you go a-visiting? Don't you send a card to the gentleman you want to see?" "No; if the door is locked, we get a ladder and go in at the window. It pays," said the visitor, with a wink.

## The Ideal Home.

No home can be thoroughly attractive without intelligence, without a thousand wide-spreading interests, reaching out toward places of human weal the most remote from personal and family details; and the broader the sympathies, the efforts, both of father and mother, the better for the whole household, the better for the whole world. The co-operation of both sexes must reach every where, into industries, science, art, religion, and into the conduct and government of the state.

Family interests, instead of suffering from this widening of womanly influence, must be surely ennobled and benefited proportionately with the wider sympathies of a more enlightened motherhood. Tenderness is not incompatible with a reach of intellect, nor have head and heart been so constituted by the All-Father that they must dwell in perpetual rivalry. —Antoinette Brown Blackwell.

BEAUTY IN SOUTH AFRICA.—The English call Satan black, the Hottentots call him white, the Cape colonists, when Lord Grey was colonial secretary, proposed "to split the difference, and call him Grey." The Kaffirs themselves, though not generally black, admire the complexion; there has been a man among them so fair that no girl would marry him. One of the titles of the Zulu king is, "You that are black." To be black, then, is to possess a physical virtue. Still more important is it to be corpulent. Fatness is a sign of good feeding and good breeding, and, therefore, of high social position; besides, as a Kaffir said to Mr. Shooter, in the event of a famine, a fat person might survive till the next season, while a lean one would surely die. A very obese noble was once condemned, in Zulu, to be hurled from a precipice; being padded by nature, he broke no bones—whereas, had he been slim, his whole anatomy must have been dislocated. —Travels in Africa.

AT THE funeral of the late Queen of Madagascar, the body was swathed in nearly 500 silk lambas, in the folds of which 20 gold watches, 100 gold chains, rings, brooches, bracelets and other jewelry, together with 500 gold coins, were rolled. That deposit of the remains of royalty will make a splendid prospecting for some future miner.



Hyar dar, what you nigger doin' out playin' wid nuffin on your head. Does yer want ter get tanned so nobody'll know yer? Put on your hat dis yer instant!

## Young Folks' Column.

## The Young Merchants.

Two country lads came at an early hour to a market town, and, arranging their little stands, sat down to wait for customers. One was furnished with fruits and vegetables of the boy's own cultivation, and the other supplied with lobsters and fish. The market hours passed along, and each little merchant saw with pleasure his stores steadily decreasing, and an equivalent in silver shuiling in his little money-cup. The last melon lay on Harry's stand, when a gentleman came by, and placing his hand upon it, said:

"What a fine, large melon! What do you ask for it, my boy?"

"The melon is the last I have, sir; and though it looks very fair, there is an unsound spot in it," said the boy, turning it over.

"So there is," said the man; "I think I will not take it. But," he added, looking into the boy's fine open countenance, "is it very business-like to point out the defects of your fruit to the customers?"

"It is better than being dishonest," said the boy, modestly.

"You are right, little fellow; always remember that principle, and you will find favor with God and man also. I shall remember your little stand in the future."

"Are those lobsters fresh?" he continued, turning to Ben. Williams.

"Yes, sir, fresh this morning; I caught them myself," was the reply, and a purchase being made, the gentleman went away.

"Harry, what a fool you were to show the gentleman that spot in the melon. Now you can take it home for your pains, or throw it away. How much wiser is he about those lobsters I caught yesterday? Sold them for the same price I did the fresh ones. He would never have looked at the melon until he had gone away."

"Ben, I would not tell a lie, or act one, either, for twice what I have earned this morning. Besides, I shall be better off in the end, for I have gained a customer and you have lost one."

The next market day Ben and Harry were on hand again, one with his fruit and vegetables, the other with fish, lobsters, etc.

"Harry," said Ben, "don't be such a fool to-day as you was last time. Let customers find out the bad spots themselves. You'll never make any money that way."

"I am going to be honest and true, if I never make any money," said Harry. Just then they espied their customer of the preceding day approaching, accompanied by a tall, dignified, benevolent looking man, with gray hair and wearing gold spectacles, and carrying a gold-headed cane.

"These are the boys," said the customer as they drew near the boys' stands.

"Which is the honest one," said the benevolent looking man. "This one!"

"No indeed! I bought some lobsters of him, on his word that they were fresh, and they were not fit to eat. This is the honest boy (pointing to Harry), and he shows it in his face."

The upshot of this affair was that Harry was then and there engaged to be office-boy in the First National Bank, and he made his way by his faithfulness and honesty, from office-boy to cashier, and is now filling that position at a salary of \$4,000 a year.

All boys can not become cashiers of banks, and make lots of money, but they can all grow up to be useful, honored citizens, respected by all, which alone is reward enough.

Ben is a poor, worthless, drunken hanger-on at the market still, and there is no prospect of anything better for him in the future. A man who by lying and cheating, drives away one customer a day, will, in a little while, have very few left, and they will soon find him out and leave him.

## GOOD HEALTH.

## About Poisons.

A poison is defined by Webster as "a substance which, taken into the stomach, mixed with the blood, or applied to the skin or flesh, proves fatal or deleterious; anything infectious or malignant."

Almost everybody knows that arsenic, strychnine, opium and chloroform are poisons; but many people are not aware that many medicines are more or less poisonous, although large doses may be required to cause death or immediate and violent sickness.

The *Journal of Materia Medica* warns us against several "every-day poisons." The first one mentioned is the bitter almond. A very little of the essential oil used in flavoring cakes or candies, brings out, on sensitive children, an eruption like nettle-rash, or may bring on vomiting and fatal exhaustion.

Fish of certain kinds are always poisonous in hot countries, and other kinds are more or less poisonous to certain individuals. Many persons have been made sick at one time or another by white fish, salmon or lobster; and the instinct is wise which avoids such articles for ever after.

Lead poisoning from water-pipes, acting slowly and subtly, often goes unrecognized, and is dubbed "malaria."

Pencils, nibbled by school-children five days out of seven, cause disorders which may be falsely charged to bad ventilation or too hard study.

Baking-powders are apt to contain alum, which it is injurious to swallow. And the syrup which we eat upon our morning cakes may be adulterated with chloride of tin, and cause dyspepsia. While many substances are not poisonous, in the absolute sense of the term, they are deleterious, and affect the human system in a variety of ways. Some persons are not affected by the free use of that which would produce fatal results in others. There are also chemical changes which occur in combining poisonous or injurious substances with other and harmless elements, which deprive the former of their baneful effects. All who desire health and comfort should carefully study the effects of food taken into the stomach, and if deleterious will soon manifest itself, and consequently should be avoided.

OXYGEN IN HYDROPHOBIA.—Oxygen as a cure for hydrophobia, is stated to have proved successful by the *Lyons Medicate*. The case is reported by Drs. Schmidt and Zebeden, from Russia. The first symptoms of rabies appeared 17 days after the injury. The patient was made to inhale three cubic feet of oxygen, and two hours afterwards he was in a state of perfect calm. Two days afterwards the symptoms of rabies re-appeared, and another inhalation of oxygen was administered with the same success. This time the inhalation was continued for 45 minutes. A slight dyspnea, which persisted after the disappearance of the graver symptoms, was treated for three weeks by the mono-bromide of camphor.

COFFEE AND NERVOUSNESS.—We have it on the authority of Dr. Bock, of Leipsic, that the nervousness and peevishness of our times are chiefly attributable to tea and coffee; the digestive organs of confirmed coffee drinkers are in a state of chronic derangement, which reacts on the brain, producing fretful and lachrymose moods. Ladies addicted to strong coffee have a characteristic temper, which might be described as a mania for acting the persecuted saint. Chocolate, he adds, is neutral in its psychic effects, and is really the most harmless of our fashionable drinks.

CURE FOR BURNS.—An iron foundryman recommends powdered pine-wood charcoal as "a never-failing, grateful, and speedy remedy" for burns and scalds.

## DOMESTIC ECONOMY.

## Table Etiquette.

Never eat very fast.  
Never fill the mouth very full.  
Never open your mouth when chewing.  
Never make noise with the mouth or throat.  
Never attempt to talk with the mouth full.  
Never leave the table with food in the mouth.  
Never soil the table-cloth if it is possible to avoid it.

Never carry away fruits and confectionery from the table.

Never encourage a dog or cat to play with you at the table.

Never explain at the table why certain foods do not agree with you.

Never introduce disgusting or unpleasant topics for conversation.

Never pick your teeth nor put your hand in your mouth while eating.

Never cut bread; always break it, spreading with butter each piece as you eat it.

Never come to the table in your shirt-sleeves, with dirty hands or disheveled hair.

Never express a choice for any particular parts of a dish, unless requested to do so.

Never hesitate to take the last piece of bread or the last cake; there are probably more.

Never use your own knife when cutting butter. Always use a knife assigned to that purpose.

Never wipe your fingers on the table-cloth, nor clean them in your mouth. Use the napkin.

Never allow butter, soup or other food to remain on your whiskers. Use the napkin frequently.

Never wear gloves at the table, unless the hands from some special reason are unfit to be seen.

Never, when serving others, overload the plate nor force upon them delicacies which they decline.

Never make a display of finding fault with your food. Very quietly have it changed if you want it different.

Never pass your plate with knife and fork on the same. Remove them and allow them to rest upon a piece of bread.

Never make a display when removing hair, insects or other disagreeable things from your food. Place them quietly under the edge of your plate.

Never make an effort to clean your plate or the bones you have been eating from too clean; it looks as if you left off hungry.

Never tip back in your chair or lounge upon the table; neither assume a position that is awkward or ill-bred.

Never, at one's own table or at a dinner party elsewhere, leave before the rest have finished without asking to be excused. At a hotel or boarding house this rule need not be observed.

Never feel obliged to cut of the kernels with a knife when eating green corn; eaten from the cob, the corn is much the sweeter.

Never eat so much of any one article as to attract attention, as some people do who eat large quantities of butter, sweet cake, cheese, or other articles.

Never expectorate at the table; also avoid sneezing and coughing. It is better to arise quietly from the table if you have occasion to do either. A sneeze is prevented by placing the finger firmly on the upper lip.

Never allow the conversation at the table to drift into anything but chit-chat; the consideration of deep and abstruse principles will impair digestion.

Never permit yourself to engage in a heated argument at the table. Neither should you use gestures, nor illustrations made with a knife or fork on the tablecloth.

Never pass forward to another the dish that has been handed to you, unless requested to do so; it may have been purposely designed for you, and passing it to another may give him or her what is not wanted.

Never put your feet so far under the table as to touch those of the person on the opposite side; neither should you curl them under nor at the side of your chair.

Never praise extravagantly every dish set before you; neither should you appear indifferent. Any article may have praise.—*Hill's Manual of Social Forms*.

A NEW PRESERVATIVE COMPOUND.—It has been found that the double borate of potash and soda has antiseptic properties. The compound is made by dissolving equal quantities of chloride of potassium, nitrate of soda and boracic acid; filter the solution, evaporate to dryness, and keep in a tight bottle, as the salt becomes wet in the air. It is claimed that this salt has no effect on the smell, taste or healthfulness of the substances to which it is added. It has been tried for preserving meats, making sausages, butter and for tanning skins. Added to milk it will keep for a week; also added to beer or wine it retards the deterioration to which the inferior kinds of these drinks are subject.

FORMATION OF ACETIC ACID PREVENTED.—It is said that common rosin prevents the formation of acetic acid in fermented liquids without having any disturbing effect on the process of alcoholic fermentation. The peculiar effect of the hop may be due, it is suggested, to its resinous matter rather than to its oils. Rosin is added to sweet wines in Greece.





DEWEY &amp; CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 202 Sansome St., N. E. Corner Pine. St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line..... 25 .80 \$2.00 \$ 5.00  
Half inch (1 square)..... \$1.00 \$3.00 7.50 24.00  
One inch..... 2.00 6.00 14.00 40.00

Quack Advertising positively declined.

Our latest forms go to press Wednesday evening.

The Scientific Press Patent Agency.

DEWEY &amp; CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, Sept. 13, 1879.

## TABLE OF CONTENTS.

**EDITORIALS.**—The Large in Farm Machinery; The Coquita Palm; Floral Perfumes; Boarding Houses on Wheels; Wheat Eating in France, 161. The Week; A Good Mark of Fashion; Cattle Show at Golden Gate Fair; Measurement of Earthquakes, 169.

**ILLUSTRATIONS.**—The Coquita Palm, 161. Measurement of Earthquakes, 169.

**QUERIES AND REPLIES.**—Odessa Wheat; The Skinner Apple; Rice's "Nonpareil" Peach; Phillips' Grass; Abnormal Growth on Quince Trees, 168.

**ENTOMOLOGICAL.**—The Sierra Locusts; The Corn Worm; The Curculios, 168.

**CORRESPONDENCE.**—The High Sierras; Poisoned Water, 162. Causes of Hard Times—No. 5, 164. Opening of the State Fair, 172.

**THE DAIRY.**—Peas as Dairy Food, 162.

**FLORICULTURE.**—A Profitable Heliotrope; An Ancient Rose Tree, 162.

**HORTICULTURE.**—Points in Berry Planting; Tree Labors, 163.

**POULTRY YARD.**—Production and Keeping of Eggs; Poultry Keeping by Women; Soft Eggs, 163.

**THE FIELD.**—Pumping for Irrigation, 163.

**PATRONS OF HUSBANDRY.**—Ho! for the State Grange; The Grange Meeting at Martinez; In Memoriam, 164.

**AGRICULTURAL NOTES** from the various counties of California, Nevada and Idaho, 164-65.

**NEWS IN BRIEF** on page 165 and other pages.

**HOME CIRCLE.**—Sing Cuckoo (poetry); Woman's Influence; Premium for Calico Dresses; Trials Needed; "Girls" and "Young Ladies"; What Our Boys and Girls are Reading; A New Book by Anna Dickinson; Shadows; Chaff; The Ideal Home; Beauty in South Africa, 167.

**YOUNG FOLKS' COLUMN.**—The Young Merchants, 167.

**GOOD HEALTH.**—About Poisons; Oxygen in Hydrophobia; Coffee and Nervousness, 167.

**DOMESTIC ECONOMY.**—Table Etiquette; A New Preservative Compound; Formation of Acetic Acid Prevented, 167.

**MISCELLANEOUS.**—How Our Ancestors in the Stone Age Made Their Implements; American and European Archaeology, 170.

## Business Announcements.

Annual Meeting, Grangers' Bank of California.  
Holly & Magoon's Cultivator, M. C. Hawley & Co., S. F. Trees, and Fruit Seeds, Thomas Meehan, Philadelphia, Pa. Farms for Sale, W. B. Stewart, San Diego Co., Cal. Important Invention, R. Weinhold, Los Angeles, Cal. New Price List, Montgomery Ward & Co., Chicago, Ill. The Home Knitter, Home Knitter Co., Canton, Ohio. The Boss Pruner, Geo. Larkin, Newcastle, Placer Co. Cal.

## The Week.

The election and its distracting influences are happily over. Whatever may be the individual satisfaction or disappointment over the turn which the ballots have taken, one thing is already clear—the issue is no longer in doubt, and therefore people can return to their accustomed vocations—buy and sell and get gain, or produce commodities without much in the crop except its inherent nutriment. The disposition to return to some sort of industry is evident in the city, and the hold upon the money-bags is said to be loosening a little, as though Shylock would like to see a little interest after his long fasting, because of distrust. The State is certainly safe, for it has passed its most critical period—that of idleness and excitement attendant upon the campaign; and if the people will maintain the industrial activity which they now seem to have good appetite for, no fear need be borrowed for the future course of events. We look to an autumn full of activity in farm work, for Californians are beginning to learn that a little stroke of honest work put in almost any time of the year is a good investment, and is apt to make a man "forehanded" all the year round.

The State fair is at its height. Reports say the exhibition is of unusual excellence and unusually attended. Sacramento is, therefore, in one of her gala periods, and we expect to have fuller accounts thereof for our next issue.

The Mechanics' Institute fair has been continued one week. It will close on Saturday evening September 13th.

A DAMAGING drouth prevails in the province of Chekiang, China.

## A Good Mark for Fashion.

We haste to give credit where credit is due, and inasmuch as the old fickle Dame Fashion has at last shown one ray of sense, we cannot lose the chance to compliment her. It would be tiresome to recount the dame's follies and more grievous faults, or how she has discomfited nearly every form of animal life from humanity, to whom she has been a false friend, down to the birds of the air and creeping things of the earth which she has pursued almost to annihilation. For it is not long since it was reported that certain kinds of gay colored wild birds were almost extinct because of the hunting to gain the bounty which Dame Fashion offered for them to deck her votaries with. And insects have shared in part the same fate; for we have read of mammoth tropical beetles being caught to act as sentinels upon a fold or founce of gossamer, and of a costume rendered all aglow with imprisoned fireflies. With such a record it is a theme for grateful comment that fashion has been strong enough to resist her murderous desires and has returned to the beauties of the earliest times, proclaiming now that beautiful and fragrant flowers are fit ornaments for beauty.

We take it that our advices, upon which we would pipe this note of rejoicing, are authentic. They are foreign, and therefore must be accurate, for fashion tolerates nothing of near-by origin. The *Ladies' Gazette of Fashion*, which comes from beyond the water, says that a perfect wealth of flowers is expended on toilettes. Not merely the garniture, but the waistcoat, apron or pocket itself is a mass of varied blossoms, and a sweet little innovation for a bridal robe is to suspend a lace satchel by strings of orange blossoms, secured with a hook of pearls. The tiniest of these flowers also dot the bouillottes of tulle, Indian muslin or gauze, which make most lovely trimmings on ordinary evening dress, replacing the wedding blossoms by eglantines, daisies, cowslips, buttercups, crowfoot, May roses, lilies of the valley, or any small field flowers. Quite an art, indeed, becomes the arrangement of dress blossoms; even paniers and rappings are beds of of posies and soft leaves, so beautifully harmonizing with the bloom of a youthful wearer. As a great contrast to the forget-me-nots, primroses, etc., we have also bunches of the largest flowers, to wit: A dress of Louis XVI. brocade, with the front of old gold satin veiled by puffs of maize tulle; here immense tulips were carelessly thrown over one side of the train, adorned in other cases by guelder roses and clusters of double chestnut. Other huge flowers, placed quite on the tops of bonnets, with encircling leaves, completely hide the squarish crowns; those generally used for the purpose are the magnolia, rhododendron, chrysanthemum and garden poppy. To these I far prefer the pretty floral head gears, provided the blossoms are very small. Real haskets of flowers are these bonnets of lilac, hawthorn, etc., rivalled only by the chapeaux, resembling a daisy-spangled grass plot or a mossy bed dotted with florettes.

Such is the radiant picture which fashion orders. But why should we who have disclosed no taste for fashions hitherto, we who have persisted in writing of sordid crops and had no thought beyond the composition of a cabbage, stand forth now in wrapt contemplation of fashion's fancies. This is the explanation. We see in this new freak of the dame a wonderful impetus to floriculture. If our bellies must have each day a robe of royal bloom, myriads of plants must grow to supply it. And as fresh flowers are perishable things, there can be no importation of them. Each beauty who would shine in proper evening costume must, in the early morning, hie her to her garden, and with trowel and watering pot must lay broad foundations for her season's ornament. Thus, we believe, many ladies who have no taste or time to grow flowers for their own sakes would be impelled, by a decree which no woman dares disobey, to make herself proficient in the floral art. And we believe that skill thus acquired and tastes thus fostered will never afterwards be lost, even though fashion, in her inconstant moods, should order every flower to be plucked from the costumes which she now enriches with them.

There is also another aspect of fashion's resort to fresh blossoms. Our reigning belles in cities and towns may not be able to produce for themselves the material for their adornment, and their acquisitions must be by purchase. This, too, will give a new impulse to floriculture, for it will awake the market for flowers, and will enable many, perhaps, to rest awhile from the drudgery of the sewing machine, regain their strength and brighten their lives in gardening for profit.

It may be that we overestimate the influence which we perceive. It may be that the fickle goddess may change her orders before even a crop of annuals can be grown to meet her dictates. But we trust not. Even in the midst of startling changes, we believe there are some things which are always *en vogue*. Let the adornment by masses of flowers be added to the permanent list, and let not the present happy movement be again repressed to the conventional rosebud or sprig of orange blossoms. No; let floral robes prevail, even until an evening costume shall demand flowing tresses to be massed above and surmounted by a flower of Victoria Regis, while morning costumes shall call the spreading sunflower to the post of honor.

## QUERIES AND REPLIES.

## Odessa Wheat.

EDITORS PRESS:—Will you oblige me and many other subscribers by giving us in your next issue information regarding Odessa wheat? We are anxious to know how it yields, and whether it makes first-class flour. We have been told that the flour is dark, and that the wheat will not grade higher than No. 3. How is this?—FARMER, Los Angeles, Cal.

Our understanding of the matter is this: Odessa wheat is a dark wheat, therefore would be ranked low by shippers, because they need white wheat to meet the English millers need of white wheat. Dark wheat can be had in England from regions nearer than California, but hard white wheat is a desideratum. The millers must have it to mix with other wheat in grinding. Consequently this is the style of wheat which it pays to ship from this State, and this is the shipper's standard of a good wheat. On the other hand a wheat like the Odessa, which is rich in gluten, is desired by our California millers, and they are, therefore, disposed to rate it higher than the place it would take in shippers' grades. A sale was reported last March of Odessa wheat to a San Francisco miller at \$1.72½ per cwt., which was then as much or more than the choicest white wheat would bring. The question then arises how much of this style of wheat can be produced to advantage? This can only be learned from the market, which will soon tell whether our millers are getting too much or too little glutenous wheat. If, for example, the growers of Odessa wheat this year, and we understand there are many of them, especially in Los Angeles county, secure good prices for their grain, it will be good evidence that the acreage may be still further extended. Growers of Odessa wheat are invited to report their sales for the public information.

As to the yield of Odessa wheat facts can be best obtained in Los Angeles county, where our correspondent resides.

## The Skinner Apple.

EDITORS PRESS:—I send you herewith a specimen of the Skinner Seedling apple, not knowing whether you have ever had the opportunity of testing the quality of what I think, an excellent apple. The specimen was taken from a small plant which I obtained from the nursery of Milton Thomas, of Los Angeles, in March, 1878. The original tree was raised by the late Judge H. C. Skinner, of San Jose, and, I believe, it is still standing on the old Skinner place on the banks of the Coyote, east of the city. I have about 30 of the young trees, and grafts, all doing well. The tree is a remarkably erect and strong grower, beautifully dark green foliage, leaves very large and broad. The tree is a handsome one, and as to the merits of the fruit, I will leave you to judge, although the one sent is not as fair a specimen as could be had if the tree had more age.—Wm. H. JESSUP, Haywards, Cal.

This is a very handsome fruit of medium size, rather flat and quite oblique, projecting much more on one side of the stalk than the other. In color it is a bright yellow, unbroken save by a few small green spots and faint green tracing near the stalk. The flesh is very tender, fine grained and of rich creamy color. The flavor is delicate, medium sweet, with disguised subacid tone. The capsule is very small. The apple, it seems to us, will become very popular as a table fruit, both for its beautiful appearance and quality of flesh.

## Rice's "Nonpareil" Peach.

EDITORS PRESS:—I send by to-day's express a sample "two and the last" of a new peach which I think comes as near perfection, everything considered, as possible. It is very high colored, good size, firm, good flavor, and comes in at a time when very few fine freestones are in market. It fruited last season, this being the second season, I consider these a fair sample. I shall hold all I possibly can for the benefit of myself and growers. Please give your opinion of the fruit.—D. A. RICE, Newcastle Cal.

This peach has the mountain hues. The flesh is rich and melting, and its flavor has that desirable quality which can be termed, "life" in addition to its sweetness. The two specimens are 9½ and 10½ inches in circumference, respectively. The pit is noticeably small for so large a peach, and the structure of the fruit seems fine in every way; in contrast with the coarseness often found in large varieties. The shape is roundish, the apex projecting slightly. The suture is shallow, and would be but indistinctly marked were it not that one-half projects beyond the other along the upper half of the suture. The pit is quite free, as our correspondent says. On the whole, the peach seems to us quite desirable.

## Phillips' Grass.

EDITORS PRESS:—I see in a recent issue of the PRESS that you quote some remarks about the success of "Phillips' grass" in these colonies, and you ask its botanical name. It is *Panicum spectabile*. I have already sent seed to your College of Agriculture and, to Prof. Sanders of Fresno county, and he has written you favorably of his experience with the grass.—W. N. CURT, M. D., Manuka Bush Station, New Zealand.

## Abnormal Growth on Quince Trees.

Some time ago Mr. Rixford handed us some specimens of rough, gnarly excrescences which he had cut from quince bushes in Sonoma. We sent them to Dr. H. W. Harkness, of Sacramento, for examination, and he replies as follows: "I have examined many such specimens during the past summer, and find no trace of fungi upon them. But the trouble seems to arise from an abnormal condition of the cambium (inner bark). I find on some of the specimens growing near the coast some species of lichen, which is of course an epiphyte, and in no manner detrimental to the tree." We are glad that the examination yields these points, for there is a vast difference between an aggressive fungus, like the "black knot" in plum

and cherry trees, and an abnormal growth of the tree's own substance: the former is incalculably ruinous and communicable from tree to tree; the latter is comparatively harmless, and, being governed by local conditions in the plant, is sporadic or occasional in its appearance. It amounts chiefly to a disfigurement, something analogous to the growth of a wart on a man's nose.

## ENTOMOLOGICAL.

## The Sierra Locusts.

Our contributor, Prof. J. G. Lemmon, writes to the *Truckee Republican* an account of his recent observations on the locust plague which has afflicted Sierra valley, and to which we have frequently referred. His remarks on the various parasitic foes, which bid fair to reduce the evil considerably, are of much interest. The "red silky mite," is here in great abundance, almost every locust in some sections being loaded with them, especially at the base and under the wings. So is the Tachinid fly chasing swiftly after the hopping or flying locust, darting upon it and depositing an egg, which speedily hatches, gnaws its way through the joints of the abdomen to the interior, becomes a large, many-legged maggot, swelling out of the body of the locust and eating its viscera fore and aft, until, weak and encumbered, the victim falls and dies. The Gordina or hair worm, too, is here, and several other undetermined parasites, all seeming to riot upon the abundant food. A congener of the atrocious locust himself, a little yellow cricket about the same size, but 10 times spryer, is seen to vigorously attack the locust on foot or flying, to bring him down, and instantly cutting off his head, devours a morsel, then twirls his antenna about and cocks his eyes for another victim.

And what of the future? When will this visitation cease, or is it overpast? The female locusts have been noted in vast numbers ovipositing in gravel beds, in dry knolls of the meadows, and in the sands under the sage bushes of the common. Those beginning this work early in the season—in July—it is feared laid perfect eggs and secured them well; those later, because so often found dead at their work with abdomen still prolonged down into the ground, it is hoped were prevented from producing perfect eggs, or from protecting them by gummy secretions from injuries by winter vicissitudes.

As a clearing up of the business, I have just sent Prof. Riley a box of all the species of locusts found here lately, including many individuals of our descriptive *Edipoda atrox*, and of another suspicious species which I fear is *Caloptenus atlantis*, one of the three true migratory species so much to be dreaded. This and the atrocious locust are heavily parasitised, and, perhaps, may be living their last day.

## The Corn Worm.

EDITORS PRESS:—In addition to what you give regarding this insect (*Heliothis armigera*), in your issue of August 16th, a little more may be said. With us fall plowing is one of the best remedies we have for the reasons you have given, but if the ground does not freeze after it has been plowed but a minimum amount of good can be done in this way so far as killing the chrysalids is concerned. I have found for the past two years that where there were two varieties of corn growing near each other, the one tall, with the ears five or six feet from the ground, and the other short, the tall corn would be free from worms, while the other would have from 50% to 90% of the ears waving. Where the tall corn has been grown by itself there are usually some worms in the ears, but not so many as in fields of a low variety. The reason of this seems to be in the fact that the parent moth does not fly above three or four feet high if it can find suitable places for depositing the eggs. Probably every one familiar with the moth has noticed that when disturbed or drawn from its retreat in the daytime, the moth starts up from some place not more than two or three feet from the ground. Now it is evident from these points that if a kind of sweet corn can be had growing tall enough so that its ears shall be say five feet from the ground, and small patches of some low growing kind be planted near this, the tall kind will be unmolested while the eggs will be deposited in the ears of the low variety, thus securing corn for the market without worms. The low kind while not fit for market need not be a perfect loss, for it can be fed to stock, probably being worth enough for that purpose to pay for its culture.—G. H. FRENCH, Carbondale, Ill.

## The Curculios.

A San Jose paper after enumerating the evil work of scale insects on the fruit trees of the Santa Clara valley, says that it is reported that the curculio has been found on the plum trees. We trust this is not so, and yet this great evil must be expected sooner or later. If our friends find anything they think is the curculio or its work, we trust they will send us specimens at once.

ON FILE.—"Hard Times, etc.," D. A. L.; "Chemical Compound," J. J. B. and W. H.; "Mountain Top Letters," J.; "Tuolumne Notes," J. T.



## Cattle Show at Golden Gate Fair.

[Written for the RURAL PRESS by ROBERT ASHBURNER.]

We attended the Golden Gate District fair on Friday of last week in the hope of seeing the judges award the premiums and tie on the ribbons at the same time, which would have been the case had Rule 35 of the Society been carried out, viz.: "As soon as the awards are made on horses and cattle, the ribbons, or badges, will be affixed in front of the grand stand."

The show of cattle was comparatively meager, there being only two exhibits of Short Horns, by J. D. Carr and C. Younger, each of whom made a good turnout from their respective herds. Upon the whole they were in good condition, though there were some two or three head in each herd that were not in proper condition for showing, and this detracted somewhat from the general good appearance of the whole.

There were some 30 head of Jerseys on exhibition by Mr. Barreto and other exhibitors; also a few Ayrshires belonging to G. Bement, of San Mateo county.

Of sheep there was a much better show than last year, especially of French and Spanish merinos. The Cotswolds and Southdowns were represented by a few of each breed, that had better have been left at home for any credit they were likely to do to the breed. As far as our own observation goes in regard to these two breeds of sheep in this State, they have been allowed to run down to a rather low standard of merit, undoubtedly for want of continuous proper care and good management in feed and selection of breeding sheep. We don't intend giving a lecture on the principles of breeding, but will just say by way of a reminder, that all marks of the pure breeds, or all females, are not good enough to breed from. There will be culls, and there must be selection combined with good feed and attention all the time, or the best breeds of cattle will assuredly run down till they become no better than ordinary stock.

As we have already said, we expected to see the premium animals carry their distinguishing marks with them from the presence of the judges, and thus give the public an opportunity of comparing the merits of one prize animal with another. We watched the judges doing their judging for a time, but as we did not know where the prizes were going we could find no profit in it. Their mode of proceeding certainly appeared to be of an easy-going, "don't carish" sort. "They don't handle the cattle," said a bystander. "Perhaps they don't know how," suggested another. These and such-like remarks were passing freely but quietly amongst the little crowd that had gathered to witness the proceedings of what ought to be, to a practical stock-breeder, the great feature of the cattle show.

Passing from the cattle ring to the sheep pens, we laid in wait for the committee to "pass on" sheep. The exhibitors thought them long in coming; in fact, some of them did not get through their duties till the Saturday morning—the last day of the fair. We happened to be just in time to hear one of them say to an exhibitor, who was amongst his sheep in the pen: "Bring out what you think is the best sheep (in the pen) and let us see him." It is not often, we presume, that an exhibitor has the singular privilege of selecting his own sheep for the prize; but the above remark apparently is dwarfed into insignificant ludicrousness by that of another asking, when they came to the fine large French Merino sheep belonging to Mrs. Blacow: "And are these Cotswolds?"

Now, we are amongst those who believe that the majority of the men who are "picked up" for judges of stock on the grounds during the fair week, do their duty in a conscientious way. It is with this very system of the different societies waiting for the selection of the judges of live stock till after the fair has commenced that we are at variance. So long as they do this, just so long will they have to put up with men who are incompetent for the work detailed to them. Why cannot the judges for the most important classes of live stock, at least, be selected beforehand, by correspondence through the Secretary of the society, and the day and hour fixed for the commencement of their work?

However, almost at the last hour, we had the pleasure of seeing the ribbons tied onto the horses and cattle, (though some of the sheep men were clamoring for their ribbons late in the afternoon), on Saturday, amidst a good deal of hurry and confusion, and not a little grumbling from the exhibitors; all of which might have been avoided by tying on the ribbons at the time the awards were made by the judges.

The other arrangements in connection with the live stock department, appeared to be carried on in an orderly manner. The grounds are as well and conveniently fitted up for the purpose of holding the live stock show as any that we have seen in the State. The place is a central one, and convenient to get at; and taking all things into consideration, ought to become, under efficient management, the leading exhibition of the State.

The main benefit breeders are expected or expect to gain by exhibiting and competing with each other is the opportunity it gives for comparing one's own with others' stock, and it is, undoubtedly, an advantage to us to have opportunities for doing so; but when we bring them together, often at

great inconvenience, risk and expense we like to have their verdicts for weal or for woe decided by masterly hands, and in an orderly manner. Every one is entitled to his own opinion about his or his neighbor's cattle, but it is well that we see our own as others see them, sometimes, and it is not till then that we can discover our errors and mistakes in breeding, and the faults and deficiencies in our own cattle. It is by comparing them with the most perfect types that we will find out their imperfections.

I have foreborne mentioning more particularly the exhibits of cattle and sheep, because I expect to see the animals again at the State fair and will then take occasion for more particular comment.

Baden Farm, San Mateo county.

THE ENGLISH RAINFALL.—We have been talking and reading all summer about the ruin-

ous weather in England, which has so disastrously affected the grain crops, but we have not had any definite idea of how bad the season really was, measured by inches and degrees. A meteorologist has compiled tables for the London Times, which show that from May to July of the present year 12.39 inches of rain fell, and this too after the wettest winter England has known for 21 years. It is also shown that the 16 months ending August 1st have been 58% wetter than the average of the corresponding 16 months in other years. Expressing this computation in figures, the 16 months ending August 1st received a rainfall of 52.83 inches, while the average for corresponding 16 months has been 33.39. The record of temperature for the last five or six months shows nearly as marked variation as the rainfall. The tables of the As-

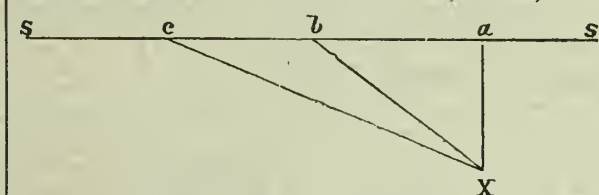


Fig. 5. Angles of Emergence.

tronomer Royal show that the average temperature of every week since March 29th has been from 1° to 7° lower than that of the corresponding for 20 years. In short, the English speak of an unprecedented winter followed by "so summerless a summer"—and this accounts for the backwardness and unsatisfactory character of the wheat crop.

THE HORTICULTURAL SOCIETY.—In another column may be found a call signed by a number of fruit growers, nurserymen and others interested in horticulture, inviting all who desire to unite in the formation of a State Society to convene at the Academy of Sciences' building, corner of California and Dupont streets, in this city, on Wednesday afternoon, September 17th, at two o'clock. This will give an opportunity for all to declare their intention in favor of the organization of such a society and to take part in bringing it into existence. We think the date fixed rather unfortunate, because there will be at least three district fairs and two county fairs holding during that week. This will lessen the attendance from the country, where the strength of the society should properly lie. We trust, however, that all who can will be present, and those who are restrained at home will give in their memberships at the earliest following meeting. The idea of the proposed society commends itself to many minds, and we trust a good working and representative membership will be speedily attained.

FOOT BATHS FOR SETTING HENS.—One of our readers reports success in overcoming the setting propensity in hens by standing them in a tub with about two inches of water in the bottom. As a hen will not sit down in the water she is cured of the desire in from 24 to 48 hours, according to our correspondent's experience.

DURING August 1,638 carloads of grain were landed at South Vallejo.

## Measurement of Earthquakes.

In a series of recent articles in the PRESS upon the subject of earthquakes, we briefly alluded to the fact that by proper appliances, the depth, direction an intensity of the earthquake waves, or trembling sensation experienced by the shock, could be measured. Our attention has been called to a variety of instruments for the purpose, which appear in Prof. Le Conte's geology, an excellent work published by D. Appleton & Co., of New York City. In spite of the many opinions that have been expressed concerning the interior condition of the earth and the causes that seem to engender a continual vibration of some part of the earth's crust, there is still great obscurity hanging about the

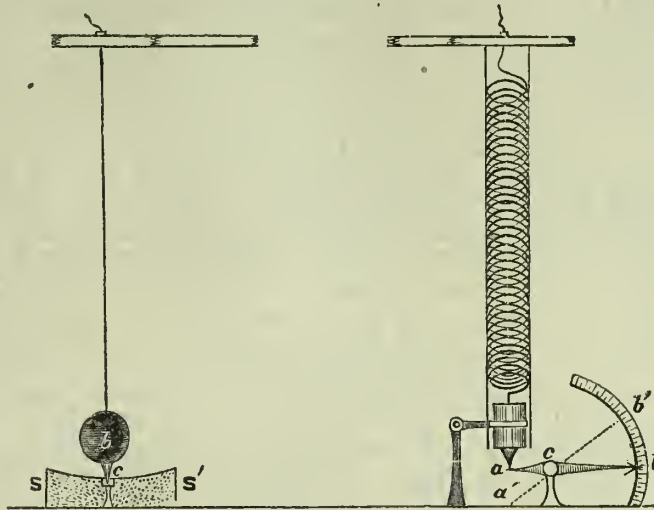


Fig. 1. CAVALIERI'S SEISMOMETER.

Fig. 2.

subject. There can be no doubt, however, that in the phenomena of earthquakes, there exists means of solving many problems which now seem beyond the reach of science. The depth of the origin of earthquakes, which, as we remarked in a former article, probably arises from an explosion of some pent-up force or power producing air explosion, is a material point in solving the problem of volcanoes. The point at which the explosion, which produces the earthquake occurs, is sought to be determined by means of an instrument termed a seismometer, or "earthquake measure." There are many forms of instruments for this purpose, the two most important of which we shall here mention. An excellent instrument for recording slight tremors is one invented and used by Prof. Palmieri, of the Vesuvian observatory. It con-

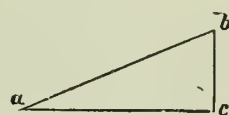


Fig. 3. Diagram of Vibration.

sists of a telegraphic apparatus with the usual paper-slip and stile. The paper-slip, accurately divided into hours, minutes, and seconds, travels at a uniform rate by means of clock-work. The battery-circuit is closed and opened, and the recording stile worked by the shaking of a metallic bob, hung by a delicate spiral spring above a mercury-cup; the shaking of the bob being determined by the tremor of the earth. Such an instrument records the exact moment of occurrence of earthquake shocks, however slight; also, the moment of passage of

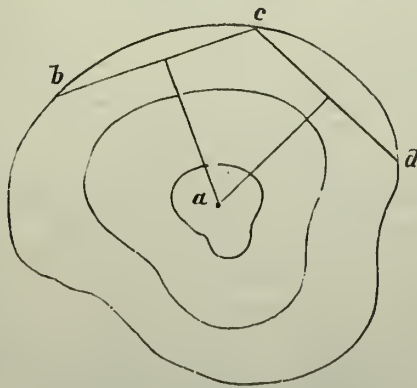


Fig. 4. Co-seismal Lines.

every wave and its time of oscillation; and if there be more than one such instrument, the moment of occurrence at different places gives the velocity of the surface wave,  $v$ . It records, however, rather than measures earthquake phenomena; it is a seismograph rather than a seismometer.

The best form of seismometer which we have seen described—that which gives the most important information—is that of Prof. Cavalleri, of Monza. It consists essentially of two pendulums, one horizontally and the other vertically

oscillating (Figs. 1 and 2). The former is an ordinary pendulum, with a heavy bob,  $b$ , armed with a stile which touches a bed of sand,  $ss$ . The sharp point of the stile rests loosely in a slight depression in a small flat cylinder or button,  $c$ , resting lightly on the top of the firm column,  $d$ . When the earthquake-shock arrives, the whole building, and therefore the attachment,  $a$ , above, and the bed of sand,  $ss$ , on the floor, will move in the direction of the shock. This direction will generally be partly horizontal and partly vertical. We will consider now only the horizontal element. The pendulum,  $b$ , will tend to retain its position, and the bed of sand will move beneath it, first in one direction and then in the other, and the stile will thus mark the sand back and forth to a distance equal to the back-and-forth motion of the earth. The direction from which the impulse came is determined by the side on which the little cylinder falls. It is easy to connect the pendulum with a clock set at 12, in such wise that the motion of the former will instantly set agoing the latter. The difference between this clock time and the real time will give the instant of transit. It is clear that this pendulum does not give the whole amount of the vibration or motion of the shock, but only the horizontal element. If  $a b$  (Fig. 2) represent the direction and amount of vibration, then  $a c$  is the horizontal element measured by the pendulum. This instrument, therefore, gives the moment of transit, the direction of transit, and the horizontal element of vibration.

The vertical element,  $b c$ , of the vibration is given by a vertically oscillating pendulum (Fig. 2), the point of which rests lightly on one arm,  $a$ , of a very easily-moved lever, the other arm,  $b$ , of which acts as an index by means of a graduated quadrant. When the shock moves the floor of the building upward, the heavy weight of the pendulum retaining its position by stretching of the wire spring, the arm  $a$  is pressed against the stile, and the arm  $b$  is elevated; when the floor descends again,  $b$  is retained in its elevated position by a ratchet at  $c$ , and thus records the amount of elevation of the floor. This pendulum, therefore, gives the upward movement or one-half the whole vertical element. Having now the horizontal and vertical element,  $i. e.$ , the base and perpendicular of a right-angled triangle, the hypotenuse, or whole oscillation, and the direction of oscillation, or angle of emergence ( $a$ , Fig. 3), are gotten by simple calculation, or by accurate plotting.

The important facts recorded by this instrument are: 1. The instant of transit; 2. The direction of transit; 3. The direction of oscillation, or angle of emergence; 4. The amount of oscillation. From these elements (if we have several seismometers scattered about the country) may be calculated: 1. The velocity of transit; 2. The position of the focus; 3. The form of the focus, whether point or fissure; 4. The force of the original concussion. The most important of these are the position and depth of the focus.

It must be borne in mind that the trembling of the earth is the result of a shock occurring somewhere in the interior of the earth, which causes a vibration of the earth's surface in waves similar to the action of water when its surface is disturbed. Now these vibrations, which are termed earthquake waves, begin at the point of the explosion and spread with greater or less rapidity, according to the geological nature of the strata, until they strike the surface of the earth at a point nearest the explosion point, whence they extend over the surface of the earth in different directions. The point at which the wave first strikes the surface of the earth is called the "epicentrum," and to find this point is to locate as near as can be the origin of the earthquake, by means of the seismometer the direction of transit of the surface-wave. If, by the use of many such seismometers, or even by rougher methods, we get a number of these surface-lines of transit, by following these back we get the epicentrum at their intersection. Or if, by means of many seismographs giving time of transit, or even by observatories or stations of any kind with accurate clocks, we get several points of simultaneous arrival of the wave, then by drawing a curve through these points we have a coseismal curve. A perpendicular drawn from the middle point of the line joining any two of these points will pass through the epicentrum, and two such perpendiculars would determine its position. Fig. 4 represents coseismal curves, and  $b, c, d$ , three points on the curve;  $a$  is the epicentrum.

The spherical wave is a wave of longitudinal oscillation. The direction of oscillation, therefore, is the same as the direction of transmission (wave-path), which is the radius of the agitated sphere. If, therefore, the direction of the ground-motion (the line  $a b$ , Fig. 3) be followed into the earth, it carries us back along the wave-path to its origin, the focus. Two such wave-paths by their intersection would determine its position. Thus, in Fig. 5, if  $c$  and  $b$  be the position of two seismometric observatories, the angles of emergence,  $x c a$  and  $x b a$ , being given by observation, and the distance,  $c b$ , being known, we have all the elements necessary to determine either by calculation or by accurate plotting the wave-paths  $c x$  and  $b x$ , and their point of intersection  $x$ , and therefore of the depth  $a x$ .

Although seismometers, such as we have described, are necessary for accurate results from few observations, yet by multiplying the observations, even by rough methods, approximative results may be obtained.



## How Our Ancestors in the Stone Age Made Their Implements.

[Read before the California Academy of Sciences, August 4th, by Hon. B. B. REDDING.]

Flint, obsidian, chert and other hard stones having a conchoidal fracture, manufactured into forms to be used as axes, chisels, knives, scrapers, spear and arrow-heads, are found in nearly all parts of the world. They are almost the only remains of a race of people who inhabited the earth at a period so remote that they were contemporaneous with the woolly elephant, the cave bear, the Irish elk, and other animals now extinct. These implements are often found in connection with the remains of these and other fossil animals. In one instance, in Denmark, a stone arrow-head was found imbedded in the bone of a deer, the whole family of which has been so long extinct that they are only now known from their fossil remains. The people who made these stone implements lived in Palestine ages before Tubal Cain, and in Egypt long before the first Pharaoh. Their flint knives, axes and arrow-heads have been found in Europe from Greece to Norway, and from France to the Steppes of Russia. In Asia, from India and the Malay Archipelago to Japan and Kamchatka. In America, from Greenland and Alaska south through the United States, the West Indies, the valley of the Amazon, and Peru to Terra del Fuego. They seem to prove that man was originally a savage; that he lived by fishing and the chase, and that civilization is the result of a long, slow and tedious process of evolution.

There is great similarity in these stone weapons and implements wherever found throughout the world. A spear-head or scraper, an arrow-head or celt from England could not, by its shape or peculiarity of manufacture, be distinguished from similar instruments found in Denmark, Palestine, Japan, or South America. The stones used might differ, but the mode of manufacture and general shape are nearly always the same. How our pre-historic ancestors could have made these stone implements ages before the discovery of the use of bronze or iron has been the subject of many speculations among archaeologists, and many theories have been advanced in support of these speculations. The general conclusion has been that they were chipped into the shapes we find them by blows from small stone hammers. It is, however, proper to state that Mr. John Evans, Sir John Lubbock, Mr. A. Morlott and other writers on pre-historic remains, have suggested that the observations of travelers as to the modes pursued by savage nations in similar work might afford a correct solution.

The theory that they were manufactured into the shapes we find them by blows from stone hammers was generally received until after the publication, in the *Overland Monthly*, of the observations of Mr. E. G. Waite, and the late B. P. Avery, and in the Smithsonian reports of a letter of General George Crook, all of whom had had an opportunity to observe Pacific Coast Indians manufacture stone implements, and chip them into perfect shapes without the aid of stone hammers. As, however, these Indians used iron or steel in their work, obtained from white men, it was thought they might have changed the processes pursued by their ancestors. From a late newspaper paragraph I see that Mr. F. H. Cushing, who is connected with the Smithsonian Institute, by independent observation, has arrived at the conclusion that the stone implements were not chipped into shapes by blows, but that the small flakes were broken out by pressure, and that to prove his theory, he made a flint chisel, chipping it into shape by pressure with the aid only of a piece of hard wood.

Having had an opportunity to see a stone arrow-head made by a man, practically still living in the Stone Age, without the aid of any implement other than those found in a state of nature about him, and taking notes at the time of each act of manipulation and every process, I have thought a record of what I saw, added to those made by other observers, might have some value in determining the processes used in similar work by our remote savage ancestors.

Prior to the close of the Modoc war the Wintoons, or McCloud River Indians, were without firearms. Up to that time the few settlers who reside about the base of Mount Shasta made it a rule to permit no Wintoon to carry a gun. As there are no agricultural lands and no mines on the McCloud river, the Wintoons were left in almost undisputed possession of their prolific hunting grounds and to the inexhaustible supply of salmon and trout with which that river abounds. The Wintoons had but little contact with Americans until after Mr. Livingston Stone established a station on the river for the taking of salmon eggs for distribution by the United States government. Very few of these Indians as yet have guns; their principal reliance in the chase being upon their primitive but powerful bow and arrows. The arrow-maker is still a man of great importance in the tribe.

While visiting the United States fishery a few days since I expressed a wish to Deputy U. S. Fish Commissioner Livingston Stone, who has acquired a knowledge of the Wintoon language, that one of the best arrow-head makers of the tribe should make in my presence a stone arrow-head, using only such tools and implements for

the purpose as were in use by the Indians before their contact with white men. These people are only now emerging from the Stone Age, and a record of their manufacture of stone implements may give an illustration of the methods pursued by our ancestors in the Paleolithic Age, 10 or 12 or more thousands of years ago, when they lived upon the products of the chase of the fossil deer, the aurochs and the cave bear.

Promptly at 3 o'clock came Consululu, an old man between 68 and 72, grey haired, but erect and vigorous. He had been for many years chief of the tribe, and was elected chief when a young man because alone and unaided he had killed a grizzly bear with his bow. He brought, tied in a deer skin, a piece of obsidian weighing about a pound; a fragment of deer-horn split from a prong lengthwise, about four inches in length and half an inch in diameter, and ground off squarely at the ends, this left each end a semi-circle; two deer prongs (*Cervinus Columbianus*) with the points ground down into the shape of a square sharp-pointed file, one of these being much smaller than the other. He had also some pieces of iron wire tied to wooden handles, and ground into the same shapes. These he said he used in preference to the deer prongs, since the white men came to the country, because they were harder and did not require sharpening so frequently. When asked where he obtained the obsidian, he answered from a place on the north side of Mount Shasta—about 60 miles distant; that, in former days, the land where it is found was claimed by the Yreka Indians, and as this stone was wanted by the Trinity Indians, the Yrekas and the Modocs, as well as the Wintoons, it was rarely obtained without a battle. The piece he had was a light blue in color, and he valued it at \$20; he stated that if it were white it would be worth \$40 or \$50. I could not learn that white obsidian is harder, or is worked with greater ease. Its increased value is probably based on its greater rarity. After stating that in battle he had been twice wounded with arrows, once in the shoulder and once through the calf of the right leg, and showing the scars above the ankle where the arrow had passed through, missing the bone, and been drawn out at the other side, and further stating, with evident gratification at the recollection, that while the arrow was still in his leg, he sent one of his own into the throat of his opponent, from the wound of which he had bled to death in a few minutes—he commenced the operation of making a stone arrow-head. Holding the piece of obsidian in the hollow of his left hand, he placed between the first and second fingers of the same hand the split piece of deer horn first described, the straight edge of the split deer horn resting against about a fourth of an inch of the edge of the obsidian, this being about the thickness of the flake he desired to split off. Then, with a small round water-worn stone, which he had selected, weighing, perhaps, a pound, he with his right hand struck the other end of the split deer horn a sharp blow. The first attempt resulted in failure. A flake was split off, but the blow also shattered the flake at the same time into small fragments. He then repeated the operation, apparently holding the split deer-horn more carefully and firmly against the edge of the large piece of obsidian. The next blow was successful. A perfect flake was obtained, showing the conchoidal fracture peculiar to obsidian. This I purchased, and instructed him to split off another from which to make the arrow-head. He repeated the operation, and was again successful, and I have no doubt he could, with only an occasional failure, have split up the whole piece in a few minutes into shapes for spear-heads, knives and scrapers. The shape naturally taken by the obsidian when split off in this manner is that of a spear-head, and it could be put to use for this purpose with but slight alteration. The thickness of the flake to be split off depends upon the nearness or distance from the edge of the obsidian on which the straight edge of the split deer-horn is held at the time the blow is struck.

The flake having been obtained, I watched with much interest and attention the process of working it into an arrow-head. He now squatted on the ground, sitting on his left foot, his right leg extended in a position often assumed by tailors at work. He then placed in the palm of his left hand a piece of thick, well-tanned buckskin, evidently made from the skin of the neck of a deer. It was thick, but soft and pliable. On this he laid the cake of obsidian, which he held firmly in its place by the first three fingers of the same hand. He then rested the elbow on the left knee, which gave the left arm and hand holding the flake firm and steady support. He then took in his right hand the larger of the two deer prongs—which, as has been stated, had its point sharpened in the form of a square file—and holding it as an engraver of wood holds his cutting instrument, he commenced reducing one edge of the circular form of the flake to a straight line. With the thumb of the right hand resting on the edge of the left palm as a fulcrum, the point of the deer prong would be made to rest on about an eighth of an inch or less of the edge of the flake, then with a firm downward pressure of the point a conchoidal fragment would be broken out almost always of the size desired. The point of the deer prong would then be advanced a short distance, and the same operation repeated until in a few minutes the flake was reduced to a straight line on one edge. As this operation broke all the chips from the under side of the flake, if left in this condition, the arrow-head would be unequally

proportioned, that is, the two cutting edges would not be in the center. He, therefore, with the side of the deer-horn, firmly rubbed back and forth the straight edge he had made on the flake until the sharp edge had been broken and worn down. The flake was now turned end for end in the palm of his hand, and the chipping renewed. When completed, an equal amount was taken from each side of the edge of the flake, and the cutting edge was left in the center. It was now plain that the straight edge thus made was to be one side of the long isosceles triangle, the form of the arrow-heads which is used by his tribe.

With the flake of obsidian firmly held in the cushion of the left palm, and the point of deer-horn strongly pressed on the edge of the flake, the effect was the same as the blow which split the flake from the larger piece. While, however, he was not always sure of the effect of the blow in splitting off the larger flakes out of which to make the arrow-heads, he in no instance appeared to fail in breaking out with the point of deer prong the exact piece desired. The soft, thick, pliable piece of tanned deer-skin on which the flake in his left palm was held may have added to the cushion, but seemed to serve no other purpose than save his hand from being cut by the countless sharp chips as they were broken off. One of the long sides of the arrow-head having been thus formed, the flake was turned over and the other side formed in the same manner. As, however, very much more of the obsidian had to be chipped away he brought more pressure upon the point of deer horn and broke out larger chips until the flake began to assume the shape desired, when the same care was exercised as when the first straight edge was made. In breaking out large or small chips the process was always the same. The pressure of the point of the deer-horn on the upper edge of the flake never appeared to break out a piece, which on the upper side reached beyond where the point rested, while on the under side, the chips broken out might leave a space of twice the distance. Invariably, when a line of these chips had been broken out, the sharp edge was rubbed down, the flake turned end for end, and the chipping renewed on the other side. By this process the cutting edges of the arrow-head were kept in the same line. The base was formed in the same manner. No lines were drawn, but he would occasionally look at his work as it progressed and chip on one side or the other to keep their proportions equal. The base of the arrow-head, opposite the point, when finished, is inserted in a slot made in the end of the wooden shaft, and is firmly tied by deer sinew. To hold the arrow-head firmly to the shaft, and to prevent the thread from interfering with the penetrating power of the arrow, a slot about one-fourth of an inch deep is chipped into both cutting edges of the arrow-head, about one-fourth of an inch above the base. This causes the arrow to look as if it were barbed, but the object seems only to be to provide means by which the arrow-head may be firmly fastened to the shaft, at the same time avoiding the making of any obstruction to the penetrating or cutting power of the arrow-head. The chipping out of these slots was the last operation to be performed. It seemed to be more difficult than any other part of the work, and I thought in this would be the danger of the loss of all the patient labor that had been expended. In practical operation it was the simplest, safest and most rapid of all his work. He now held the point of the well-shaped arrow-head between the thumb and first finger of his left hand, with the edge of the arrow-head upwards, the base resting edgewise on the deer-skin cushion in the palm. He then used the smaller deer prong, which had been sharpened in the same form as the larger one, but all its proportions in every respect were very much smaller. Its point could not have been larger than 1-16th of an inch square. He rested this point on the edge of the arrow-head where he desired to make the slot and commenced sawing back and forth with a rocking motion, the fine chips flew from each side, the point of deer-horn descended, and in less than a minute the slot was cut. The arrow-head was turned over and the same operation repeated on the other edge. It seemed that, by this process, if he so desired, the arrow-head could have been cut in two in a very few minutes. He now examined his work in the strong sun light, and, being satisfied, handed to me the completed arrow-head. It had taken him 40 minutes to split the two flakes from the larger piece of obsidian and chip one of them into the arrow-head. A younger man, equally expert, would probably have done the work in half an hour. When I came to the purchase of the arrow-head and flake, I found they would cost 75c, payable in shells, *dentalium entalis*, which he estimated more highly than their value in money. The worth of the flake and arrow-head was not based on the time or labor employed, but upon the value of the obsidian, as he offered for a dollar's worth of shells to give me 10 arrow-heads of the same shape and size made from the bottoms of glass ale bottles.

The celts, knives, chisels and scrapers of the Stone Age are all much simpler and more easy of manufacture than these semi-barbed arrow-heads.

I doubt if stone hammers were used in their manufacture other than to split off the flakes from a large piece of flint or obsidian, and when thus used the blow was communicated through the split deer-horn or a piece of hard wood in the manner I have described. The blow from a stone hammer direct on the flint or obsidian

would be very uncertain in its results, even in the most skillful and practiced hands. With the split deer-horn the thickness of the flake and probable length could be determined with tolerable accuracy. Probably large chips could be broken from the edge of a flake by a slot in the end of a deer's horn, as is now practiced by the natives of Alaska with a walrus tusk, used as I have seen window glass broken with a key; but an arrow-head is too small and delicate for either operation.

I cannot but believe our pre-historic ancestors in the Stone Age used the same processes as were followed by Consululu; and that, in describing what he did, I have told how the first ancestor of

"The ancient arrow maker,  
Made his arrow-heads of sandstone,  
Arrow-heads of chalcedony,  
Arrow-heads of flint and jasper,  
Smooth and sharpened at the edges,  
Hard and polished, keen and costly."

## American and European Archaeology.

A marked difference is observable between Europe and America with respect to the order of succession of the different prehistoric human "periods" to one another. In fact the succession is in the one exactly the reverse of what it is in the other. This difference is clearly expressed by the Rev. Stephen D. Peet in an article on "The Archaeology of Europe and America." "In Europe," he says, "the cave-hunter, who used bone implements, first departed; the fisherman of the kitchen-midden next passed away; the builder of the earth mounds followed with his rude weapons, and the inhabitants of the palafitte next disappeared; and last of all the Etruscan, the builder of the rude stone monuments. Thus Esquimaux, Basque Briton, Belgian, Celt, Saxon and Etruscan (?), are the successors to one another, while on this continent Quiches, Toltec, Aztec, Mound-builders, Red Indians, and Esquimaux are the silent throng who have reversed the column of departure. The Esquimaux was ruder than the Basque, and the Basque than the Briton, and so the order of departure gave place to a higher culture. In America the most civilized was the soonest removed, and the rudest remained the longest. The ancient city was deserted, but the pueblo remained; the pueblo itself changed inhabitants, but the Mound-builder remained; the Mound-builder was driven away, but the Red Indian continued; the Red Indian has disappeared, but the Esquimaux abides. The palaces of Palenque and Uxmal and the seven cities of Cibola are monuments of a civilization more ancient than the Mound-builders. The mounds of the Mississippi valley were doubtless erected by a more ancient race than the people who occupied at the time of their discovery. The Red Indians held an unbounded dominion more ancient than the villages which they inhabited, and the Esquimaux may possibly have once covered the whole land where all of these tribes so lately roamed, but the last survivor of all is now the rudest and wildest."—*Science Monthly*.

SCRAPING HOGS BY MACHINERY.—Man's inventive genius descends on many occasions to a porcine level. This remark is called forth by an invention used in Chicago in the packing houses of Armour & Co. for scraping hogs. As the scalded hogs pass over the revolving flukes they are scraped clean at the rate of ten hogs per minute, as we lately witnessed in company with some prominent agricultural gentlemen from the South who had come here to see the commercial emporium of the West, and the greatest live stock, grain and lumber mart of the world. And it is interesting to note the improvement which must have been effected in this marvelous machinery during the past year or so; for, if we remember rightly, the previous account of it was that large hogs could be scraped in ten seconds and small ones almost momentarily. So that there has been a saving of four seconds on big pigs, and possibly a fraction of a second or so on small ones.

PATRONAGE of one saloon in Chicago lately, in one evening, between 7 and 11 o'clock, 2,898 men and boys, and 219 women and girls. So says *The Alliance*.

# PIANOS

## LARGEST MUSIC HOUSE

On the Pacific Coast.

WHOLESALE AND RETAIL

## Lowest Prices and Best Goods.

Write for information concerning any Musical Instrument, and terms of sale. It will be given with pleasure.

ESTABLISHED IN 1850.

## KOHLER & CHASE,

137 and 139 Post Street, San Francisco.



## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

PETER SAXE & SON, 520 Bush St. S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

## SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

## POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Doves, etc. Eggs for hatching. Send for price list.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Thoroughbred Berkshire and Poland-China Swine. Light Brahma and Black Cochon Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

## BEES.

JOS. D. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## Nurserymen.

## A New Forage Plant.

## THE GREEN VALLEY GRASS.

The WONDER of the NINETEENTH CENTURY, yields 10 to 14 tons of hay per acre, and from 3,000 to 4,000 bushels of roots, which far exceeds artichokes as feed for hogs.

Grows without Irrigation.

For price list of seed and roots, address

ARTHUR TAYLOR,  
Watson, Atchison Co., Mo.

## Phylloxera-Resisting Vines.

Vineyard Proprietors desiring to plant American Grape Vines, which with resist to the attacks of the Phylloxera, either as Grafting Stock, or for direct production, which proves to be the only salvation and means of reconstructing the destroyed Vineyards of France, will do well to address BUSH & SON & MEISSNER, Bushberg, Jefferson Co., Mo.

RASPBERRY PLANTS Early Prolific and Reliance the best. All the newest and best STRAWBERRY PLANTS in pots or strong layers. Stock pure and first class. Prices low. See new list. Address, GIBSON & BENNETT, Woodbury, N. J.

## MONEY TO LOAN

AT LOWEST RATES  
On Country Real Estate and Grain in Warehouse.

McAFEE BROTHERS,  
202 Sansome Street, San Francisco.

California Inventors Should consult DEWEY & CO., AMERICAN AND FOREIGN PATENT SOLICITORS. Established in 1860. Their long experience as journalists and large practice as patent attorneys enables them to offer Pacific Coast inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS, No. 202 Sansome St., San Francisco.

WELL AUGER. Ours is guaranteed to be the cheapest and best in the world. Also nothing can beat our SAVING MACHINE. It saws off a 2-foot log in 2 minutes. Pictorial books free. W. GILES, Chicago, Ill. P. SAXE, 520 Bush street, General Agent for Pacific Coast.

## Nathaniel Curry &amp; Bro.,

113 Sansome Street, San Francisco,



Sole Agents for the

## Sharps Rifle Co., of Bridgeport, Conn.

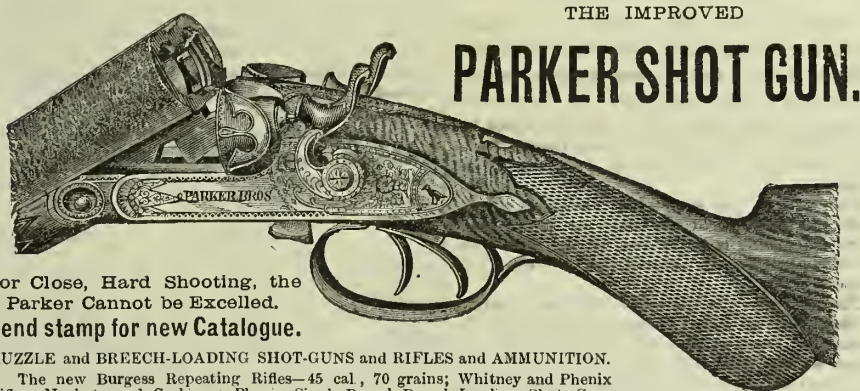
FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO. Also Agents for W. W. GREENER'S Celebrated Wedgefast, Chokeyore, Breech-loading DOUBLE GUNS; and all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America. AMMUNITION of all kinds in quantities to suit.

In consequence of spurious imitations of  
**LEA AND PERRINS' SAUCE,**  
which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signatures

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine. Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.



THE IMPROVED

## PARKER SHOT GUN.

For Close, Hard Shooting, the Parker Cannot be Excelled. Send stamp for new Catalogue.

MUZZLE and BREECH-LOADING SHOT-GUNS and RIFLES and AMMUNITION. The new Burgess Repeating Rifles—45 cal., 70 grains; Whitney and Phenix Rifles, Muskets and Carbines; Phenix Single-Barrel Breech-Loading Shot Gun; Allen Rifles, 22, 32, 38 and 44 caliber, rim fire, very cheap; Lovell & Sons Revolvers, the best and the cheapest.

## E. T. ALLEN, Agent for Pacific Coast,

NO. 515 MARKET STREET, - - - - - SAN FRANCISCO, CAL.



## Howe's U. S. Standard Scales.

## SCALES REPAIRED

In City or Country by a Practical Scale Maker with United States Standard Weight.

Platform, Drop Lever, Grain, Hay, Warehouse and Counter Scales, Even Balances and Butcher Scales, White's Money Drawers, Store, Wagon and Box Trucks.

DAVID N. HAWLEY, Agt., 201 and 203 Market Street, (Cor. Main) SAN FRANCISCO.

## Educational.

## HEALD'S BUSINESS COLLEGE,

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed. LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College. TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper. For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

E. CHAMBERLAIN, JR. Thos. A. ROBINSON



SEND FOR CIRCULAR.

## Seedsman.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc. Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco



B. K. BLISS & SONS,

Importers, Growers and dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address

B. K. BLISS & SONS, 34 Barclay Street, N. Y.

EXOTIC GARDENS. F. A. MILLER & CO., Mission St. opposite Woodward's Gardens. Send for Catalogue and Price List.

## Lands for Sale and to Let.

## Farm For Sale.

Yields an Income of \$4,000 a Year.

Price, \$10,500.



My Farm and Poultry Business yield over \$4,000 a year. The place—116 acres—with orchard, vineyard and improvements, has cost me \$15,000. The good will of the business is worth fully \$6,000. I will sell the business and farm for \$10,500, half cash, or exchange for San Francisco property. It is a bargain such as is seldom offered.

M. EYRE, Napa, Cal.

Law Office in San Francisco, No. 636 Clay St., Room 25. I am in Napa each Saturday and Sunday; other days in San Francisco.

## FOR SALE.

700 Acres. The Finest Stock and Grain Farm in Northern California.

Price, \$25,000, including Farming implements. The whole under fence.

The Stock upon this farm, all thoroughbred and graded, embracing some of the finest in the State, will be sold at private sale. Among the stock is some that has been awarded different premiums at State and County Fairs.

This is one of the finest opportunities for a man of means in the State. For full particulars apply to

D. B. HAYS,

Real Estate Agent, Oroville, Cal.

## C. C. RODGERS,

CALIFORNIA LAND AGENCY,

Office, 276 First St., San Jose, Cal.

GENERAL LAND, REAL ESTATE, U. S. PENSION AND BOUNTY AGENT.

Will buy and sell Land Warrants; Locate and Survey Public Government Land, Pre-emption Homesteads, Soldier's and Sailor's Homesteads, Timber and Wood Lands, Desert Lands, Etc.

## FARMING LAND

For Sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

## LAND

Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$2,500,000,

In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

## OFFICERS:

PRESIDENT.....G. W. COLBY.

MANAGER AND CASHIER,  
ALBERT MONTEPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

## Grangers' Co-operative Business Association, of Sacramento Valley.

Location: K & 10th Sts., Sacramento, Cal

Dealers in GENERAL PRODUCE, RETAIL GROCERIES, and sale of FRUITS. Desire the co-operation and trade of farmers in general. Pay the highest market rates for all produce, and sell for the smallest profit. Our orders are cash on delivery. Goods shipped; marked C. O. D. W. H. HEVENER, Manager.

## Contents of Pamphlet on Public Lands of California, U. S. Land Laws, Map of California and Nevada, Etc.

Map of California and Nevada; The Public Lands; The Land Districts; Table of Rainfall in California; Counties and Their Products; Statistics of the State at Large.

Instructions of the U. S. Land Commissioners.—Different Classes of Public Lands; How Lands may be Acquired; Fees of Land Office at Location; Agricultural College Scrip; Pre-emption; Extending the Homestead Privilege; But One Homestead Allowed; Proof of Actual Settlement Necessary; Adjoining Farm Homesteads; Lands for Soldiers and Sailors; Lands for Indians; Fees of Land Office and Commissions; Laws to Promote Timber Culture; Concerning Appeals; Returns of the Register and Receiver; Concerning Mining Claims; Second Pre-emption Benefit.

Abstract from the U. S. Statutes.—The Law Concerning Pre-emption; Concerning Homesteads; Amendment Act Concerning Timber; Miscellaneous Provisions Additional Surveys; Land for Pre-emption; List of California Post Offices. Price, post paid, 50 cts.

Published and sold by DEWEY & CO., S F

50 Perfumed, gilt edge & chromo Cards, elegant case, name in gold, 10c. ATLANTIC CARD CO., E. Wallingford, Ct.



## The Mechanics' Fair.

E. Dietrick &amp; Co.'s Exhibit,

The exhibit of E. Dietrick & Co., the well-known bag and tent-makers of this city is one of the most attractive of the fair. Both in material and manner of displaying it, their stand is noticeable. Their fine establishment on Clay street lately suffered from a fire, but the exhibit shows that misfortune cannot affect the infinite variety of their resources.

One article which justly receives the admiration of visitors is their "camp cot," a piece of canvas furniture indispensable in outdoor life. It is a new pattern, and contains many excellent points. To show its strength and durability, a heavy man jumps and tramps on it, and the specimen at the fair has now been jumped upon thirty days and thirty nights consecutively without starting a tack or weakening a joint. The cot is adjustable so as to form an easy chair; it folds again into a strong bench; it extends itself into a comfortable bed; and finally it doubles itself up into a package about 4 inches square and 3 feet long, and weighing 13½ pounds.

The display also contains several tents, adapted either for camp, lawn, or other uses. The "Chieftain" tent can be set up or taken down in five minutes. It encloses a space 10 feet square, but folds up into a bundle about 10 inches square and 3 feet long, and is thus very portable.

The "house tent," divided by a curtain into two apartments, is as complete and handsome a canvas dwelling as we ever saw, and excites much admiration. Its style of manufacture shows the ability of the firm to do work of the strongest and yet most ornamental character. It is furnished with camp cots and camp tables, which, by the way, are of a very praiseworthy style, being very strong, and yet made to pack in small compass.

Those who admire local manufactures, and believe in supporting them, should not fail to examine Dietrick's California-made camp chairs, and compare them, both in strength and comfort, with those which come from the East. The superiority of the California article is very noticeable.

Owing to the great variety of the exhibit, one can but mention few single articles. The display of twine, of every conceivable size and strength and material and color, would make a boy wish his pockets reached to his boots, so he could get in all that "string," and the housewife's "string bag" would burst before it contained a hundredth part of it. But, seriously, the twine exhibit is worth study, to discover how the manufacturers have succeeded in meeting every use and pleasing every taste. The manufacturing department of the display is also noteworthy, as containing the widest piece of duck in the fair, being 120 inches or 10 feet wide—wide enough to cut a summer coat and pantaloons for Goliath without reaching the selvage on either side. There is also the widest piece of rubber goods in the fair. But what we have mentioned is only about 1% of the exhibit, and hardly a handful compared with the immense and varied stock at the Clay-street manufactory.

## Holly &amp; Magoon's Cultivator.

This improved cultivator, manufactured by Holly & Magoon, Stony Point, Sonoma Co., and E. J. Holly, Lakeville, same county, is exhibited in the fair by M. C. Hawley & Co., agents. The arrangement for raising or lowering the frame to put the plows or cultivator teeth into the ground, or raise them out, is peculiar, and the operating lever is adjustable to suit the driver, when either walking or riding. The cultivator teeth, or chisels, are attached to the foot of the standard by a peculiar means, which admits of ready interchangeability of chisel teeth or weed cutters. The peculiar dove-tailed chisel cultivator teeth are self-sharpening and made of the best cast steel, with an improved method of attaching to the standard. These teeth stir the ground up, but sometimes in vineyards it is desirable to cut weeds without disturbing the ground. These weed cutters are attached in place of the chisel teeth. For vineyard purposes the wheels are set near the center, so that the outside chisels cover the tracks of the wheels. This makes the machine very easy to turn around. With the castor wheel in front and the others near the center, it may be turned like a cart. Another peculiar feature is the wheel, which is made with double box running on a square axle, so that the hub is always good and strong. These cultivators are made in sizes to suit from two to six horses. Throughout Sonoma and Los Angeles counties in the vineyards, they have given entire satisfaction.

MONTEREY FAIR.—We have received the premium list of the third annual exhibition of the Monterey Agricultural Fair Association, to be held at Salinas City, September 30th to October 4th, 1879, inclusive. The premiums seem to be quite liberal and equitably distributed. It should be consulted by intending exhibitors, and may be obtained from S. J. Westlake, Secretary, at Salinas City.

## A Call to Organize a State Horticultural Society.

To the horticulturists, fruit growers and nurserymen of California: We, the undersigned, are anxious to have a State Horticultural Society organized, and made a permanent institution. We ought to collect and preserve the results of practical experiments in gardening and fruit culture; to name and discuss new fruits and plants; to suggest and make scientific investigations; and, in all possible ways, to educate the people in practical and scientific horticulture.

We, therefore, unite in asking all persons who are interested in these subjects to meet in San Francisco, at the Academy of Science building, southwest corner of California and Dupont, on Wednesday afternoon, September 17th, at two o'clock. Plans for organization will then be laid before you.

E. W. Hilgard, Professor of Agriculture, State University; W. B. West, Stockton; John Rock, San Jose; James Coey, San Francisco; J. E. Benton, Oakland; H. Tubbs, Brooklyn; W. A. Bray, Brooklyn; Joseph W. Jordan, Fruit Vale; H. H. Lawrence, San Francisco; E. Wal- legh, Fruit Vale; E. Crane, San Lorenzo; Horatio P. Livermore, Oakland; H. G. Ellsworth, Mission San Jose; A. Kellogg, M. D.; W. G. W. Harford; R. J. Trumbull; M. H. Lester; H. M. Sanborn; James Hutchison; Fred. M. Hennig; M. King; John Hampton; L. M. New- som; G. Nicholson; H. E. Leopold; R. Ulrich; E. Meyer; James Bailey; G. E. Bayley, Oak- land; E. J. Hooper, San Francisco; E. Lew- elling, San Lorenzo; Wm. Meek, San Lorenzo; Lorenzo Yates; E. G. Waite, Oakland; A. Montpelier, Graugers' Bank; C. W. Hathaway, San Lorenzo; J. Strentzel, Martinez; Thos. A. Garey, Los Angeles; E. J. Wickson, editor RURAL PRESS; John Hittel, editor Alta; G. P. Rixford, Bulletin; Col. J. P. Jackson, S. F. Post; Charles H. Shinn, editor Horticulturist; Prof. H. B. Norton, Normal School; I. N. Hoag, Agricultural Editor Record-Union.

## Opening of the State Fair.

EDITORS PRESS:—The whole city of Sacra- mento has turned over its attention to the State fair, and nothing else at present seems import- ant enough to claim attention. At the park the prospect is very good, every available space being crowded with farming machinery, tools, live stock, and agricultural products of all kinds.

They are as yet somewhat unsettled at the park, but more so at the pavilion in the city. Here everything is hurry and bustle, as the exhibitors continue to be entered and are set up in shape. The art gallery is the most prominent feature of the pavilion, and we here find much to be proud of. Occasionally may be noticed the pic- tures which last week hung in the Mechanics' pavilion; other articles have been brought from the same, and on the whole this fair is made up of the superior portions of a number of other fairs, together with much that is original and attractive. All hope and expect—in fact, the indications prove that this fair will equal, if not excel, any of previous years.

Sacramento, Sept. 9th, 1879.

BONE MANURES.—A Haas, Manager of the Pacific Bone-Coal and Fertilizer Company has just issued a pamphlet on the subject of bone manures which is worth careful reading. It re- views the general subject of plant food, and shows how valuable substances taken from the crops may be restored and thus fertility be re- tained. This is a question of the utmost im- portance in California. It is wrong that our fertilizing materials should be shipped to foreign markets, and we trust this pamphlet may lead many who find their fields, gardens and orchards growing less productive, to make a trial of bone manures, which are offered in small lots at the same rate as by the ton. The address of the company is 523 Market St., S. F.

SAN JOAQUIN VALLEY FAIR.—Preparations for the 19th annual fair of the San Joaquin Valley Agricultural Society are being pushed vigor- ously, and an unusually good exhibition of in- dustrial achievements is foreshadowed. The fair will be held in Stockton, September 16th to 20th. The premium list is very complete, and is issued in handsome style, and all intend- ing exhibitors should apply for it to J. M. La Rue, Secretary, Box 188, Stockton. The district includes the following rich counties: San Joa- quin, Calaveras, Stanislaus, Tuolumne, Merced, Mariposa, Fresno, Tulare and Kern.

A SON of John Bright, the English orator, will soon visit California.

## Books on Agriculture, Etc.

The following among other books will be sent post-paid on receipt of publishers' prices, annexed:—Tobacco, its culture, manufacture and use, 500 pages, \$3.50;—The Patrons of Hus- bandry, 500 pages, \$3.75;—The Women of the Bible, 77 en- gravings, \$4;—Wells' Every Man His Own Lawyer, 612 pages, \$2.75;—Americau Husbandry, 2 vol., \$1.50;—Gray's Agricul- tural Essays, \$1;—Langstroth's Honey Bee, \$1.50;—Randall's Sheep Husbandry, \$1.50;—Agricultural Engineering, \$1.50;—New Bee-Keepers' Text Book, \$1;—Pacific Rural Hand- book, \$1;—Ropp's Easy Grapery, \$1;—U. S. Land Law, 50 Cts.;—Woodward's Grapery, Etc., \$1;—Sugar from Melons, 25 Cts.;—Strawberry Culture, 50 Cts.;—Layre's Belle Lettres, \$1;—Holt's Map of California and Neva- da, to subscribers, \$1;—Back Volumes PACIFIC RURAL PRESS (bound) \$5; unbound, \$2;—Picturesque Arizona, \$2. Address DEWEY & CO., Publishers, 202 Sansome St., S. F.

HELP IN ACQUIRING KNOWLEDGE.—In acquiring a knowledge of the English language, and especially in learning the meaning of words, probably no other work, nor many other books altogether, can afford so much aid as Webster's Unabridged Dictionary, with its 3,000 picto- rial illustrations, its precise and full definitions, its care- ful discrimination of synonymous words, its many valu- able tables, and above all with the recent additions to it of a supplement of over 4,000 new words and meanings, such as have come into the language within the last few years, and a new biographical table of more than 9,700 names of noted persons, giving in brief the name, pro- nunciation, nationality, profession and date of death. It is, in itself, a whole library of the language. Let one family have a copy of this work, and use it faithfully, and another be without it, the difference in the progress of the two families in getting knowledge will be very great.

FRESH attractions are constantly added to Wood- ward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonder- ful resort. Prices remain as usual.

HOW TO STOP THIS PAPER.—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our pros- pectus and terms of subscription, and request that they circulate the copy sent.

EXTRA COPIES can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.

## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Sat- urday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, September 10th, 1879.

There are many signs of increasing activity in city streets and stores. The receipts and shipments of grain are large. The bay is filled with sail, no less than 13 ships from foreign ports having arrived during one day. Grain prices do not materially change. The foreign market is especially disinclined to fluctuate, as may be seen by the following table.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday....	8s	6d	9s	6d	9s	5d	9s	10d
Friday.....	8s	6d	9s	6d	9s	5d	9s	10d
Saturday....	8s	6d	9s	6d	9s	5d	9s	10d
Sunday.....	8s	6d	9s	6d	9s	5d	9s	10d
Tuesday....	8s	6d	9s	6d	9s	5d	9s	10d
Wednesday..	8s	6d	9s	6d	9s	5d	9s	10d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1877.....	12s	6d	12s	8d	12s	9d	13s	2d
1878.....	10s	2d	10s	5d	10s	5d	10s	8d
1879.....	8s	6d	9s	6d	9s	5d	9s	10d

## The Foreign Review.

LONDON, September 9.—The *Mark Lane Express* says: Advantage has been eagerly taken of the few days of fine weather to commence cutting Wheat and Barley, and except in the northern counties the harvest is now actively proceeding. The warm breezy weather has dried much of the grain that was laid by previous rains, and sprout- ing has not assumed such alarming proportions as was re- cently expected. The nights have been cool and occa- sional frosts have in some cases damaged unripe grain. Provided there is no disastrous return of rain, some samples of new Wheat may be expected in a few days. A few samples of Barley have already appeared in the country markets, but nothing of any consequence. In Scotland many fields are still quite green, and the harvest will be at such a late season that if the days are fairly fine, ripening will be poor, as the heat of the sun will be much diminished. The yield of Barley and Wheat will both prove exceptionally deficient, but a continuance of fine weather may do something to improve the quality and condition. Potatoes have more or less suffered from disease throughout the United Kingdom. In midland counties many acres have been plowed in as worthless. Potatoes may altogether be considered to have disap- peared from the list of this season's crops. Other root crops improved slightly during the last few days, but are generally backward, foul and unpromising. Any ten- dency to an improvement in the Wheat market has been checked by heavy arrivals from abroad. Millers have shown little inclination to increase their stocks in the face of arrivals in London, amounting to 350,000 quarters up to Friday last. While speculators have been paralyzed by the enormous shipments from American Atlantic ports, the great want of confidence existing in the Wheat trade is due to the exact deficiency in English crops be- ing still mainly a matter of conjecture, pending the solu- tion of which buyers confine their purchases to the smallest possible limit. The week's business has been very light, and prices fluctuated but very little, though under pressure of heavy supplies that little has been in buyers' favor, but not to an extent of more than 6d per quarter. Still, however, as trade has been the condition of a rise is not wanting, and having regard to the re- quirements of several European countries for another cereal, the year's American surplus will probably be ab- sorbed at a range of prices more profitable than the present, both to shipper and merchant. Sales of English Wheat last week amounted to 16,570 quarters, at 48s 2d per quarter; against 55,455 quarters at 45s 4d per quarter for the same week last year. Imports into the United Kingdom during the week ending August 30th, were 155,033 cwt of Wheat and 125,728 cwt of Flour. In the market to-day, business was exceedingly quiet.

## Freights and Charters.

The following late charters have been drawn: Ship *St. David*, 1,596 tons Wheat and Merchandise to Liverpool, £2 2s 6d; British iron ship *Peri*, 777 tons, Wheat for Great Britain, prior to arrival; British iron ship *City of Nankin*, 936 tons, Wheat for Liverpool, £2 5s 6d; Cork, £2 8s; Continent, £2 13s.

EASTERN GRAIN AND PROVISION MARKETS.  
NEW YORK, September 9.—The Merchandise markets are moderately active, and prices generally firm. Flour

is more active and firm; Wheat is active, 1c higher; Pork is quiet, easier; Lard is neglected, lower.

CHICAGO, September 6.—All the markets the past week have been moderately active, firm and higher, with a strong closing, and prospects good for a general advance. Grain has moved pretty freely, but there has been a good call for all that came forward. Provisions have firmed up as the daily receipt of Hogs showed that less are coming in than last year. There is an urgent Southern demand. Sales of October Wheat, 85½¢; Corn, 33½¢; Oats, 23½¢; Barley, 70¢; Pork, 87¢; Lard, 88½¢; Cash closed, Wheat, 87¢; Corn, 33½¢; Oats, 23½¢; Barley, 70¢; Pork, 88½¢; Lard, 88½¢. Receipts for the week, Wheat 1,115,000 bushels; Corn, 1,950,000; Oats, 392,000. Shipments, Wheat, 1,005,000 bushels; Corn, 1,352,000; Oats, 457,000. Receipts for the same time last year, Wheat, 1,773,000 bushels; Corn, 2,123,000; Oats, 794,000. Shipments, Wheat, 983,000 bushels; Corn, 1,969,000; Oats, 565,000.

## Eastern Wool Markets.

NEW YORK, September 9.—Wool is fairly active at full prices. Pacific coast Wools are under good control, and indifferently offered.

PHILADELPHIA, September 9.—Wool is firm, with a good request. Prices are buoyant. Colorado fine and medium is quoted at 15¢25¢; coarse, 17¢19¢; extra and Merino pulled, 36¢38¢; No. 1 and Super pulled, 36¢38¢; Texas fine and medium, 18¢25¢; coarse, 17¢19¢.

BOSTON, September 6.—The Wool market is firm, with a steady demand from manufacturers. There is a better feeling, and prices are a shade higher all round. The de- mand for medium Wools continues, and prices for this description have a decided upward tendency. Combing and Delaine fleeces are in better demand, and rates are 1c per pound higher than last week. The stock of pulled Wool has not been sold up so close for many years, and lots arriving find ready sale at full prices. Sales include Ohio and Pennsylvania fleeces, XXX and above, and No. 1, at 37½¢43¢; Michigan X and No. 1, at 36¢40¢; Wisconsin X and No. 1, at 37¢39¢; New Hampshire fleeces, at 32¢39¢; Combing and Delaine selections, 39¢45¢; unwashed Combing, at 25¢32¢; unwashed and unremountable fleeces, 25¢34¢; Eastern and Valley Oregon 23¢33¢; Texas, 25¢; Territory, 15¢30¢; Colorado, 19¢27¢; scoured, 35¢62¢; tub-washed, 42¢; Super and X pulled, 30¢43¢. Very little has been done in California Wools. Sales of the week were only 109,000 lbs Spring, at \$21¼¢, but stocks are held firm.

## Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon to-day as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Aug. 20.	WEEK. Aug. 27.	WEEK. Sept. 3.	WEEK. Sept. 10.
Flour, quartersacks..	34,423	30,569	4,558	59,473
Wheat, centals.....	232,440	236,680	208,109	512,161
Barley, centals.....	80,059	71,542	25,900	66,076
Beans, sacks.....	335	2,038	609	1,953
Corn, centals.....	2,061	982	277	2,178
Oats, centals.....	6,937	8,349	1,342	7,421
Potatoes, sacks.....	13,737	17,417	7,592	20,080
Onions, sacks.....	1,341	1,320	724	2,520
Wool, bales.....	1,346	2,672	788	2,210
Hops, bales.....	168	127	25	383
Hay, bales.....	2,567	2,352	891	1,899

BAGS—Jobbers have restored the rate for Standard Grain Bags to 9¢9½¢. There have been more auction sales of large lots at 8½¢9¢. Other Bags are unchanged.

BARLEY—Barley has receded a little from the mark of a week ago. In Brewing there is a difference of 16¢20¢ between Old and New as shown in our list. We note sales as follows: 400 cts choice Bay Feed at 75¢; 900 sbs Old Coast do, 65¢, and a small lot of Coast Chevalier at \$1.10 per ctn.

BEANS—Limas have dropped off one-third because of a temporary over supply. Other Beans are not materi- ally changed.

CORN—A marked improvement is noticeable, and prices for all sorts are advanced. There was a sharp de- mand during the last of last week, which has since mod- erated somewhat, but prices have held the increase thus far.

DAIRY PRODUCE—There is no change except that single boxes of fancy brands now bring 30¢ per lb.

EGGS—There is no change.

FEED—Hay is stagnant at former prices; Ground Feeds are also unmoved, except that Middlings now have a range of \$17¢\$18 per ton.

FRESH MEAT—Our list shows a gratifying advance in all grades of Beef; Veal has fluctuated slightly.

FRUIT—The chief trade is now in table Grapes. Since last week they have nearly all changed prices, as shown in our list. Other fruits are running along evenly, except Plums, which have advanced, and Quinces, which have arrived in excess of the demand.

HOPS—The motion is upward. The first California Hops are expected in this week, and they will bring 30¢; in fact, that much has been bid upon them we believe. Washington Territory Hops are selling to arrive at 25¢26¢. It is probable that 500 bales have been ordered from the East before picking here, and some of these orders are still unfilled. It seems possible that the choicest Califor- nia may reach 35¢ when they come to sight. This is, however, a conjecture.

LIVE STOCK—We note the following sales reported to us from Visalia: 900 Lambs, at \$1.25; 750 Lambs, do, \$1.35; 2,700 do, \$1.20; 4,200 Sheep, \$1.90; 1,690 Sheep, \$1.60; 520 Ewes, \$1. The following Hog sales have been made in this market: 2,100 Hogs, delivered in S. F., \$3.12½; 240 Hogs, \$3; 354 Hogs, \$3.10 per cwt.

OATS—There is no change nor any movement liable to affect prices at once.

ONIONS—Prices are reduced to 40¢ per ctn for Reds and 50 for Silverskins.

POTATOES—The combination has fallen through, and knocked the bottom out of the Potato market again. The choicest Fruit, fit to tempt a fairy, goes at 25¢ per sack.

POULTRY AND GAME—Ducks and Geese are on the decline. Turkeys also have gone off 2¢ per lb.

PROVISIONS—A slight advance is noted in all grades of California Bacon. The trade is improving.

VEGETABLES—Green Corn, String Beans and Toma- toes are much cheaper. The canners are now freely work- ing on the low priced Tomatoes. Watermelons have ad- vanced to \$8¢\$12.50 per 100.

WHEAT—Our prices are advanced 2½¢ per ctn on the best grades to cover a slight advance.

WOOL—The fall Wool now in is mainly San Joaquin, and these descriptions are doing about 2¢ per lb better than at the date of our last report. We note sales of 100,000 lbs San Joaquin, at 13¢17¢, according to quality.



## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., September 10, 1879.

<b>BEANS &amp; PEAS.</b>			
May, cal.	1 00 @ 12 1/2	Brazil.	12 1/2 @ 13
Butter.	1 75 @ 20	Peanuts.	12 1/2 @ 14
Castor.	3 00 @ 50	Peanuts.	6 @ 8
Pea.	— @ 20	Filberts.	15 @ 16
Red.	1 00 @ 10		
Pink.	95 @ 10		
Sm't White.	1 25 @ 30		
Lima.	— @ 40		
Field Pea.	1 25 @ 50		
<b>BROOM CORN.</b>			
Southern.	2 @ 2 1/2		
Northern.	3 @ 4		
<b>CHICORY.</b>			
California.	4 @ 4 1/2		
German.	4 @ 4 1/2		
<b>DAIRY PRODUCE, ETC.</b>			
<b>BUTTER.</b>			
Cal. Fresh Roll.	22 1/2 @ 25		
Fancy Brands.	2 1/2 @ 30		
Pickle Roll.	20 @ 22 1/2		
Firkin, new.	18 @ 21		
Western.	12 1/2 @ 15		
New York.	— @ —		
<b>CHEESE.</b>			
Cal. Fresh Roll.	6 @ 8		
do, new.	7 @ 10		
N. Y. State.	— @ —		
<b>EGGS.</b>			
Cal. fresh, doz.	27 1/2 @ 32 1/2		
Oregon.	— @ 25		
Eastern, by exprs.	27 1/2 @ 30		
Picked here.	— @ 25		
Utah.	— @ 27 1/2		
<b>FEED.</b>			
Brn, ton.	14 00 @ 25 00		
Corn Meal.	20 00 @ 21 00		
Hay.	15 00 @ 16 00		
Middling.	17 00 @ 18 00		
Oil Cake Meal.	32 00 @ —		
Straw, bale.	40 @ 50		
<b>FLOUR.</b>			
Extra City Mills.	5 25 @ 6 25		
do, Country Mills.	4 50 @ 5 00		
do, Oregon.	4 50 @ 5 00		
do, Walla Walla.	4 75 @ 5 25		
Superfine.	3 25 @ 3 50		
Extra Superfine.	3 50 @ 4 25		
<b>FRESH MEAT.</b>			
Beef, 1st quality.	5 @ 6		
Second.	4 @ 5		
Third.	3 @ 4		
Mutton.	2 1/2 @ 3 1/2		
Spring Lamb.	4 @ 5		
Pork, unadressed.	3 @ 3 1/2		
Dressed.	4 @ 5		
Veal.	4 @ 5		
Milk Calves.	6 @ 6 1/2		
do, choice.	6 1/2 @ 7		
<b>GRAIN, ETC.</b>			
Barley, feed, cal.	57 1/2 @ 72 1/2		
Brewing, new.	75 @ 85		
do, old.	95 @ 105		
Chevalier.	50 @ 75		
Buckwheat.	40 @ 60		
Corn, White.	87 1/2 @ 90		
Yellow.	87 1/2 @ 90		
Small Round.	85 @ 90		
Oats.	50 @ 60		
Milling.	60 @ 85		
Rye.	80 @ 85		
Wheat, No. 1.	70 @ 72 1/2		
do, No. 2.	65 @ 67 1/2		
do, No. 3.	40 @ 50		
Choice Milling.	— @ 72 1/2		
<b>HIDES.</b>			
Hides, dry.	16 @ 16 1/2		
Wet, salted.	7 @ 9		
<b>MONEY, ETC.</b>			
Beeswax, lb.	20 @ 25		
Honey in comb.	10 @ 12 1/2		
do, No. 2.	7 @ 9		
Dark.	— @ —		
Extracted.	8 @ 10		
<b>HOPS.</b>			
Oregon.	— @ —		
California, old.	8 @ 12		
Wash. Ter.	4 @ 8		
Old Hop.	4 @ 8		
<b>NUISANCE.</b>			
Walrus, Cal.	8 @ 9		
do, Chile.	6 @ 8		
Almonds, hd shd lb	7 @ 8		

## FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., September 10, 1879.

<b>FRUIT MARKET.</b>			
Apples, box.	25 @ 1 00	Blackberries.	12 @ 15
Apricots, box.	— @ —	Citron.	23 @ 24 1/2
Bananas, hnd.	2 00 @ 4 00	Dates.	3 @ 10
Blackberries, ch't.	— @ —	Figs, Black.	3 @ 4
Cherries, ch't.	— @ —	Peaches.	7 @ 8
Citrons, Cal.	100 @ 100	do, pared.	18 @ 20
Cocoanuts, 100.	8 00 @ 10 00	Pears.	8 @ 10
Crab Apples.	— @ —	Pineapples.	3 @ 4
Currants, chest.	— @ —	Pitted.	12 @ 14
Figs, box.	25 @ 50	Prunes.	8 @ 15
Gooseberries.	25 @ 40	Raisins, Cal, bx	150 @ 1 75
Grapes, hnd.	50 @ 75	do, Halves.	300 @ 2 25
Muscadine.	25 @ 50	do, Quarters.	225 @ 2 50
Malvolsie.	25 @ 50	do, Malaga.	275 @ 3 00
Rose of Peru.	40 @ 60	Zante Currants.	8 @ 10
Bl'k Morocco.	60 @ 85		
Tokay.	50 @ 75	<b>VEGETABLES.</b>	
Limes, Mex.	8 00 @ 12 00	Asparagus, box.	125 @ 1 50
do, Cal, box.	4 00 @ 5 00	Beets, ch't.	— @ —
Lemons, Cal M.	8 00 @ 12 00	Beans, String.	15 @ 18
Sicily, box.	8 00 @ 12 00	Cantaloupes, dz.	75 @ 1 00
Australian.	3 00 @ 4 00	Carrots, sk.	25 @ 35
Nectarines, hsk.	— @ —	Cauliflower, doz	30 @ 40
Oranges, Cal M.	15 00 @ 35 00	Chile Peppers, bx	25 @ 75
do, small.	6 00 @ 9 00	Cucumbers, bx.	25 @ 35
do, Tabiti.	— @ —	Egg Plants, bx.	25 @ 1 50
Peaches, hsk.	25 @ 50	Garlic, lb.	3 @ 4
do, Mountain.	75 @ 1 25	Green Corn.	6 @ 12 1/2
Pears, bx.	25 @ 50	Green Peas, lb.	11 @ 2
Bartlett.	75 @ 1 50	Lettuce, doz.	10 @ —
Pineapples, doz.	4 00 @ 6 00	Parsnips, lb.	11 @ 14
Plums, box.	60 @ 1 25	Horseshoe.	— @ 10
Prunes, hsk.	50 @ 1 00	Rhubarb, lb.	— @ —
Quinces, box.	35 @ 50	do, Marrow.	— @ —
Raspberries, ch't.	40 @ 70	do, Summer, box.	25 @ 35
Stewberries, ch't.	40 @ 70	Tomato, box.	10 @ 25
<b>DRIED FRUIT.</b>		Turnips, ch't.	40 @ 50
Apples, sliced, lb	4 @ 6	White.	— @ 50
do, quartered.	2 @ 3	Wat'm's, @ 100.	00 @ 12 50
Apricots.	15 @ —		

## BAGS AND BAGGING.

[JOBBER PRICES.]

WEDNESDAY M., September 10, 1879.

Eng Standard Wheat.	9 @ 9 1/2	Elghths.	3 1/2 @ 4
California Manufacture.	— @ —	Hesslan, 60 fnd.	— @ 14
Hand Sewed, 22x36.	9 @ 9 1/2	45 fnd.	— @ 10
22x36.	11 @ 11 1/2	40 fnd.	— @ 9
22x40.	12 @ 12 1/2	Hand Sewed, lb.	44 @ 45
24x40.	12 1/2 @ 13 1/2	4 lb do.	47 1/2 @ 52
Machine Sd, 22x36.	— @ 11	Machine Sew.	45 @ —
Flour Sack, halves.	8 @ 10	Standard Gunns.	13 @ 14
Quarters.	5 @ 6 1/2	Bean Bags.	7 @ 7 1/2

## Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO &amp; C.]

SAN FRANCISCO, September 10, 3 P. M.

SILVER, 25.	
GOLD BARS, 800 @ 910.	SILVER BARS, 6 @ 900.
Exchange on New York, 20, on London, 40 @ 49 1/2.	
Commercial, 50; Paris, 40 francs @ 44 1/2; Mexican dollars, 90 @ 22 1/2.	
LONDON Consols, 97 1/2; Bonds (4 1/2), 104 1/2.	
QUOTATIONS in S. F., by the bank, 3 1/2 @ 3 3/4.	

## GENERAL MERCHANDISE.

[WHOLESALE.]

WEDNESDAY M., September 10, 1879.

<b>CANDLES.</b>			
Crystal Wax.	17 @ —		
Eagle.	12 @ —		
Patent Sperm.	30 @ —		
<b>CANNED GOODS.</b>			
Assorted Pie Fruits.	— @ —		
2 1/2 lb cans.	2 25 @ —		
Table do.	3 50 @ —		
Jams and Jellies.	3 75 @ —		
Pickles, hf gal.	3 25 @ —		
Sardines, qr box.	1 67 1/2 @ 90		
Ht Boxes.	2 50 @ 2 75		
<b>Merry, Faul &amp; Co's.</b>			
Preserved Beef.	— @ —		
2 lb, doz.	3 75 @ 4 00		
do Beef, 4 lb, doz.	6 50 @ —		
Preserved Mutton.	— @ —		
2 lb, doz.	3 75 @ —		
Beef Tongue.	6 50 @ —		
Preserved Ham.	— @ —		
2 lb, doz.	6 50 @ —		
Deviled Ham, 1 lb.	— @ —		
do, doz.	5 50 @ —		
do Ham, 4 lb doz.	3 00 @ —		
Boneless Pig Feet.	— @ —		
2 lb.	4 50 @ —		
3 lb.	3 75 @ —		
Spiced Fillets.	— @ —		
2 lb.	4 25 @ —		
Head Cheese.	— @ —		
3 lb.	4 25 @ —		
<b>COAL-Jobbing.</b>			
Australian, ton.	6 00 @ 6 50		
Coos Bay.	— @ 5 50		
Bellingham Bay.	— @ —		
Seattle.	5 50 @ 6 00		
Cumberland.	12 00 @ 15 00		
Mt Diablo.	4 75 @ 6 00		
Lehigh.	11 50 @ 12 50		
Liverpool.	6 00 @ 6 50		
West Hartley.	— @ 8 00		
Scotch.	— @ 8 00		
Scranton.	— @ —		
Vancouver Id.	6 00 @ —		
Charcoal, sack.	75 @ —		
Coke, hush.	60 @ —		
<b>COFFEE.</b>			
Sandwich Id, lb.	16 @ 16 1/2		
Coffee, Rio.	16 @ 16 1/2		
Guatemala.	16 @ 16 1/2		
Java.	25 @ 26		
Manila.	17 @ —		
Ground, in cs.	25 @ —		
<b>FISH.</b>			
Sac'd Dry Cod.	— @ 4		
do in cases.	5 @ 6		
Eastern Cod.	7 @ 7 1/2		
Salmon, hbls.	8 00 @ 9 00		
Ht hbls.	1 10 @ 1 12 1/2		
Pk'd Cod, hbls.	22 00 @ —		
Ht hbls.	11 00 @ —		
Mackerel, No. 1.	— @ —		
Ht Bbls.	9 50 @ 10 00		
In Kits.	1 85 @ 2 10		
Ex. Mess.	2 25 @ —		
Pk'd Herring, bx	3 00 @ 3 50		
Boston Mkd H'g	70 @ —		
<b>LIME, ETC.</b>			
Plaster, Golden	— @ —		
Gate Mills.	3 00 @ 3 25		
Land Plaster, tn	10 00 @ 12 50		
Lime, Sta Cruz.	— @ —		
hbl.	1 25 @ 1 50		
Cement, Rosen.	— @ —		
dale.	2 00 @ 2 25		
Portland.	4 00 @ 4 50		
<b>NAILS.</b>			
Ass'd sizes, keg	2 70 @ 2 75		

## LEATHER.

[WHOLESALE.]

WEDNESDAY M., September 10, 1879.

Sole Leather, heavy, lb.	22 @ 29
Light.	20 @ 24
Jodot, 8 Kil.	48 @ 50 60
11 to 13 Kil.	65 @ 76 00
14 to 19 Kil.	80 @ 90 00
Second Choice, 11 to 16 Kil.	55 @ 70 00
Cornellian, 12 to 16 Kil.	57 @ 67 00
Females, 12 to 16 Kil.	63 @ 67 00
14 to 16 Kil.	63 @ 67 00
Simon Ulmo, Females, 12 to 16 Kil.	58 @ 62 50
14 to 16 Kil.	66 @ 70 00
16 to 17 Kil.	72 @ 74 00
Simon, 18 Kil.	61 @ 63 00
20 Kil.	65 @ 67 00
24 Kil.	72 @ 74 00
Robert Calf, 7 and 9 Kil.	35 @ 40 00
Kips, French, lb	1 00 @ 1 35
Cal, doz.	40 @ 60 00
French Sheep, all colors.	8 00 @ 15 00
Eastern Calf for Backs, lb.	1 00 @ 1 25
Sheep Roans for Topping, all colors, doz.	9 00 @ 13 00
For Linings.	5 50 @ 10 50
al. Russet Sheep Linings.	1 75 @ 4 50
oot Lugs, French Calf, pair.	4 00 @ 4 75
Beood French Calf.	5 00 @ 5 25
Best Jodot Calf.	4 00 @ 5 25
Leather, Harness, lb.	15 @ 38
Fair Bridle, doz.	48 @ 10 72 00
Skirting, lb.	33 @ 37
Welt, doz.	30 @ 50 00
Buff, ft.	38 @ 21
Wax Side.	07 @ 20

## LUMBER.

WEDNESDAY M., September 10, 1879.

<b>CARGO PRICES OF PUGET SOUND PINE REDWOOD.</b>			
Rough, M.	13 00 @ —	Rough, M.	18 00 @ —
Refuse.	9 00 @ —	Fencing.	18 00 @ —
Clear.	23 00 @ —	Flooring and Step.	28 00 @ —
Clear Refuse.	23 00 @ —	Narrow.	30 00 @ —
Rustic.	23 50 @ —	2d quality.	25 00 @ —
Refuse.	18 00 @ —	Laths.	3 50 @ —
Surfaced.	20 00 @ —	Furring, lineal ft.	— @ —
Refuse.	14 00 @ —	<b>REDWOOD.</b>	
<b>RETAIL PRICE.</b>			
Flooring.	20 00 @ —	Rough, M.	18 00 @ —
Refuse.	12 00 @ —	Refuse.	14 00 @ —
Beaded Flooring.	23 00 @ —	Pickets, Rough.	15 00 @ —
Refuse.	13 00 @ —	Polys.	16 00 @ —
Half-inch Siding.	16 00 @ —	Fainted.	22 50 @ —
Refuse.	14 00 @ —	Siding.	20 50 @ —
Half-inch Surfaced.	20 00 @ —	Surfaced & Long Beaded.	30 00 @ —
Refuse.	14 00 @ —	Flooring.	30 00 @ —
Half-inch Battens.	16 00 @ —	Refuse.	22 50 @ —
Pickets, Rough.	11 00 @ —	Half-inch Surfaced.	30 00 @ —
Rough, Pointed.	12 50 @ —	Rustic, No. 1.	30 00 @ —
Fancy, Pointed.	18 00 @ —	Battens, lineal ft.	— @ —
Shingles.	1 75 @ —	Shingles M.	2 00 @ —

## Signal Service Meteorological Report.

SAN FRANCISCO.—Week ending September 9, 1879.

HIGHEST AND LOWEST BAROMETER.						
Sept. 3	Sept. 4	Sept. 5	Sept. 6	Sept. 7	Sept. 8	Sept.
30.071	30.072	30.086	30.085	30.066	30.020	29.900
30.001	30.043	30.041	30.044	29.999	29.899	29.893
MAXIMUM AND MINIMUM THERMOMETER.						
63	61	61	65	67	70	67
52	53	54	55	56	58	57
MEAN DAILY HUMIDITY.						
88	85.7	83.7	77.7	85.3	84	72
PREVAILING WIND.						
W	W	W	W	W	W	W
WIND—MILES TRAVELED.						
264	233	215	207	364	233	258
STATE OF WEATHER.						
Fair.	Cloudy	Fair.	Clear.	Fair.	Fair.	Clear
RAINFALL IN TWENTY-FOUR HOURS.						
Total rain during the season, from July 1, 1879						0.93



## Agricultural Articles.

## The Famous "Enterprise."

PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babitted boxes.

Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs.

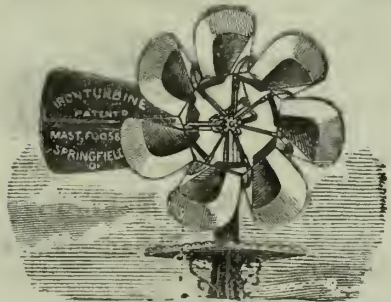
All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

**HORTON & KENNEDY,**

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

## Iron Turbine Wind Engine



## LAND BUCKEYE FORCE PUMP.

This machine made of iron, wheel, vanes, etc., made of No. 24 sheet iron, bound and braced with best quality of wrought iron, gives more power than any other wheel of same diameter. No wood to swell, shrink, rattle or be destroyed by the wind. The most durable and the best Windmill ever invented. For particulars, price lists, etc., address

D. E. GOLDSMITH, State Agent,  
419 Sansome street, San Francisco.

## MATTESON &amp; WILLIAMSON'S



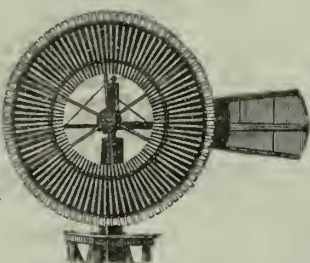
Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

**MATTESON & WILLIAMSON,**  
STOCKTON, CAL.

\$50.

The New  
**Worthington**  
Windmill



Manufactured by

W. D. PARSON,

1384 San Pablo Avenue, Oakland, Cal.

Also, maker of the "Colorado Wind Engine," Wind Grist Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern of Deep Well and Artesian Lift Pump Cylinders. Circulars free.

## Anderson's Springs,

LAKE COUNTY, CAL.

Nineteen miles from Calistoga, five miles from Middletown, and ten miles from the Great Geysers; between which and Anderson's Springs there is a good stage road.

## HOT SULPHUR WATER

For Rheumatism, Paralysis, etc.; Cold Sulphur for Dyspepsia, Diseases of the Stomach and Bowels. Scenery unsurpassed. Climate mild and equable. Consumptives generally improve in health, and asthmatics are invariably relieved.

## TROUT FISHING ON THE GROUNDS.

Deer Hunting in the Immediate Vicinity.

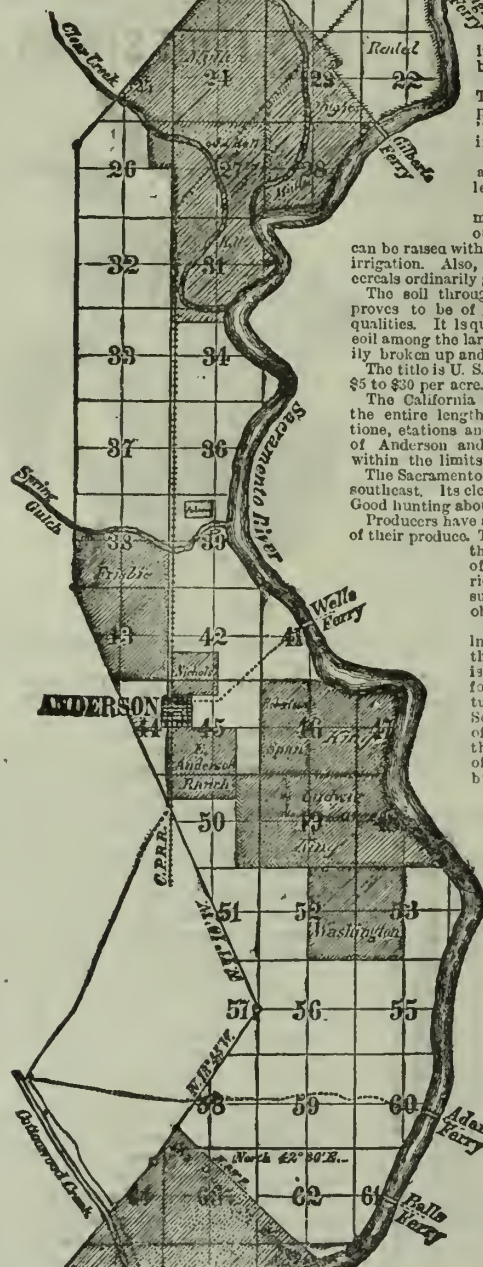
23 Accommodations and Cookery good. Board from \$10 to \$12 by the week.

**ANDERSON & PATRIQUIN, Prop's.**

READING RANCH,  
Shasta Co., Cal.

Good Land!  
Sure Crops!  
HEALTHY CLIMATE!  
Prices Low. Terms Easy.

TITLE PERFECT.



The Reading Ranch, in the Upper Sacramento valley, originally embracing over 20,000 acres of choice grain, orchard and pasture land, is now offered for sale at low prices and on favorable terms of payment, in subdivisions to suit purchasers.

The ranch was selected at an early day by Major P. B. Reading, one of the largest pioneer land owners in California. It is situated on the west side of the Sacramento River and extends over 20 miles along its bank.

The average rainfall is about 30 inches per annum, and crops have never been known to fail from drought.

The climate is healthy and desirable. The near proximity of high mountain peaks give cool nights during the "heated term" which occurs in our California summers.

Pasturage, wood and good water are abundant. The tillage land is mostly level, with complete drainage.

Figs, Grapes, Peaches, Prunes, Almonds, English Walnuts, Oranges and other temperate and semi-tropical fruits can be raised with success on most of the tract without irrigation. Also, Alfalfa, Vegetables, Corn and all other cereals ordinarily grown in the State.

The soil throughout the filled portions of the ranch proves to be of great depth and enduring in its good qualities. It is quite free from foul growths. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

The title is U. S. patent. Prices range principally from \$5 to \$30 per acre.

The California and Oregon railroad traverses nearly the entire length of the tract. There are several sections, stations and switches, besides depots at the towns of Anderson and Reading, all of which are located within the limits of the ranch.

The Sacramento River borders the whole tract on the southeast. Its clear waters are well stocked with fish. Good hunting abounds in the surrounding country.

Producers have a local market, which enhances the value of their produce. The railroad transportation route is level throughout to San Francisco. A portion of the land is auriferous and located near rich mines now being worked. Land suitable for settlers in colonies can be obtained on good terms.

Town lots are offered for sale in Reading, situated on the Sacramento river, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

Purchasers are invited to come and see the lands before buying here or elsewhere. Apply on the ranch, to the proprietor.

**EDWARD FRISBIE,**

Anderson, Shasta Co., Cal.

P. S. - Send postage stamp for illustrated paper containing information about Shasta county and these lands, and say advertised in this paper.

Location of Shasta County.

Shasta County lies not far from midway between the two most important ports on the Pacific shore, i. e., San Francisco and Portland, Oregon, and directly on the overland route, which in the future will become the grand thoroughfare from Mexico to British Columbia. The town of Reading, at present, and probably for years to come, the head of railroad transportation on the California side of the mountains intervening below Oregon, is distant from San Francisco by railroad (via Vallejo) 255 miles; from Sacramento City, 169 miles; from Marysville, 117 miles.

## LAND FOR SALE OR RENT IN SUB-DIVISIONS.

## WELLS, RICHARDSON &amp; CO'S PERFECTED BUTTER COLOR

Gives Butter the gilt-edge color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. **WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.**

HERRMANN'S HATS  
ARE THE BEST!

Try one and you will Wear no other.

Spring and Summer Styles,

— AT —

336 Kearny St., bet. Bush and Pine,

— AND —

910 Market St., above Stockton.

Send for Illustrated Spring Style Catalogue.

## AGENTS, READ THIS

We will pay Agents a Salary of \$100 per month and expenses, or allow a large commission, to sell our new and wonderful inventions. We mean what we say. Sample free. Address **SHERMAN & CO., Marshall, Mich.**

20 Best Chrono Cards, no 2 alike, 10c, or 25 fancy mixed, 10c. name on all. **J. B. Husted, Nassau, N. Y.**

## ROOMS TO RENT.

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

TRADE



MARK.

## LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price, \$2 per gallon. For directions and testimonials, apply to **FALKNER, BELL & CO., Sole Agents, 430 California Street, S. F.**

## AMERICAN MACHINE AND MODEL WORKS.

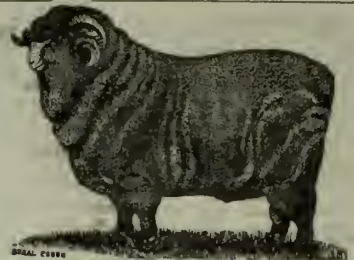
Experimental and Fine Special Machinery, Planing, Gear Cutting, Patterns, Models for Inventors, etc. Printing Press and General Machine Repairing. Punches, Dies, Taps, Reamers, etc., made and repaired.

**I. A. HEALD, Proprietor.**

514 Commercial Street, above Sansome, San Francisco.

OBTAINED IN U. S. AND FOREIGN COUNTRIES; trademarks, labels and copyrights registered through **DEWEY & CO.'S** MARKING AND SCIENTIFIC PRESS Patent Agency, San Francisco. Send for free circular

## Stock Notices.



## SPANISH MERINO SHEEP.

Choice stock of thoroughbred Bucks and Ewes, guaranteed free from disease. Purchasers are invited to examine. About 10 minutes' walk from the Railroad terminus, adjoining State University.

**E. W. WOOLSEY,**  
Berkeley, Alameda County, Cal.

## BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

**JOHN RIDER,**  
18th and A Streets, Sacramento City, Cal.

## ANGORAS AT THE FAIRS.

The undersigned would announce to those interested in ANGORA GOATS, and the public generally, that he will have a lot of

## Choice Angora Bucks

On Exhibition at the State and District Fairs

This fall, namely: At the State Fair at Sacramento, the Golden Gate Fair at Oakland, the Nevada State Fair at Reno and the Oregon State Fair at Salem.

These Bucks will be sold at fair rates.

**JOHN S. HARRIS,**  
Hollister, San Benito Co., Cal.

## RAMS FOR SALE.

400 THOROUGHbred  
And Graded  
SPANISH MERINO  
Rams For Sale.

Bred from the first importation of Spanish Merino Sheep to California, in 1859.

Prices to suit the times. Residence, one mile north of McConnell's Station, Western Pacific Division C. P. R. R. P. O address, **MRS. E. McCONNELL-WILSON,** Elk Grove, Sacramento Co., Cal.

## JOHN ROGERS &amp; SONS,

GENERAL STOCK AND SALE YARD,

Corner Market and 9th Sts., San Francisco.

HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN. Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

## ST. DAVID'S.

A FIRST-CLASS LODGING HOUSE.

CONTAINS 113 ROOMS.

715 Edward St., near Third, San Francisco.

This house is especially designed as a comfortable home for gentlemen and ladies visiting the city from the interior. No dark rooms. Gas and running water in each room. The floors are covered with body Brussels carpet, and all of the furniture is made of solid black walnut. Each bed has a spring mattress, with an additional hair top mattress, making them the most luxurious and healthy beds in the world. Ladies wishing to cook for themselves or families, are allowed the free use of large public kitchen and dining room, with dishes. Servant wash the dishes and keep up a constant fire from 6 A. M. to 10 P. M. Hot and cold baths, a large parlor and reading room containing a Grand Piano—all free to guests. Price single rooms per night, 50 cts.; per week, from \$2.50 upwards.

**R. HUGHES, Proprietor.**

At Market Street Ferry, take Omnibus line of street cars to corner Third and Howard.

## SEND FOR THE

\$1.50

## Homœopathic Medicine Case.

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address **BOERICKE & TAFEL,** Homœopathic Pharmacy, San Francisco.

## A Call to Grangers and Farmers.

HAY GRAIN, HORSES and CATTLE.

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address **S. H. DEPUY,** Nos. 11 and 13 Elkome St., San Francisco.



Do not begin your Singing Classes before  
examining L. O. EMERSON'S  
New Book

## THE VOICE OF WORSHIP.

While containing a large and valuable collection of Church Music in the form of Tunes and Anthems, it is perfectly fitted for the Singing School and Convention by the large number of Songs, Duets, Glee, etc., and its well made Elementary Course.

Price, \$9.00 per dozen. Specimen copies mailed for \$1.00.

Send for Circulars and Catalogues, with full list of standard Singing School Books.

The new 50 cts. edition of Pinafore (complete), sells finely, and Fatinitza (\$2.00), Sorcerer (\$1.00), Trial by Jury (50 cts.) are in constant demand.

### EMERSON'S VOCAL METHOD, by L. O.

EMERSON, (\$1.50) is a valuable new book for Voice-Training, containing all the essentials of study, plenty of exercises, and plain explanations, and costing much less than the larger works on the same subject.

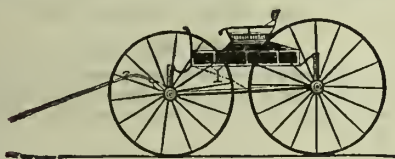
Subscribe now for the MUSICAL RECORD, and receive weekly all the news, and plenty of good music, for \$2.00 per year.

In press, WHITE ROBES, a charming new Sunday School Song Book.

OLIVER DITSON & CO., BOSTON.

C. H. Ditson & Co., 843 Broadway, N. Y.

## H. J. HASKELL,



MANUFACTURER OF

CARRIAGES,  
BUGGIES,

— AND —

SPRING WAGONS,

At the Lowest Rates.

Corner of Alameda and White Streets,  
SAN JOSE, CAL.

### THE WILSON ADJUSTABLE CHAIR,

With 30 Changes of Position.

Patented in the United States and Foreign Countries.  
BEST CHAIR IN THE WORLD.

Parlor, Combining  
LIBRARY, Beauty,  
Invalid Chair, Lightness,  
Rocker, Strength,  
BED or Simplicity  
LOUNGE, and  
Comfort.



READING POSITION.

Same Chair in Cane Seating, very desirable for summer. Manufactured of the best of wrought iron and rivets. Castors made purposely for the Chair. Everything to an exact science. **WILL LAST A LIFE-TIME.**

Has been awarded Medals, Prizes and Diplomas for its superiority and merit wherever it has been exhibited. Orders by mail promptly attended to. Goods shipped to any address. C. O. D. Send for Illustrated Circular.

Address the WILSON ADJUSTABLE CHAIR MFG CO.,  
535 Washington St., Boston

J. P. JONES. J. THOMPSON.

JONES & THOMPSON.

Wholesale and Retail Dealers in

Hay, Grain and Feed.

Also, Store and Sell on Commission at  
Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,  
1535 Mission St., San Francisco.

M. COOKE. R. J. COOKE

### PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,

AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOK & GREGORY.

## Week's Grape, Fruit and Flower Picker.

SIZE NO. 1.



Valentine's Patent, Aug. 1, 1865

any kind, it is an invaluable assistant. Sent by mail on receipt of \$1.25.

These cuts represent one of the most useful articles of its kind yet invented, and supplies a want that has long been felt. Every one engaged in picking fruit knows the difficulty of detaching the fruit from the branch, and depositing it in the basket or other receptacle for receiving it, without bruising the fruit, and particularly with grapes, unless very great care is exercised, each bunch will be more or less injured. The tool is a pair of shears arranged with an elastic holdfast that cuts the stem and holds it, so that the fruit can be deposited in the receptacle for receiving it, without touching it with the hands.

It will take the smallest cherry, or hold a bunch of grapes weighing five pounds.

For PICKING ORANGES, where the branches are full of thorns, it will save many a hard word.

FOR LARGE PEARS AND CHOICE FRUIT OF

## FLOWER PICKER.

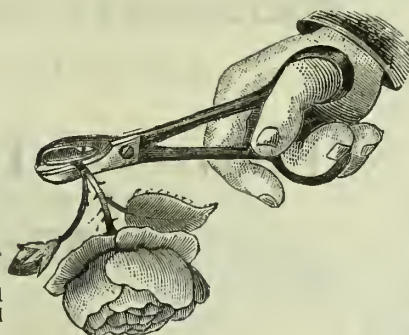
THE NO. 2, OR SMALLEST SIZE,

Is Particularly Adapted for

FLOWERS,

And will be found an invaluable assistant in the Garden or Hot-house.

THEY ARE MADE OF THE BEST MATERIAL, and finished in a workmanlike manner. Sent by mail on receipt of \$1.00.



FOR SALE BY

**Dunham, Carrigan & Co.,**  
SAN FRANCISCO.

— OFFICE OF THE —

## BLACK POINT PACKING AND SLAUGHTER HOUSE.

MERRY, FAULL & CO., Proprietors.

### TO OWNERS OF LIVE STOCK!

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

### SQUARE DEAL and FULL MARKET PRICES

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices.

Please address our

Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.

## A BARCAIN IN BERKSHIRES.

The undersigned offers for sale for the next 30 days a limited number of Pure Bred Berkshires, aged from 3 to 18 months. These pigs are all bred by myself from stock imported from some of the most noted breeders in the United States, and include several Boars fit for service, and a few choice Sows in farrow, to imported Boars. These pigs are not calls, but the choice pigs of their respective litters.



Hesick, Sacramento; W. C. HOPPING, P. M., Sacramento.

PRICE LOW FOR CASH.

A perfect and complete pedigree, and a written guarantee they are as represented sent with each animal sold. Correspondence solicited. Among purchases of my stock are the following gentlemen well known as men of careful discrimination: Dr. G. A. SHURTLEFF, Superintendent State Insane Asylum; J. R. I. TAGGART, Oakland; J. D. SMITH, Prof. Livermore College; L. E. STANFORD, by R. H. COVEY, Col. PETER SANK, San Francisco; L. U. SUPPER, President S. J. V. Ag. Society; W. HESICK, Sacramento; W. C. HOPPING, P. M., Sacramento. For further particulars address

ALFRED PARKER,

Bellota, San Joaquin Co., Cal.

## MISSION ROCK DOCK AND GRAIN WAREHOUSES.

SAN FRANCISCO, CAL.

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

GRAIN consigned to us by water insured in open policy at Special Rates. Wheat shipped by railroads via Stockton, care of the CALIFORNIA STEAM NAVIGATION CO. will be received by them at Stockton and delivered at Mission Rock Warehouse at same rate of freight as to Oakland Wharf. Freight paid, Fire Insurance and Loans effected and proceeds forwarded free of commission. Money advanced at bottom rates, interest payable at end of loan. Fire Insurance 1% per annum. Short Rates of Storage—First month, 30 cents per ton, or 40 cents per ton if delivered. Each month thereafter 20 cents per ton. Weighing in, free. Weighing out, 10 cents per ton.

CHAS. H. SINCLAIR, Superintendent,

Or to the California Dry Dock Co., Office, No. 318 California Street, San Francisco.

Dewey & Co. { 202 San- } Patent Ag'ts | Engraving done at this office.  
some St.



Pyrethrum Cinerariae Folium—A California Production.

THE MOST WONDERFUL DISCOVERY OF THE NINETEENTH CENTURY.

This wonderful Insect Powder will exterminate Flies, Weevils, Caterpillars, Mosquitoes, Midges, Crickets, Cockroaches, Spiders, Tarantulas, Scorpions, Ants, Hawk-bugs, Phylloxera, Plant Lice, Moths, Beetles, Grasshoppers, Locusts, Bed-bugs, Fleas, and every species of Insects.

Remember that none is genuine unless my Trade-Mark is attached to every package.

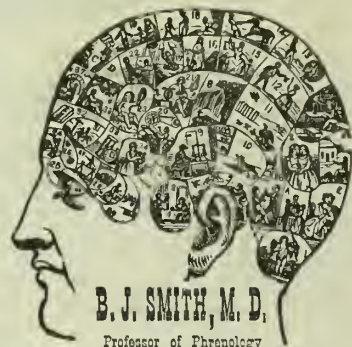
\$100 WILL BE PAID IF IT FAILS TO KILL ANY INSECT.

Endorsed by Prof. E. W. Hilgard, of the University of California, and by Prof. C. V. Riley, Chief Entomological Commissioner at Washington, D. C., and pronounced superior to any imported article, and perfectly harmless to man and beast.

G. N. MILCO.

Patentee and Sole Manufacturer, Stockton, Cal.

CHARLES LANGLEY & CO., Wholesale Druggists, Sole Agents, S. F.



B. J. SMITH, M. D.  
Professor of Phrenology

## MENTAL HYGIENE.

Proprietor of the Hygienic Medical and Phrenological Institute, 633 California Street, above Kearny.

This Institute has of late been entirely re-fitted, and is now far more healthful and conveniently arranged for the reception of patients and boarders than ever before, and by combining medical hygiene with the various Water Cure treatments and the most powerful Electrized Horseshoe Magnet in the world, claims to cure speedily and permanently all forms of acute or chronic nervous derangements, Brain, Spinal and Heart diseases, St. Vitus Dance, Palsy, Epilepsy and all Rheumatic, Liver and Kidney troubles. The institution has for the past 20 years made a specialty of treating all forms of weaknesses and diseases peculiar to males and females. By the use of hygienic remedies and electro-motopathy the worst forms of impotency and seminal weakness in males and sterility in females are speedily and permanently overcome. Hygienic board, with or without rooms. Terms moderate. Electro-therm, Russo-Turkish and Medicated Baths given daily. Mrs. Dr. Smith as Matron has charge of the female bathing department.

Dr. SMITH has practiced Phrenology the past 30 years, and during the last 20 years has been constantly using the science connected with Physiognomy, in examining or diagnosing disease in this city, and claims to have made discoveries in the SCIENCE OF PHRENOLOGY that enables him, by an examination of the head, even blindfolded, to determine the disease to which the person is constitutionally subject, or whether the disease at the time afflicting the person, is the result of accident or hereditary weakness; whether CONSUMPTIVE, DYSPPEPTIC, RHEUMATIC, APOPLECTIC, NEURALGIC, LEUCORRHEAL, or SEMINAL. Especially does the form of the head indicate the strength of the uterine, genital or reproductive system. The head is also an index of the natural strength of the lungs, heart, stomach, liver, kidneys, spleen, back or vertebra, and it determines the power of the system in warding off and overcoming disease of all kinds.

Ladies or gentlemen, desirous of obtaining a thorough and correct Phrenological examinations with Fowler and Wells' charts, will meet with a respectful reception at his consulting rooms. Parties can depend upon a reliable delineation of the character of their intimate male or female friends, by presenting a clearly defined photograph.

Phrenological or Physiognomical examinations without charts, \$1.50; with charts, from \$2 to \$3.

### INVITATION TO INVALIDS

And all persons who in any way out of health, who desire to know the nature and causes of their disease, may avail themselves of an examination through phrenology in regard to health free of charge, between the hours of 9 A. M. and 8 P. M. Sundays from 9 A. M. to 12 M.

## PLEASANT SUMMER READING.

THE NEW PENELOPE

— AND —

Stories of California Life.

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. For sale by

A. L. BANCROFT & CO.

PRICE, \$2 00.

## Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.



## Commission Merchants.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

BRYANT & COOK,

Commission Merchants,

AND DEALERS IN

GRAIN, FLOUR, ETC.

No. 8 Davis St., near Market, San Francisco.

CHARLES NAUMAN.

FRANK NAUMAN.

C. & F. NAUMAN & CO.,

Wholesale Commission Merchants

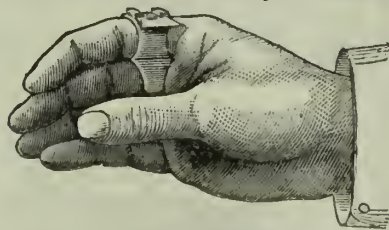
—AND DEALERS IN—

GRAIN, POTATOES, FRUIT, BUTTER, POULTRY, EGGS, GAME, ETC.

227 & 229 Washington St., San Francisco.

Consignments Solicited.

## The California Grape Picker.



PATENT APPLIED FOR.

In offering this article to the Wine and Raisin Growers of California, we call your attention to some of the important advantages over the ordinary knife used heretofore in picking Grapes, and some of the principal reasons why every Vineyardist should use it.

1st.—A man can pick twice or three times as many Grapes with it in a day as he can with a Knife. 2d.—It can be used with both hands at the same time. 3d.—Your Knife never gets lost and is always ready for use when needed. 4th.—You have the use of your hands to handle basket or tray, and the picker is no incumbrance. 5th.—It is made entirely of metal, the knife of cast steel, tempered in oil, and easily sharpened, and not liable to get out of order. 6th.—No Grape Grower can afford to be without it, as it combines simplicity, durability, economy, convenience and cheapness.

Price, \$1 each, \$4 per dozen. Agents wanted in every county in the State. For particulars apply to JAS. L. FINK, Box 1267, San Francisco. Gen'l Agt. for U. S. and Europe.

R. J. TRUMBULL & CO.,

SUCCESSORS TO

R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock

EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

\*—Guide to the Vegetable and Flower Garden, will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL & CO.,

419 and 421 Sansome Street, S. F.

## IMPORTANT INVENTION.

—FOR THE—

## Grape Growers of California.

From a friend in southern Russia, I came in possession of a process to preserve Grapes in a fresh state for a year and longer. The high importance of this invention I do not need to explain. I am willing to part with it, and ask interested parties to write for particulars.

R. WEINHOLD,

Florist and Nurseryman,

Los Angeles, Box 303.

## The Boss Pruner.

Patented Jan. 8, 1878.

ENTIRELY NEW!

Works on a cog principle. Smallest size cuts one inch, and largest size two inches in diameter. Has been thoroughly tested, and given perfect satisfaction. Sold by

GEORGE LARKIN,

Newcastle, Placer County, Cal.

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 120 Sutter St., S. F.



SOLE PROPRIETORS AND MANUFACTURERS

—OF THE—

## Celebrated Detrick "E W" 22x36 Grain Bag.

CALCUTTA, DUNDEE AND PACIFIC JUTE HAND-SEWED BAGS always on hand. OUR No. 1, No. 2 and No. 3 SECOND-HAND GRAIN BAGS selected and graded with care.

3, 4 and 5-ply for Grain Bags, 6 and 8-ply for Potato Gunnies, 3-ply EXTRA FINE for Flour Bags, made expressly for our trade and QUALITY GUARANTEED.

FLOUR BAGS Printed to Order WITHOUT EXTRA CHARGE. POTATO GUNNIES, Wool, Bean, Ore and Salt and Seamless Cotton Bags.

## Tents, Awnings and Hydraulic Hose.

ORDERS PROMPTLY FILLED AT LOWEST MARKET RATES.

119, 121 and 123 Clay St., and 118 and 120 Commercial St., San Francisco.

## PATRONIZE HOME INDUSTRY!

BEAUREGARD'S

PATENT

## Channel Iron Harrow.

"THE FARMERS' FRIEND."

This Harrow is the most complete implement of the kind ever brought before the farmers of the Pacific Coast. It combines Strength, Lightness and Durability, and will last a lifetime. Every Farmer will need but to see one to be convinced that it cannot be surpassed by any other Harrow in the market.

Fig. 2.

Fig. 1.

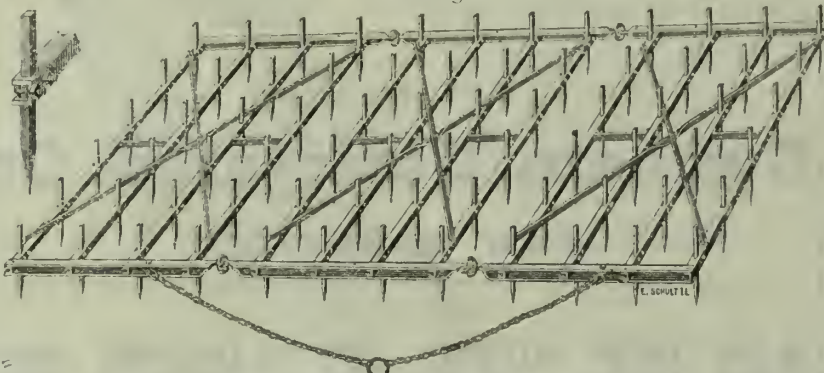


Fig. 3.

In the above engraving, Fig. 1, represents the "Farmers' Friend Harrow," made in three independent sections, with 21 steel teeth to each section. The sections are so hinged together so that they can accommodate themselves to the unevenness of the ground, and yet preserve the parallelism of the bars and relative position of the teeth. Each section can be unhinged by raising one section vertically, in which position the hinges easily separate from each other.

The chief advantage of my improved Harrow consists in the manner in which the teeth pass through the flanges and are secured to the bars. Fig. 2 represents a section of channel iron placed so that the open portion of the channel is on one side with the teeth passed through the two flanges and laying close to the bottom, in which two holes are made, one on each side of the tooth. The tooth is strapped to the bottom of the channel iron by means of a staple bolt, the two extremities of which pass through the holes and are secured to the outside by nuts as shown. In this manner, when the teeth become worn, they can be let down by loosening the nuts, or removed for shipment or sharpening, and can be replaced by any Farmer or ordinary workman. By strapping the teeth to the bottom of the channel iron, I obviate the difficulty heretofore encountered in metal harrows, viz.: that of keeping the teeth tight. I make these Harrows of all number of teeth, in two, three and four independent sections, which can be used either separately or together. Farmers will find it to their advantage to examine my Harrow before buying.

I also make an improved harrow-tooth, shown at Fig. 3 and 4, which is lighter than the ordinary square tooth, and fully as strong. Its great advantage is, that it will always keep its point sharp. This tooth is made of the same size as the ordinary square tooth, and has longitudinal grooves on its two wide sides; the point of the tooth can never present a larger surface than the thickness between the two grooves. The blunting of the tooth will therefore be greatly obviated. I will furnish my Improved Channel Iron Harrow, "The Farmers' Friend," with either the new style of grooved teeth or with the ordinary square tooth. Both kind of teeth are made of the best quality of steel, and manufactured expressly for this Harrow. Farmers will find that these teeth will wear better and last longer than any other harrow tooth now in use.

Farmers of the Pacific Coast, encourage home industry; buy the "Farmers' Friend Harrow," which is made entirely of material manufactured on the Pacific Coast. By giving me your patronage, you will help to develop the iron industry here, and secure a Harrow superior to any imported. My Improved Harrow is protected by Letters Patent of the United States. Farmers are hereby cautioned not to buy any kind of metal harrow made of channel iron, having the teeth pass through the two flanges and secured as shown, also having grooved teeth as above described, as such are infringements of my patent rights. The "Farmers' Friend" will be on exhibition at the Mechanics' Institute Fair, in San Francisco, and at all the Agricultural Fairs on the Pacific Coast.

## J. SMITH & R. HOPPE,

Manufacturers and General Agents for the Pacific Coast,

318 Pine Street, Nearly opposite San Francisco Stock Exchange.

Or address N. BEAUREGARD, Patentee, San Francisco, Cal.

AGENTS WANTED IN EVERY COUNTY.

## HOLLY & MAGOON'S CULTIVATOR.

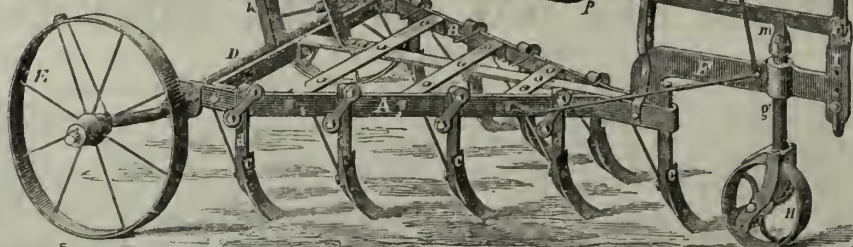
Manufactured by Holly & Magoon, Stony Point, and E. J. Holly, Lakeville, Sonoma Co.

Jones' Patent, May

29th, 1877.

Holly & Jones' Pat-

ent April 8th, 1879.



For further particulars address the Manufacturers, or M. C. HAWLEY & CO., Agents, San Francisco and Sacramento, Cal.

## Baling Fencing Telegraph Telephone Galvanized WIRE

## Barbed Fence Wire.

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the Trademark.



A. S. HALLIDIE

Wire Mills.

Office, No. 6 California St.

SAN FRANCISCO.

## WIRE ROPE and CORDAGE

Of every kind on hand or Made to Order.

## FARMS FOR SALE.

IN THE FERTILE AND HEALTHFUL

San Pasqual Valley,

San Diego County, Cal.

TITLES PERFECT.

The owner (an architect) having recovered his health by a residence of four years in this Valley, is desirous of returning to the city, and so offers the following farms for sale

At a Great Sacrifice:

The Home Farm of 200 acres is well fenced and subdivided. There is beside 600 yards of movable panels,

50 Acres in Alfalfa.

Yielding five and six crops a year. There is an abundance of water on the place for stock, besides running water for garden, orchard, etc., and a one-sixth interest in the S. P. V. Ditch Co. House 23x36, enclosed in a lot 200x180, barn and stable, 54x35, two sheds 24x14 and 18x14, smoke-house, 20x14, with an adobe cellar under it, and every convenience as regards large tanks, etc., for making bacon. The implements are of the best, nearly all new, and in good order. They consist of two farm wagons, 10 foot header, header beds, hay rack, mower, gang plow, single do. harrow, 10-foot seeder and cultivator, small do. sulky rake, two sets of strong harness, together with a lot of other tools, hay, grain seed, etc.

Price for the whole, \$4,000; one-half cash, balance on time at 1 per cent.

For Sale Also,

A farm under cultivation of 116 acres, adjoining the above, suitable for grain, corn or alfalfa, with a one-sixth interest in the Ditch Co., and about one and one-quarter miles of fencing, no other improvements. Price, \$1,200; one-third cash, balance on easy terms.

For Sale Also,

A farm of 120 acres, one-quarter mile from the above ranches, mostly damp land, suitable for a nursery, alfalfa, corn, etc. There is a small house, etc., and a ditch running along its upper side. Price, \$900; one-third cash, balance on easy terms.

The neighborhood is exceedingly healthful and growing. Two schools are in the valley, one within one-quarter mile, and the postoffice within one mile, neighbors with families are all round.

My stock consists of superior brood mares, colts, hogs, etc., and they may be taken at a valuation if wanted.

For particulars apply to W. B. STEWART, San Pasqual Valley, San Diego Co. Cal.

## CHEAPER YET!

## Tension Sewing Machines!

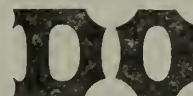
A large number of nearly new genuine SINGER, WHEELER & WILSON, HOWE, WOOD, WILSON, GROVER & BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

NO TENSION MACHINE.

Wilcox & Gibbs' S. M. Co.,

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.



DO NOT FAIL to send for our NEW PRICE LIST. More complete than ever. Contains descriptions of every thing required for personal or family use, with over 1000 illustrations. Send nine cents for it. (Stamps will do.) We sell all goods at wholesale prices in quantities to suit the purchaser. The only institution in America who make this their special business. Address, MONTGOMERY WARD & CO., 227 & 229 Wabash Ave., Chicago, Ill.

60 Chromo, perforated, Snowflake & Lace cards, name on all 10c. Game Authors, 15c. Lyman & Co., Clintonville, Ct.

60 Elegant Perfumed Cards, Chromo, Motto, Lily, Etc., 15c. Gift with each pack. H. M. SMITH, Clintonville, Ct.



# PACIFIC RURAL PRESS

Volume XVIII.]

SAN FRANCISCO, SATURDAY, SEPTEMBER 20, 1879.

Number 12.

## The Cuthbert Raspberry.

As is our custom, we continue to present our readers with engravings and descriptions of the new small fruits which win favor among Eastern growers, in order that all may keep apace with the progress which is being made by the leading propagators of new varieties.

The engraving on this page shows a characteristic fruit cluster of the Cuthbert raspberry, which is now receiving many encomiums as a market variety, and is placed at the head of the upright-bearing sorts. Our engraving is from fruit grown by E. P. Roe, Cornwall-on-the-Hudson, New York, who is already known to our readers as a small fruit culturist of high standing. Mr. Roe gives this berry the place of honor in his catalogue for 1879, a pamphlet which all desirous of new varieties should consult. Mr. Roe has also collected from all sources items of the qualities of the Cuthbert, from which we shall draw points for a description of the plant and fruit. He says: I have watched the Cuthbert very closely. I visited six and eight fields in bearing, and saw it growing under different conditions, and I can now best express my opinion by saying, that if I had the land I would set out fifty acres of this variety. It is the best market raspberry I have ever seen—as firm as the Brandywine, a third larger, and almost doubly productive. It can be shipped by rail like a Wilson strawberry. It does comparatively well on light, thin soils—better than any other kind that I have seen—but on moist, loamy land, its yield is simply enormous. It is such a strong grower after once becoming rooted in the soil that it has little need of fertilizers. On too rich land it would make too many and large canes. It has been a little slow in starting with me, but when it once gets a hold upon the soil its vigor is remarkable. One of its best characteristics is its power to endure the hot sun unharmed, and I think it will prove better adapted to the South than any other good raspberry. It has become a well recognized fact that varieties containing much foreign blood will not thrive at the South. But as far as I can learn or judge the Cuthbert will thrive anywhere. I have seen it growing in a fruit garden in Newburg, N. Y., where I had a chance of comparing it with nearly all the leading foreign and native kinds, and it surpassed them all in vigor of growth, and the proprietor affirms in productiveness also. I also saw it in N. J. sand, and in a large field where it had precisely the same treatment as almost all the raspberries there are in cultivation, the Cuthbert could be distinguished as far as the field could be seen. It so far exceeded everything else as to excite my astonishment, but I was informed that only the native vigor of the variety made the difference, and that the fruit was as fine as the canes. This raspberry originated near N. Y. city, in the garden of a gentleman by the name of Cuthbert, and was by him given to a well-known horticulturist for more complete trial.

The following points are derived from different growers, as characteristic of the berry and plant: Berry large (specimens being found that measured three and one-fourth inches round), conical, deep, rich crimson. Added to this, it is of excellent quality, being the only firm red raspberry we have yet seen that was not deficient in this respect. It is also a tall, vigorous grower, very prolific, and remains in fruit for a long while, beginning to ripen moderately early, and holding out until all others are gone. Chas. Downing says of the Cuthbert: "I consider it the most promising market raspberry before the public as far as yet tested. The fruit is large and very firm, and the plants, as I have seen them, are vigorous growers and exceedingly productive." Peter Henderson says: "The Cuthbert raspberry, as far as I am able to judge from the specimens shown me, will prove a very valuable acquisition. It is unusually firm, of excellent flavor, and knowing it to have been in cultivation for the last five years, I can say that it is entirely hardy."

We are not aware whether it has been brought to this State or not. If any of our readers have fruited it, we shall be glad to have their opinions of the fruit and plant for publication, as tests under California conditions are especially valuable to California growers.

THE GROWTH OF CALIFORNIA.—The anniversary of the admission of California into the sisterhood of States occurred during the progress of the State fair last week. The great achievements which have been attained in agriculture and allied industries, as they were shadowed by

An intimation of the progress of the State in legitimate mining is also pertinent to the occasion, and some interesting statements on this subject, taken from the *Mining and Scientific Press*, may be found in another column. It is true that our beloved commonwealth is advancing finely into the estate of manhood, and merits



THE CUTHBERT RASPBERRY—A NEW MARKET VARIETY.

the industrial displays at the fair, may therefore be taken as fitting testimony of growth of the State and as themes for contemplation on the State's birthday. At the fair there were also appropriate words spoken of California's sturdy advancement. On one of the pages of this issue may be found the opening address of Mr. La Rue, President of the State Board of Agriculture, and next week we hope to print the annual address delivered by Mr. Webster.

the wisest and most devoted efforts from the present generation to see to it that the advancement is truly and evenly made. There are still problems to be met and solved. A truer relation between the different parts of the body politic is yet to be secured, but it may be safely trusted to time and the devotion of true citizens to right the wrongs, and thus lay the foundations of an enduring and prosperous future.

## Hungry Europe.

Our wheat is going aboard ship quite rapidly, and the market has a good tone, although a material advance is still in the hope of many growers. It would be pleasant, indeed, to see the price approach a little nearer the end of the second dollar, but what is in the future no one can tell. There is, however, this surty of enduring spirit in the trade, and that is the fact that a good part of the American surplus must be distributed to the continent, and this will make our English customers pay more for the immense quantity which they will require from us. As this is an important question we cannot do better than compile such facts as come to us this week from abroad concerning the wheat harvest in the various countries of the continent. A French grain circular says that from "all reports which have thus far come in, it seems that, with some few local exceptions, the harvest of several districts, which include no less than 40 departments, must be designated as bad, as inferior to that of last year in quantity, though perhaps somewhat superior in quality. It is of no use whatever to blink at the fact that a good, or even an average harvest, is not to be expected. Undoubtedly we are on the high road to a new season of extensive importations."

It is reported that not a single country in the continent announces a good harvest. Hungary, which generally exports from 6,000,000 to 8,000,000 hectoliters, has nothing whatever to spare this year. Italy and Switzerland must import more this year than usual. In fact, throughout Western Europe generally there is a deficiency of wheat. Germany gives fair promise and Denmark expects an average yield, but those countries are of little account except to fill the mouths of their own citizens. Southern Russia will cut a fair figure in exports, as her harvest promises a full average yield, but Russia has long since fallen far behind the United States as a supply region. To this country, therefore, European consumers are now looking for bread material, and the French take this view of the situation: "America has already sent us, this season, some 60,000,000 hectoliters, partly, of course, of last year's harvest, but to some extent of considerably older date. Can she supply us again this year, with nothing but the current harvest's stock on hand? The trade seems to take it for granted that she can, but we are by no means sure that such blind confidence is justified by facts."

Whether all that the Europeans expect of us in the matter of breadstuffs will be realized or not it is hard to tell thus early. The wheat harvest has, however, been quite satisfactory as a rule in the prairie States, and our Eastern brethren are quite jubilant over the inward flow of foreign gold which has set in. There is a better feeling in the East in agriculture, in trade and in manufactures than has been experienced for many years, and a good part of the confidence arises from the anticipated large sale of the hountiful crops which have been gathered. We believe, however, that there is no amount of wheat which can be used to depress prices, and it is a fact that the spring exports cleared out about all the reserves. While, therefore, there is reason to expect that we shall be able to sell Europe a good year's board, there will be no departure from established boarding-house rules and no supply of good things sufficient to cloy their appetites. We look for a year of good wheat prices—that is, prices which will prove fairly remunerative to all who have secured good returns from the land.

HUNTERS' FIRES.—Ruinous fires are still reported from different parts of the State, and thousands of dollars' worth of cord-wood, dry feed, fences and other property are being destroyed. These fires are often the result of the visits of careless hunters, who invade private enclosures without permission, and thus repay the owners. It is difficult to trace the fire to its cause and the farmer therefore has no remedy. Does it not commend itself to the conscience of reasonable men to see to it that no act of theirs injures the property of a fellow man in this way.



## HORTICULTURE.

### The Best Fruits to Cultivate.

EDITORS PRESS:—Under the above caption M. P. Owen, of Sequel, contributes an article in your issue of September 6th, in which he recommends fruit growers to raise Red Astracan and Early Harvest for early apples, the Baldwin, Esopus Spitzenberg, and Yellow Newtown Pippin as the best varieties of winter apples, and for pears the Winter Nelis and Easter Beurre.

It may be said of the above list that they are all fine varieties of fruit, and should be found in every farmer's orchard in sufficient quantity to supply his own family. But, before any man puts out these or any other varieties of apples or pears for marketing, let him give good heed to these two questions:

First. Are they the best now known? In order to make money at fruit raising we must have not only good varieties, but the very best; and not merely the best that were known five years ago, but the very best that are known now. Many orchard men have told me repeatedly within the last five years that the Yellow Newtown Pippin is the best winter apple known in California, and I cannot doubt that it has so ranked, and perhaps does still. But I must say that I never admired the apple. It is too hard for eating, and too flat and insipid for cooking. It is not even a first-class keeping apple. It has held its proud pre-eminence, not because it had any rare merit within itself, but because it was the best we could do. But we can now do better, and so much better that no farmer can afford to have more than one Newtown Pippin tree on his farm. The Cook Seedling, although a new apple, has been thoroughly tested in the coast counties, and is undoubtedly the finest winter apple ever raised in our State. In size it compares well with the Newtown; in shape it is superior, in color and texture it is far superior, while in flavor and keeping quality it fairly drives the other, and all others, from the field. I do not know what this new apple will do elsewhere, but in Sonoma, where it was developed, it has no equal. It can be ordered from the nurseries, and fruit men should not fail to get it. No more Newtown Pippins for me. No man will take them as a gift when he knows the Cook Seedling, and can get them for a dollar a box.

Second. Before planting any variety of fruit let it be asked, can it be profitably grown in my locality? The great difference in soil and climate in places situated very near together in California has caused fruit growers to make many mistakes. Some fruits that grow to perfection in one county are quite inferior in an adjacent county; and again, some fruits that grow equally well in both counties, pay well in one and not at all in the other, by reason of the great difference in the time of ripening. For instance, the Red Astracan and Early Harvest may be set down as failures in the coast region as a market fruit. For while they both do well with us, they are always two weeks behind at Sacramento river, the market is glutted with them before we can ship a box, and consequently our fruit growers have found it more profitable to let these two varieties rot on the ground than to ship them to San Francisco.

As to pears, the Winter Nelis is the best, provided you can raise it. But settle that question before you plant many trees. In Napa it does well; in Sonoma it is unreliable; while in Petaluma it has often proved a total failure. Probably the difficulty in Sonoma is a light, gravelly soil, with water too near the surface; while Petaluma has too much raw air, chilling wind and fog, which blights the fruit in the blossom or soon after it has set.

And now I expect to see protests sent in from both these places, by men who raise fine Winter Nelis pears, and who will declare that my statements are a libel on their climate. But I write only in the interests of fruit growers, and will simply add, "Prove all things; hold fast that which is good," and profit by other men's mistakes. W. C. D.

Napa, Cal., September 10th.

### A Frugivorous Colony.

An association of spiritualists, calling themselves "Societas Fraterna," has settled upon the Cajon Rancho, in southern California. Some one writes to the Anaheim Gazette that he has lately been to see them, and gives an extended and interesting account of his visit. Their place is near the foothills, free from malaria, unsurpassed in climate, and surrounded by grand and beautiful scenery. Amid such quiet loveliness of nature, and with agreeable, harmonious environments, "this society of mediums ought to receive inspirations of a superior order." Their mode of living, system of diet, and freedom from corroding cares are also conducive to spiritual growth and progress. They are refined, intelligent, and ready to give a reason for the faith that is in them.

The visitor stayed to dinner and enjoyed it highly. The bill of fare was as follows: First, muskmelon, utmeg melon and cocoanut melon cut in strips and served on china plates; then, grapes, apples, pears, watermelon, cucumbers,

tomatoes, and sweet corn on the ear, uncooked. Dessert—raisins, peanuts, walnuts, etc. All except the dessert was fresh from the garden, and presented in so neat and tasteful style as to whet the appetite of even the grossest flesh-eater.

These people abjure animal food of every sort, and subsist upon the various fruits in their season, together with the cereals in their natural state. They declare that they are healthier and harder for their peculiar way of living, and their children are models of health, intelligence and beauty.

After spending several hours with them, the writer came away laden with food for thought and impressed with the beauty of their ideal; which, however impractical it now appears, may perhaps be realized in "the good time coming."

### Cherry and Grapes.

At the late meeting of Grangers at Martinez the discussion turned upon horticulture, and from the report thereof in the Patron we take the following points:

Mr. Lowelling, of St. Helena, gave an interesting description of his mode of treating the cherry tree. He considered the best time to prune the cherry as well as all pitted fruit to be in September or immediately after the fruit was taken from the tree; he commenced to head back his trees when about two feet high; he allows them to attain the height of three or four feet, keeping a broad head, so as to shade the body of the tree. When bearing, the trees are thinned out and half of the new growth cut off. This course he pursued with all pitted fruit. He considers sandy loam or slightly clayey soil, in rather cool climate, the best for the cherry.

Mrs. Jeanne C. Carr asked him which he considered the best six varieties of cherries for general cultivation? Mr. Lowelling considered the Black Tartarian as standing at the head of the list, then the Royal Ann, Grafferon, Black Republican, Pontiac and Black Eagle. For canning he considered the Royal Ann superior to any other variety known. Mrs. Carr described a cherry orchard she had visited near San Jose, the trees of which were so pruned as nearly to touch the ground, every limb being heavily laden with fruit. I. C. Steele said that all fruit trees should be sheltered from the cold winds of the ocean. He then gave an interesting description of the climatic changes caused by the geographical structure of the earth's surface. These changes should be well considered before persons engage in the cultivation of fruits or even vegetables. The disappointment and failure of so many farmers in California where we have so many varieties of soil, and such a varied climate, was caused by a lack of knowledge of the particular qualities of the soil they propose to cultivate or the peculiarities of the climate. That because a farmer on one side of a hill can cultivate a certain kind of fruit or vegetable successfully, is no evidence that his neighbor living on the other side of a hill, and but a mile distant, can cultivate the same article with the same success. Hence the numerous disappointments we hear of among farmers living in close proximity to those who are successful. He believed that the farmers of California more than any State in the Union needed a thorough knowledge of the sciences connected with agriculture, and he looked forward to the future when those sciences would in a large measure be taught in our district schools.

H. M. La Rue, of Sacramento, gave a history of the early fruit culture in Sacramento valley, particularly of the White and Hollister orchard, situated on the American river, that became famous in the early history of the State some 27 or 28 years ago.

W. B. West, fruit culturist and nurseryman, of Stockton, in response to questions said, that last year, in pursuit of health and business, he had visited many of the famous vineyards in southern Europe, had studied their mode of cultivating grapes for wine, and their mode of handling their wines, and had become thoroughly impressed with the opinion that to-day California is making superior wine to most that is made in Europe; and when the consumers of that beverage will impartially decide on the intrinsic merits of California and foreign wines, without regard to where they were made, wine making in California will be a success. He was also in Malaga during the raisin-making season; and while California had reason to feel proud of her success in raisin making, she had much to learn. Our raisins compare favorably with what are called English layers, which are considered about the fourth or fifth rate raisins in Malaga. The vines in Malaga have not so great a tendency to make wood as here, being about the size of our three-year-old vines. In the valley only about one pound of grapes are permitted to mature on a vine; on the side hill five or six pounds to the vine is the ordinary yield. He considers the Muscatel as being the Malaga raisin grape. He was aware that many vineyardists in this State considered the white Muscat of Alexandria, and the Muscatel the same grape. From this opinion, however, he dissented. The wine interest of the State should be encouraged, and every effort should be used to make a better raisin. One way to accomplish this is not to allow the vine to mature more than one-fourth of the present crop we are in the habit of allowing our vines to mature. In Malaga they cure their raisins in the sun, cutting the grape from the vine when it is matured and laying it on the ground, turning them occasionally until they are cured.

Mr. Lowelling in answer to a question said he considered a sweet cherry as unfit for canning, and he presumed this was the cause of so many failures in attempting to can cherries. The Queen Anne for canning purposes, had given the best satisfaction.

Mr. J. F. Demming, of Vallejo, said the best way to protect trees from borers was to sew old sacks loosely around the bodies of the trees. This did not retard the growth of the tree, but prevented the sun from burning the bark, as it was at such points that the borer always commenced his work. The tap root question was thoroughly discussed and the conclusion reached that there was but little importance to be attached to that theory.

The question of how best to exterminate squirrels was called up, when Dr. C. Grattan gave a history of the various expedients that had been resorted to in San Joaquin county to exterminate them; at present, however, they are using the following preparation with the most gratifying results:

One ounce strychnine pulverized fine; one-half tea-cup of brown sugar, water sufficient to make a thick syrup; add to this 22 drops oil of Anise, 20 drops rhodium; mix all thoroughly; then wash seven quarts of wheat, drain off all the water, and while damp add all the other ingredients, when it will be in condition to use, by placing four or five kernels of wheat within two or three feet of the holes. Dr. Grattan considers immediately after the harvest the best time to kill them.

### California Fruit in the East.

The Boston Journal of Commerce has an excellent article on California fruit in the markets of the Hub, which contains so much of interest for our readers that we give it here entire: The shipment of fresh fruit from the luxurious orchards of California to Chicago, as a local distributing center, and even to some more easterly markets, has been an established success for several years. Instalments of this fruit have come to New York, but the Boston trade has received by this route such poor and contracted selections that they have not met with much favor. Last fall, however, for the first time to much amount, there were received here considerable direct shipments of the large and luscious grapes peculiar to the Golden State. The different varieties command full prices in comparison with foreign grapes, which they resemble in texture, and their shipment continues along into November. Last season they brought \$6 to \$7 a box of 40 pounds. To farther open up our market to California fruit, there are now coming forward here by direct shipments, several times a week, a limited amount of Bartlett pears and purple egg plums. The plums are packed three tiers in a box. The pears contain from 140 to 160 in a box, and sell at about the same figure as the plums. The fruit is packed one by one in white paper of a considerably thicker texture than that used about foreign lemons and oranges. The plums are richness itself, and the pears have the juiciness and flavor of the choicest Bartletts raised in our midst. The fruit comes through in generally prime order, and a little experience will determine just at what stage to pluck the pears so as to have them arrive in the best possible condition. At present the fruit comes from California in the regular fruit cars, but a little later in the season refrigerator cars may be used to prevent too rapid maturing. The time now occupied in the transit is nine to eleven days, which is very good dispatch. The shipments to which reference has been made, and which will be followed later by grapes, are from Porter Bros., among the very largest operators on the Pacific coast, who have been in the business for a decade of years. The receivers here are Fisher Bros. The demand at present is from the best class of the retail fruit trade, but is likely to extend to the leading hotels and restaurants.

There have been some attempts also in the past to forward peaches from California to this market, but without substantial success. The fruit is of large size and fine quality, but can hardly endure the long journey and arrive here in prime condition. The comparatively few hours' trip from the peninsula of Delaware and Maryland is about as strong a test as this tender fruit can stand.

California is destined to soon effect very materially our importation of raisins. The attention of packers there has of late been largely given to perfecting arrangements for curing raisins, and last year considerable quantities of that fruit were marketed throughout the country. A very good article was produced, in many instances comparing very favorably with Malaga fruit. The California fruit has been, in some cases, a little off in appearance, owing to a want of experience and skill in curing, but this difficulty, it is said, has now been overcome. In the past the heavy freights from the Pacific to the Atlantic have crippled this industry, to which the climate of California is so well adapted, despite the duty on the imported article. Freights now, however, have become so low that the home product can be sold advantageously in competition with the Spanish fruit—the improved quality helping to put it fully on a par.

Almond raising is also another industry in California which promises to be a great success. It was begun a few years ago, and although it has not attained considerable proportions yet, the progress thus far made leads to the belief that before many years the entire country may be supplied from that source.

## POULTRY YARD.

A GRIEVOUS CHICKEN PARASITE IN AUSTRALIA.—A writer for the Adelaide Observer gives the following account of a terrible tick, or louse. He says: One of the worst of the scourges during the past hot weather has been the parasite of which so many complaints have been made. This dreadful pest of an insect, which has the appetite of a vampire for blood, is an old enemy reappearing. It haunts the cracks and crannies of old wooden buildings, crevices in brickwork, or any dark sheltered spot by day, and comes out at night to feed on the drowsy fowls as they roost, leaving them spiritless after draining their blood. Fowls infested by them are often found squatted helplessly on the ground, completely powerless in the legs, as if paralyzed. The legs are limber at the joints, pale in color, and seem destitute of all strength. At the same time the birds' eyes are bright, their plumage glossy, and their general appearance healthy. When they arrive at the paralytic stage their recovery is apparently hopeless. In size, shape, and color it resembles the common house bug or those often found on grape bunches, and the parasite seems more prolific and difficult to cope with. It is covered with a reddish-brown, horny, granulated skin, and has eight legs with sharp, hooked points, with which it attaches itself to the skin and finally anchors itself into the flesh. The under part of the head is provided with three penetrating appliances close to the region of the mouth, and acting as suckers. The insect seems by its form peculiarly adapted for clinging tenaciously to the skin. In general conformation it agrees with the description of the *Acarus*, a genus of Arachnides, which are very numerous and of different sizes, this parasite in particular often attaining the size of a coffee bean.

SALT FOR POULTRY.—The question as to whether salt is injurious to poultry has often been mooted. To get at the true facts, I have been feeding salt to all my poultry, young and old alike, and closely watching the result. I have fed it in cold mash and in hot; in bran and everything else, all the spring and summer (so far) with the following result: The poultry will eat all kinds of salted food in preference to unsalted; they are better in general health; not a louse of any kind in young or old (the first year I have been able to say so), and they are all beginning to moult, many of them laying as though not moulting. Eggs are cheap now, and the hens will be ready for laying when the weather is cold and eggs scarce. This may or may not be the result of feeding salt largely to them, but I am compelled to believe this to be so, as are some other peculiarities. I have noticed one feature which may not be in favor of salt—the hens have seemed to be more persistently inclined to sit, it being very difficult to break off the inclination; they sit closer than usual. All seem voraciously fond of green food of any kind, and have eaten a large quantity of clover, grass, young corn, and other similar food. My observations lead me to the conclusion that salt is a needed condiment for all our poultry, and in all points is beneficial to them.

## THE FIELD.

### Egyptian Corn and Pop-Corn.

EDITORS PRESS:—Mr. Crosby, of Stanislaus county, informed me to-day that a Mr. Buckney, within five miles of Modesto, is now harvesting 100 acres of Egyptian corn, raised on summer-fallowed land, yielding 25 or 30 bushels to the acre. It is the white variety. Some 20 men are employed gathering the crop. Mr. Crosby intends to follow suit another season. He is in raptures about the beauty of the crop, raised without water on a sandy loam. It is certainly a feature in farming worthy of note. Last season the same parties raised 100 tons, and consider the corn for stock feeding superior to barley or oats, and for chicken-feed and poultry of all descriptions it has no superior. My half acre, for winter use, will soon be ready for harvesting, to be used entirely in the poultry yard. Suppose the farmers of the great plains met with a wheat failure, could they not plow their land early in spring, and plant a corn crop, ensuring success by having facts like the above to work upon? If it is good food for horse and fowl, why should it not be good for man, when made into flour? [It is good.—EBS. PRESS.] The time will come when this Egyptian corn will be appreciated much more than at present.

Speaking of corn—when Mr. Dewey and Mr. Ewer, publishers of the RURAL PRESS, were tourists to Yosemite, they left with me a few ears of pop-corn. Enough was saved to plant. The product is beyond precedent—seven ears is common to the single stem. The tassel is the most beautiful pink and white, the pink tassel predominating. No such corn was ever seen in this county. Can we grasp at the results of a small action, either for good or evil, Mr. Dewey will long be remembered for leaving a few seeds by the wayside. It is so in thought, word and deed, hence much sadness or gladness may be diffused thoughtlessly or otherwise.

Amidst all the crash of political contention, the RURAL comes weekly, freighted with the art of agriculture, peace and domestic economy. May its influence never be less. J. TAYLOR.

Mt. Pleasant, Tuolumne Co.



## THE STOCK YARD.

### Stock Quarantine in South Australia.

The governments of the Australian colonies have already set their foot upon a trade in thoroughbred cattle between this coast and the colonies, which might have been pursued to the great advantage of all concerned. It was the design of some of our breeders to exhibit their stock at the great Melbourne and Sydney exhibitions, but the enforcement of quarantine against healthy as well as diseased cattle, discouraged the effort. It is a demonstrable fact that the cattle of this State are freer from contagious diseases than those of any country of which we have reports. In fact, the dreaded diseases which destroy herds in Europe, and occasionally in the Eastern States, are unknown here. Nevertheless the rigid quarantine is enforced against all, instead of excepting the place where only cattle above suspicion of disease can be obtained. This is a great wrong to our breeders, and to Australian purchasers, who desire to improve their herds.

Our breeders may be interested to read the unreasonable conditions which are insisted upon by the government of South Australia. They do not meet the views of the colonists themselves, for the following description and comments on the "regulations" we quote from the *Adelaide Observer*, just received:

The rules have been framed in such a manner as to discourage the most ardent stock-fancier, and persons of ordinary means will find the importation of cattle under the conditions proposed to be out of the question. The truth obviously is that the Government desire to prevent the introduction of foreign stock. They have been compelled, by pressure from without, to depart from the policy which has prevailed of late years, and they have sought to render this action valueless by framing quarantine rules of an absurdly stringent character. The most rabid opponent of stock importation could scarcely have devised regulations more restrictive than those which the Government have approved. They not only impose conditions which in many cases will be impossible for importers to comply with, but they pile up precaution on precaution to an extent which clearly proves their desire to check and discountenance in every possible way the introduction of stock.

Those who peruse the regulations now issued will, we imagine, admit that their stringency passes all reasonable bounds. In the first place, persons desirous of importing cattle must, before landing the animals, give six weeks' notice to the Chief Inspector of Sheep. No animals may be landed at any other port than Port Adelaide, and before they can be landed there the importers will have to furnish three declarations relating to the state of the health of their stock. They must first produce one from the breeder or owner of the animal at the time of shipment that it was when shipped and had been for the preceding 60 days free from infection; that it had not during such 60 days been in contact with or feeding on the same land as any animal infected with disease; that it had not been conveyed to the port of shipment in any truck, cart, or vehicle; or, if it had been so conveyed, that such truck, cart, or other vehicle had, for the purpose of and before conveying such animal, been washed and disinfected. It is obvious that in many cases it will be difficult for the original owner of the stock to give so sweeping a guarantee. Next, a declaration must be procured from a veterinary surgeon, who is not only compelled to testify to the health of the animals belonging to any one importer, but of all those on board the vessel they are shipped by, whether for export or for the use of passengers or crew. Furthermore, the captain of the vessel will be called upon to declare that no disease of any kind has manifested itself in any animal during the voyage. When these conditions have been fulfilled the cattle will be inspected and washed or disinfected. The Inspector, moreover, has the power to compel an examination by a veterinary surgeon, to be appointed by the Inspector himself. After these ordeals the cattle may be landed, but their troubles are far from being at an end. It is not considered sufficient that they should be certified to have been in good health for two months before sailing and should have remained free from a disease during a voyage of about three months, besides being twice inspected and washed on arrival at Port Adelaide. They have next to undergo an indefinite term of quarantine at the pleasure of the Inspector. The sole limitation is that they shall not be kept in quarantine for a period of less than 90 days. If he chooses, the Inspector may keep them in seclusion at Wauraltie island for the rest of their existence; there is nothing in the regulations to prevent him from doing so. Moreover, whilst in quarantine the unfortunate animals are to be once more "washed, dipped, and disinfected," and before removal they will have to be again examined, should the Inspector wish it, by a veterinary surgeon. It would be instructive to learn from Mr. Valentine what cattle disease has ever been found to lie latent for five months. Certainly none possessing this property is commonly known. Yet, in addition to demanding a clean bill of health covering this period, it is ruled that the cattle shall further undergo a quarantine of at least

three months, to say nothing of the dipping and scourings and examinations to which they are to be subjected. It is scarcely likely after all the precautions taken that any diseased or infected animals will be shipped, and even should such be the case, it is in the highest degree improbable that disease will not manifest itself during the voyage. For this reason alone the present regulations are needlessly severe. By all means let declarations be required, and let a reasonable quarantine be insisted upon; but to make three months the minimum is passing the region of precaution into that of uncalled-for obstruction.

### Improved Refrigerating Apparatus.

The export of fresh meat from this country to Europe has led to the invention of a number of processes for keeping the meat cool during the voyage. The most simple, and, so far, the most successful process, consists in making an air-tight chamber in the steamer, pumping air by means of a fan and special engine, through a series of pipes packed in ice. The air is cooled to about 35° Fahr., and is deprived of its moisture by condensation in passing the pipes, and the meat is preserved perfectly so long as the supply of ice holds out and the fan is kept in motion. An improved process recently announced dispenses with the use of ice and accomplishes equally good results, with only a moderate expenditure of power. The new method is founded on the simple fact of the heating and cooling of air when compressed and allowed to expand. A meat chamber of any convenient shape and size is fitted up, and near it is placed an air-compressor driven by steam power. The first result obtained is a heating of the compressed air, and to get rid of this heat, a spray of cold water is let into the chamber containing the compressed air, at each stroke of the compressor. This lowers the temperature to that of the cold water, and by an ingenious system of fine grating, the moisture that saturates the compressed air is extracted. The air is passed through a series of finely perforated discs, on which a large proportion of the water is caught and allowed to pass away through suitable valves.

Within the meat chamber are arranged a series of pipes hung up in zigzag form (probably straight pipes joint by return-bends), and the compressed air is allowed to pass through these, still farther chilling it and removing by condensation the remaining moisture. It then passes to the cylinder of an engine and is there allowed to expand in driving the engines. The exhaust air is then taken by pipes into the meat chamber, and there allowed to expand to atmospheric pressure. The engine is also coupled to the steam engine that drives the compressors, and thus the air in expanding performs a part of the visible work of compressing. By this ingenious process the air is cooled three times and enters the chamber, not only dry, but very cold. There is less waste of power by this process, and a far lower degree of cold and a freedom from dependence on ice. By taking the air for compression from the chill-room, a still lower temperature may be obtained, and by joining one apparatus to another, there is apparently no limit to the lowering of the temperature of the air. The practical limit is found in the freezing of the lubricants used in the engine that is driven by the compressed air. Oil is frozen solid and stops the engine, and in practice it is found that glycerine must be used, and here the process stops, for, if the chilling and re-chilling is carried farther, the glycerine must freeze, and the engine will be unable to move. The process has been kept in operation for three months without stopping, and has proved to be entirely practical and satisfactory, and will undoubtedly soon be tried on steamers making long voyages.

**CURING BEEF BY INJECTING BRINE.**—The infiltration system of salting beef, by filling the blood-vessels with brine, is attracting considerable attention in Australia. In some recent experiments at Brisbane, bullocks were treated as follows: At the instant of killing, the animal's heart was laid bare, and incisions were made in both ventricles. Into the orifice of the left ventricle a pipe was inserted, and a stream of weak brine was forced through the blood-vessels, washing out all the blood. Pressure was obtained by having the brine in an elevated tank. After the expulsion of the blood, the right ventricle was closed by a clamp, and stronger brine was forced in until all the blood-vessels were full. In this way the distribution of the brine through every part of the meat is said to be complete and the curing perfect. It is proposed to send to the Sydney exhibition a whole bullock thus preserved.—*Scientific American*.

**BENZOLE AND BENZINE.**—Benzole and benzine have been generally regarded as synonymous, but certain pharmaceutical works now apply the term benzine to a light petroleum product. True benzole is soluble in half to three quarters of its weight of alcohol, while the petroleum spirit requires six times its weight.—*Exchange*.

**CLEANING BOTTLES THAT HAVE CONTAINED ESSENTIAL OIL.**—The handiest way is to put a little powdered bichromate of potash in the bottle, then as much in bulk of concentrated sulphuric acid. Let it run well round, and then let it stand till the organic particles are carbonized or turned black. Add a little water, shake well, and rinse out.

## THE DAIRY.

### International Dairy Fair in New York.

Any California dairyman who may wish to show his butter or cheese in competition with Eastern makes; or any dairyman who wishes to know of the progress dairying has made since he "emigrated," will be interested in the announcement of the International Dairy fair to be held in the American Institute building in New York city during the second and third weeks of December next. The experiences gained at the last fair enable the committee to more readily comprehend the necessities of this, and having this in view, the whole of the American Institute has been engaged this year, thereby enabling the management to devote a much larger space to the exhibition of goods, and at the same time give that attention to proper display of dairy implements and tests of cream-raising which want of space prevented at the last exhibition. Machinery Hall, a part of the Institute not used last year, will be devoted exclusively to this branch of industry, where, having ample steam-power and connections, every facility will be afforded for the manufacture of butter and cheese upon a much larger scale than heretofore, and opportunities for displaying dairy implements by hand or power greatly increased. A separate apartment will be arranged with every requirement for making the fullest tests of the different processes for raising cream, and the trial of inventions claiming superiority. Accommodations for a large number of cattle will be provided, and the exhibition of herds, as well as specimen animals, made a feature. From promises already received from owners and breeders, it is confidently believed that an unprecedented number of choice animals will be exhibited, comprising selections from the most celebrated herds in America and Europe.

The display of foreign products will be far greater than last year, assurances having been received from the officers of the association, resident and traveling abroad, of extensive preparation being made to send specimens of every kind of dairy product manufactured, as well as some thoroughbred cattle.

The Executive Committee are unable to announce, as yet, what amount of premiums will be offered, except that it will be greater than at the last fair. The aggregate sum to be distributed in the encouragement of the dairy interests will not fall far short of \$10,000. As soon as the subscriptions now being obtained are further progressed, and the committee more fully assured of the amount to be depended upon, the premium lists will be published, together with a list of officers of the association. In the meantime exhibitors are advised to make their arrangements, as the prizes to be offered will not differ materially, except in number and extent, from those awarded at the last fair. The discussion of dairy topics will be made an important feature, and a certain portion of each afternoon set aside for this purpose, when questions of importance to dairymen will be presented, and the addresses delivered preserved for future publication. The array of prominent speakers invited to deliver addresses will be particularly attractive, and it is expected that the gathering of prominent dairymen will be the largest ever had. The Secretary of the International Dairy Fair Association is T. M. Seaver, 309 Greenwich street, New York, to whom any inquiries concerning the exhibition may be addressed.

### Green Rye as Dairy Feed.

A few months ago one of our foothill readers gave an interesting account of his system of hillside farming, in which rye fed off by stock had a place. There is also, in various parts of the State, a disposition to grow rye. It may, therefore, interest some to know that green rye has a good name as a dairy feed. We find the following in one of our Eastern exchanges. The use of rye as winter feed, as this writer proposes, is not directly applicable under our conditions and seasons, but we print the article as written because of the qualities claimed in the young rye:

The use of rye in the field that cows can be turned upon once or twice a day, when the ground is not muddy or covered with snow, is admirable for the purpose of giving the butter a rich yellow color with any breed of cattle. This, however, is not the only nor the most important effect to be expected from giving the cow an occasional bite of green rye in winter. There is such a thing as grass flavor to butter, that no winter substitute has thus far been able to supplant. It is a rich aromatic flavor, suggestive of green fields and clover blossoms, that no art can supply. It is the freshness we miss so much when we compare canned fruits with those that are just brought from the orchard. It is this flavor that is so desirable to be retained in butter, that green rye supplies.

There is still another purpose of great value in the herd, that should be credited to green rye, and that is its hygienic effect upon cows that have been fed for any great length of time on heating food. We are all familiar with the practice of turning horses out to grass for a season in summer to get what is commonly supposed to be the fever out of them. If necessary with the horse, then how much more important it must be with the cow, when we are actually

eating a part of her every day. If we take part of her organization into ours, we should certainly be careful that hers is in the best condition. But, aside from these speculations, there is much good to be derived even from the increased flow of milk by adding a ration of green rye to the winter food.

In early spring, no matter how close the rye has been eaten in winter, it puts on a vigorous growth, and leads all the grasses in furnishing the first pasture. It is well to have the rye, in order to save the grass pasture until it not only gets a good growth in point of height, but very young grass has but little substance in it, and should, for that reason, be left to mature as long as practical.

In soiling, early rye is indispensable, and even if the soiling plan is not otherwise adopted, and it is inconvenient to pasture the rye patch, it is no great trouble to cut it and carry to the cows in early spring before turning on to the pastures. The growth of the rye—late, fall and early spring—is at a season when the ground can be used for no other purpose, and if all the rye is not used it can be turned over for a green manure. There is, therefore, no loss under any circumstances, except the labor of putting it into the ground. By all means sow a patch of it, and try it. We are sure you will repeat it.

## ARBORICULTURE.

### Fruit Tree Tap Roots.

C. T. Hopkins, President of the California Insurance Co., writes for the *Southern California Horticulturist* the following interesting observations: Having had some little opportunity to observe the tendency of trees in the dry climate of California, to run tap roots to immense depths, evidently for the purpose of drawing water from the lower strata, I beg to submit a few facts to your readers.

#### The Apple Tree.

I purchased in 1868 a few acres of land in Fruit Vale, Brooklyn, Alameda county. The land was a portion of one of the first apple orchards planted in California. The portion in question had been used for a nursery, and the trees had been allowed to grow up from their position in the nursery, much too close together to permit full fruitage. In fact, it was more like a forest than an orchard. Wishing to use the land for other purposes, I had most of the apple trees dug out. The workmen found but few lateral roots (the ground having never been irrigated), but in every case a strong tap root, generally as large as the trunk of the tree, had to be cut off below the small lateral roots. How deep these roots ran I afterwards learned in digging a well on the site of one of the trees. The well-diggers followed down the tap root of a tree four inches in diameter above the ground to the entire depth of the well, 28 feet, and then cut it off the size of a man's wrist. Doubtless it penetrated several feet further than the bottom of the well. The soil was a gravel to the entire depth, except about 18 inches of strong compact clayey soil on the surface.

#### The Black Walnut.

Within 100 feet of this well and in substantially the same soil, I planted a row of common black walnuts, about 18 inches apart, intending by and by to transplant them. The nuts sprouted and grew, but very slowly. On the third year they were only about three feet high, but had very stout stems,  $1\frac{1}{2}$  to  $1\frac{3}{4}$  inches in diameter at the ground, and were strong healthy trees. At this stage I undertook to move them, and set my man at work in the morning to dig them out. What was my surprise on returning home at night to find that he had dug at them all day, making a ditch 6 feet deep and 12 or 14 feet long, exposing tap roots larger at that depth than the trees were above ground, and apparently extending to the lower levels without any sign of tapering off. In despair of getting to the bottom of the difficulty I made him cut off the roots and plant the trees. But as they had no lateral roots whatever they all died without exception.

The existence of these tap roots explains the fact that the first crop in Fruit Vale does not seem to be injured by drouth. In fact, the drier the summer the better the fruit, both in quantity and quality, and the greater the growth of the trees. It seems as if the extra demand from the leaves for water owing to its absence in the air, stimulated the roots to double duty, and these invigorated the whole economy of the tree. So well known is now the tendency of the trees in Alameda county to form tap roots, that Mr. James Bailey, the principal forest planter of Oakland, has adopted a plan to encourage this growth. He drives a crowbar four feet into the ground just under the tree about to be set out. This hole he fills with fine sifted earth, selected from the richest top soils, and tamps it gently. The tree planted over this column of rich soil soon finds it and its tap root follows the lead prepared for it down into the moist strata below. The wonderful growth attained by Mr. Bailey's plantation of eucalyptus, cypress, pine and hedges on the Newton tract on the east shore of Lake Merritt, in only three years, illustrates the advantages of this mode of planting. I doubt not that it would be found beneficial to use this method in setting out oranges, olives, etc. In Los Angeles county who will try it, and report the result through your valuable paper?



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### The Progress of California.

Opening Address at the State Fair by President H. M. La Rue.

Officers and Members of the State Agricultural Society, Ladies and Gentlemen: In accordance with a long established custom it becomes my pleasant duty to extend to you here, on behalf of the State Agricultural Society of California, a welcome on this its twenty-sixth annual exhibition. In extending to you this formal greeting, permit me to congratulate you upon the success of the society, and the bright auspices under which this exhibition has opened. If to-night we were to institute a comparison between the exhibition now in progress and some of the twenty-five which have preceded it, we would find in some of the elements which constitute a successful exhibition the merit of superiority to belong to the exhibitions of other years, while in other respects we would find gratifying evidences that in many departments of agricultural and mechanical industry great progress has been made among our people, while in many important respects the exhibition now opening is superior to any that have preceded it. In the vicissitudes of industry there will be fluctuations from year to year, and these will be reflected in this annual exhibition; but they are merely superficial and transient. The great underlying objects of the society are being steadily accomplished. Thirty years ago a number of people sufficient to populate a State immigrated here in one year. They found a new and a strange world. They found soils differing in every respect from those with which they had been familiar. They found a climate as new and strange to them as if the stories of a fairy land had become a sudden reality. The object of their coming was to search for gold. To these comers the plains and valleys of California were brown and barren deserts. To their eyes the mountains gave no other promise than the hiding places of precious metals. Gradually the capabilities of the soils and this climate, for the purposes of agriculture, began to be suspected. But the discovery was early made that the knowledge and skill acquired in other lands, under other climates and other conditions, were not applicable to this country; that the farmer must learn anew the science of agriculture if he would be successful here. The experience of other States, which had been fully justified and which had found its way into the standard literature of the science of agriculture, could not be availed of to guide and direct the agriculturist in California. The science must be formed anew, almost from the very beginning. To accomplish this the most extended observation and inquiry and

#### Comparison of Experiment

Was necessary, and it was to facilitate the accomplishment of these necessary things that the State Agricultural Society was organized, and these annual exhibitions were projected. It is intelligence that develops the resources of any country. The large population which had suddenly—almost simultaneously—occupied this territory were men of enterprise, energy and forethought. From such men the capacities of the soil and climate of California could not long remain hidden. They saw in the fertility of the soil and the salubrity of the climate the highest possibilities of reward to intelligent agriculture. They saw in the well-watered slopes of the mountains reservoirs of mechanical power, and opportunities for irrigation. They wisely concluded that the one thing necessary to develop those resources was, first, a knowledge of their existence; and, second, a knowledge of the processes necessary to their development and adapted to the peculiarities of the soils and the seasons. With these objects in view, these annual comparisons of the products of the soil, and of the mines, and of mechanical skill were instituted. Once in each year during these twenty-six years the best results of agricultural industry have been brought together in this place for comparison. Once in each year the best specimens of the herds have been congregated for comparison and contrast. Annually the most enterprising and the most public-spirited of the agriculturists, the herdsmen, the fruit growers, the miners, and the mechanics have met to exchange ideas and to compare the results of their industry. In this way, unaided by the experience of the centuries of which our sister States may avail themselves, in the literature of agriculture and stock-raising—in this way, I say, we have developed a special science of agriculture. We have had much to learn and have much still to learn, but what we know we have taught to each other. I repeat, intelligence is the great producer, and I believe that the annual exhibitions of your society have, more than any other instrumentality, contributed to the intelligence of our people; and, judged from this standpoint, these annual exhibitions have conferred a wealth upon the State of California rising into millions, and in comparison with which their cost to individuals or to the State sinks into the utmost insignificance. When you educate a man you educate that all belongs to him; even his gates, his

fences, and his whole farm become an exponent of his intelligence and of his mind. Some fears have been entertained that certain provisions of the lately-ratified organic law of this State will operate injuriously upon the interests of this society. I fully believe these fears to be groundless. The practical and economic value of these annual exhibitions is too fully appreciated by the intelligent and public-spirited people of this State to justify the simple doubt of their continuance. I do not believe that the bounty of the State, so generously bestowed in former years, will be withheld, because I believe that the endowment was not the result of caprice, but was bestowed with intelligent purpose and for well-considered reasons. These objects and reasons were not in any way affected by the change in the organic law.

#### The Harvest.

It is also my pleasant duty to congratulate you upon the bounteous harvest of this year, and the continued evidence of the growth and the prosperity of our State. The surplus of the wheat crop for export this year will exceed in value \$12,000,000, while the wine and the wool and the fruit crops have kept pace with the growth of the cereals. It is not the place in this opening address of welcome and congratulation to deal with statistics, but we may refer to the general prosperity of our people with patriotic and sincere gratitude to the Giver of all good.

I have said that notwithstanding what we have learned of agriculture in California, we have still much to learn, and I take the liberty of calling your attention to the still too common fault of adhering to methods of agriculture and processes of manufacture which were taught us by our fathers, and which were applicable to others conditions, but are inapplicable to those which surround us here on the Pacific slope. Some experiments have been made in the production of silk. They are admitted failures, but I believe that they failed only because the methods and processes adopted in making these experiments, were applicable to the conditions existing in the countries where these methods originated, and that the methods which would have insured success in this State, were not sought and were not found. I believe this observation to be equally true as to the experiments that have been or are being made in the growing of tobacco and cotton. In the growth of cereals we were not long in discovering the season of seed time, the treatment of the soil, and the varieties of the cereals best adapted to our climate. In our experiments with cotton, tobacco and silk, we have observed not the seasons of California, but those of other countries, and without presuming to the possession of any special or professional knowledge of the subject, I conclude from a general rather than a specific knowledge, that whatever of failure has attended the wine industry of this State has been largely attributable to our attempts at making French wines from California grapes, and by processes which, however adapted to wine-making in France, could not be successful here. What I desire to strongly emphasize by these suggestions is the obvious necessity of intelligent cultivation of all products, and what is meant by intelligent cultivation is that which adjusts itself more perfectly to all the existing conditions which influence growth and development. When we have learned how, I believe that the tea plant and the coffee plant may profitably be grown in many parts of this State. We possess here a great variety of soil, and climate ranging from the tropical to the northern temperate, and I see no reason why all the products of the temperate and semi-tropical zones may not profitably be produced here. It is well that in these annual gatherings some thought should be given to these subjects, that a comparison of ideas and experiences may be had. Great results have been attained from small beginnings, and many things now the principal sources of wealth of the different peoples of the world met with discouragement, and even failure many times before they achieved their present high success. Looking back as a pioneer over the history of fruit-growing in this State I can recall to-night how very unpromising this country appeared to us when the first orchards were planted; and looking forward, and remembering the capabilities of our soil and climate, I have faith to believe that whatever can be profitably grown in the temperate or semi-tropical climates may be produced with profit here. The prospect of growing tobacco and cotton and tea and coffee profitably is not more remote in the indefinite future than was the growth of oranges, lemons, and other fruits of the orchard, to the pioneers of this State.

#### The Advantage of Climate.

Whatever the capabilities of our soil may be, it should not be forgotten that the one chief advantage possessed by us over our sister States of this Union is the superiority of our climate. To avail ourselves of this superiority it will very soon become necessary for us to abandon, in a measure, the cultivation of products which may profitably be produced in the temperate zones, and devote our attention more to those products to which our climate is peculiarly adapted. When we devote our soils to the growth of wheat, we enter into competition in the production of an article which may be grown in the largest breadth and area of the earth's surface, and in doing this we abandon the superior advantages which our climate affords. But I believe that with increased facilities for transportation our orchards and vineyards will become steadily more and more profitable with

each year, and that very soon we will devote more attention to the cultivation of fruits, because we will find in them a product which may be profitably exchanged for the products of the northern climates.

#### Production and Transportation.

No discussion of production would be complete without some attention being given to the important bearing of transportation on the subject. Transportation is an important factor in production; it fact, it may be said that they are not only allied, but that they are but parts of a single process. The productions of soils and climates differ, but transportation enables men to avail themselves of the economy arising from the production of articles useful to them in the soil and climate best adapted to their growth. A proper division of labor will interest different individuals in different departments of industry and activity, and in the adjustment of the rights of these to each other there will always be some friction. But if in the agitations growing out of these adjustments any have been led to conclude that an irrepressible conflict must forever exist, all such are, in my opinion, mistaken. If in the heat of any contest that has arisen any have been led into the extreme view of concluding that agencies of transportation ought to be injured or destroyed, a dispassionate view of the relations of modern agencies of transportation to civilization will convince them that such a conclusion is mistaken and erroneous. We cultivate fruits in the tropics and cereals in the temperate zone simply because transportation permits us to make that distribution of labor which is most profitable. If we could wrench from the soils of the north a small dole of the cotton and the sugar raised in the more temperate latitudes it would not be profitable to do so, while on the other hand the cereals of the north cannot be profitably grown in the tropics. Without commerce the producer in the north must derive from his unwilling soil, through his clenched fist as it were, everything he must eat and wear, and which is necessary to the maintenance of civilization. This would prevent the accumulation of wealth, and with it the growth of all that exercises a refining influence upon life. We weave cotton fabrics in Manchester, and make iron and steel and edged tools in Sheffield, only because of transportation. We make iron where iron and coal are found together. We grow grain upon the broad prairies of the West. We mine for silver and gold in the mountains of Nevada and California; and we exchange these commodities and find there is a profit over and above the cost of transportation incidental to that exchange, by reason of producing everything where it can be produced with the greatest facility. Nature helps sugar and cotton to grow in Louisiana, and corn and wheat in Illinois, so that transportation is the suggestion of nature. Transportation and commerce are one and inseparable. They are assisted by the zones, by the tides, by the seasons, and by everything that is natural. To resist their tendencies is to resist the irresistible force of nature. Now let it be understood that the modern agencies of transportation are

#### Important Factors

In all the processes of civilization. They are a part, in fact, of the looms which weave cotton fabrics in Manchester, and of the anvils upon which is wrought the world's iron work at Sheffield and Pittsburgh. They are a part of the sunshine that helps to grow cotton and sugar in Louisiana, and corn and wheat in Wisconsin and Illinois. They are not separate and apart from production, they are merely departments of the one great whole. The railroad is but a single cog-wheel in this universal commercial machine; an instrument of distribution in the world's exchange. It moves with the rest of the machine in human activity, and with all other factors only will it stop. It is a producer and distributor of wealth. It is a promoter of happiness, and makes it possible for more men to reach an elevated plane of civilization. For several years just past a contest has been maintained between the producing class and the agencies of transportation as to the right and expediency on the part of the Government to regulate the tariffs of transportation. That contest is happily settled, and as I believe, justly settled, in favor of the right of the people to regulate the rates of freights and fares on transportation lines. At the very foundation of all human society lies the maxim, "So use your own property as not to injure the property of others," as well as to exercise your right of liberty of action as not to interfere with the liberty of others. All property and its ownership is held and owned and controlled with reference to its relation with all other property, and the rights of all other individuals. The ownership of property can have only such exercise, and the rights of that ownership must be so interpreted that the ownership of all other property and the rights of all other individuals will not suffer. The bearing of transportation upon all other divisions of industry is such, that unregulated and uncontrolled it would possess an undue advantage over them—an advantage which is such in its nature as to call for governmental regulation as the only adequate protection against abuse. The right of such regulation is now finally and fully established. The precedent just established admits of the right of regulation as applicable to any other interest which by reason of its influence on the rights of property of others is liable to abuse. Men are not fit to be trusted with irresponsible and absolute power over the property or liberties of other men. From the menace of such

power the people may seek protection in governmental regulation, whatever the property or interests to be regulated may be. In the exercise of this newly-acquired right it becomes necessary now, at its threshold, to remember that the interests of production and transportation are so interwoven that injustice to either is injury to both.

Transportation is not only a distributor but a creator of wealth. As its facilities are increased production becomes more profitable. If in the exercise of this newly-acquired right the people attempt to defraud transportation the injury will react upon production by reducing the facilities of transportation, and arresting the extension of transportation lines. Nothing is ever finally settled, except upon the basis of equal rights and exact justice to all parties. Recognizing the unity of these great departments of industry, let us enter upon their equitable adjustment in that spirit of fairness which alone affords the guarantee of justice in our conclusions and our judgments.

#### In Conclusion.

In this annual harvest home, this peaceful festival, where labor is dignified and ennobled, and industry is crowned King, let us remember that the ultimate object for which we toil and strive is to build up an enduring civilization, and to exalt and embellish civilized life. To do this we must begin at the home. Every decade we take the census of this nation, and each succeeding census shows that the cities and towns gain population in a greater ratio than rural districts. The significance of this is that the rural spirit in our country is dying out and that the better social advantages of the cities is attracting an undue proportion of our population to them, to the injury of agricultural pursuits. This should not be so, and would not be if more attention was given to the beautifying and adornment of country homes, and to the enhancement of the social and intellectual advantages of country life. The organization of the Order of Patrons of Husbandry has done much to encourage a rural spirit and to elevate the occupation of farming and enhance the sociability and unity of country life. That Order has also contributed much to combine the agricultural classes and confer a higher social dignity upon the occupation of farming. Under this genial climate and amid the natural beauty of our scenery, where every flowering plant will bloom and every fruit ripen, where winter comes only to clothe the hills with verdure, and summer covers the plains with golden harvests and purple fruits, and autumn ushers in the spring, the occupation of farming will ever be attractive and ennobling. Permit me to indulge the hope that this exhibition of the best products of our fields, our pastures, our orchards and our vineyards, will enhance in the minds of all the blessings and dignity of labor and the high honor of our calling. We present you here the best results of the skill and the industry of our well ordered people, from the most primitive employment to the highest realm of fine art. We present you the best specimens of the capabilities of the soil and the climate of this land of sunshine and fertility. I convey to you the welcome of the State Board of Agriculture, and sincerely hope that this exhibition may confer upon all who witness it social enjoyment and profitable instruction, that it will encourage industry and skill by inspiring in us an honorable spirit of emulation, and, above all, energize a patriotic love for our glorious State.

#### Grange Suggestions.

The Secretary of the subordinate Grange is expected to make accurate minutes of the transactions of and correct accounts of all moneys paid over. His office does not contemplate a record of discussions, experiments and current Grange events. In the subordinate Grange, which is already in the full tide of successful effort, a tolerably minute record of what is said as well as done, might be made of material value. It has been the custom with many Granges to assign to members certain experiments to be tried on the farm—the use of special fertilizers, etc., etc., which are duly made and reported on, but no record of the results, and in a measure the benefit of the experiment lost. A permanent record would give a fair test of improvements and changes in agriculture, and would be read and reread in after days when the "minutes" would be forgotten. A wide latitude might be given to the reporter as to what should enter into the report. We make the suggestion to the Grange that can secure the right "Recorder."

The question is not unfrequently asked why the Grange makes so little progress? That is, as all Patrons believe, that the fundamental principles of the Order underlie the prosperity of the farmer everywhere, and on the success of the Grange depends the future of the agriculturist, if this be true, why have there been failures anywhere? Why has not the Order engrossed the attention of all farmers and commanded their earnest efforts for its spread and influence? The accepted proverbs of the world touching the gradual processes by which great things are accomplished and the time that must elapse before they become permanently established, are in point. The Grange is no exception to the proverbs. It everywhere inculcates dependence, fraternity, co-operation, an investigation of old processes, a more intellectual culture. It would revolutionize much, that from the sheer force of habit is deemed indestructible. —Grange Bulletin.



## AGRICULTURAL NOTES.

## CALIFORNIA.

## COLUSA.

**ALMOND GROWING.**—*Sun*, Sept. 13: There are hundreds of thousands of acres of land in Colusa county, upon which the almond can be grown with great certainty. It is not profitable to plant the trees on lands exposed to frosts, but as we have heretofore explained, there is much land in the foothills sheltered from frosts. The Newland Brothers have discovered, too, that a frost always comes with a west wind, and that orchards situated on the east side of the river are not so much affected by the frost for a few hundred feet back. As the river is always warmer than frost, the wind passing it becomes warmer. It will pay any persons having such sheltered spots to study the almond question more thoroughly. No one in this county can give more practical information than the Newland Brothers, who have some 2,000 trees, four miles above Colusa. Their orchard is not, however, in a good situation. Their losses have made them study the question.

## CONTRA COSTA.

**EDITORS PRESS:**—Threshing west of Clayton is drawing to a close; three weeks more will finish it. South and east of Clayton the grain is at the depots or landings, there being but little more to haul. Martinez is becoming the shipping point of Contra Costa. Much grain is being hauled to the Pacheco landing and other points in our county. Brentwood and Byron, make a material difference in the receipts of grain, at the water front in Antioch. The grade at the Brentwood platform is being raised so that shippers will not have so much labor in delivering grain. The *Crisedale*, a fine full rigged ship, is lying off the Granger's wharf in Martinez, nearly ready for sea; she is loaded well down to the Plimssole line. The grain is brought down in barges towed by a small river steamer. I understand another ship will take the place of the *Crisedale* when she departs. There is much summer-fallow in the southeast, but not much west of Diablo. Farmers are expecting a good winter; land for renting in demand at good figures. In the San Ramon valley there has not been more than half a crop of wheat, two thousand sacks being with one exception the limit of any one farmer. The hay crop is immense, and the grain heavy and good. There has been a good deal of re-cleaning done. The barley crop in the tules is very good. Business is looking up; prospects encouraging.—W. H. T., Martinez, Sept. 15th.

## FRESNO.

**ITEMS.**—*Republican*, Sept. 13: Many of our colonists will manufacture this season all the wine required for home consumption. Sheep-shearing commenced at Fresno this week. Mr. D. D. Hudson, of the C. C. colony, is trying the experiment of drying his raisins on thin muslins instead of wooden trays. He claims that his plan is much cheaper, and thinks from the fruit being nearer the earth that he will get a more uniform temperature.

**A CHICKEN THIEF.**—The poultry raiser on the plains has many enemies to contend with. The coyote, badger and fox are all fond of poultry, and are not at all particular as to the means used in procuring them. J. M. Sumner of the C. C. colony, has for some time been losing chickens almost nightly. Some small animal would gain entrance to his chicken-house and cut their throats and drink the blood, leaving their bodies on the floor. The marauder's last visit cost him 13 nice chickens. He procured a little strychnine and put some on a freshly killed chicken and the next morning found an animal a little larger than a common rat dead upon the floor. It probably belonged to the polecat family. No person was found who had ever seen an animal like it.

## KERN.

**ITEMS.**—*Courier-Californian*, Sept. 11: Mr. C. Miller, of Tacuya, reports about 1,000 sheep died from eating poison weed, as is supposed. The bladder of the animals was found filled with blood. Sheep-shearing is progressing at the Bakersfield corrals, with about 40 men, and will continue some weeks. About 10,000 sheep have already been shorn.

## LOS ANGELES.

**DIRECT SHIPMENTS.**—*Courier*: The ship *Colusa* has been loaded at Wilmington with 35,000 sacks of barley for New York. The average price paid was 70 cents per cental.

**HOPS.**—Mr. Raine, of Gospel Swamp, finished picking hops last Saturday. He reports a heavier yield by one-fourth than any previous season. The crop of 15 acres just picked yielded 34,000 pounds.

**BEEKEEPERS' DIVERSIONS.**—*Santa Ana Herald*: Messrs. Williams and Brown, of Trabuca canyon had a narrow escape from a grizzly a few days since. Their bees having been robbed on several occasions by bruin, they concluded to trap the marauder. Placing the hives on a platform, leaving one on the ground for a bait, they went to their cabin. Early in the afternoon they started for the scene, but Mrs. B. and two cubs held the ground. Williams fired a load of buckshot at the varmints, whereupon the bear made a charge on the men. Each dropping his gun started on a retreat. Brown soon discovered that he was not fast enough to keep out of harm's way, so he jumped down a 20-foot bank among the rocks and briars, while Williams and the grizzly kept on until a tree was reached, up which Mr. Williams went

just in time to save us the trouble of writing an obituary.

## MENDOCINO.

**ITEMS.**—*Ukiah Press*, Sept. 12: Our bop growers are busy gathering their crop. There were not so many hops planted this year as last, but the yield is excellent. Some of the sheep men are shearing their fall clip. Threshing is about through. Smoke has made its appearance in the atmosphere, indicating the annual fires. MONTEREY.

**CASTROVILLE.**—*Argus*, Sept. 13: In this vicinity threshing is nearly, if not quite finished, the season having been unusually short by reason of the numerous machines brought here early in the harvest, as soon as it became known that there were excellent crops at this end of the valley. Farmers are now busy hauling their produce to the warehouses.

## NAPA.

**IN-COMING WHEAT.**—*Register*, Sept. 13: This season about half the grain of Berryessa valley is being brought to Napa, eighteen to twenty four, six and eight-horse teams arriving here now every Tuesday and Friday with wheat, which is stored in Sheehy's warehouse. Since they have taken to sprinkling the Berryessa grade there is no complaint of bad wheeling and unendurable dust. There being a larger acreage of grain in Berryessa valley this year than last, there is a larger aggregate yield, and the farmers of that section will be several weeks yet marketing their crop.

**HOPS.**—*St. Helena Star*, Sept. 13: Hop picking commenced last week. Growers tell us there is about two-thirds of a crop. Prospects for prices are good. Storey Brothers have, we are told, sold already four tons at 25 cents. Mr. Dowdle sold, some time ago, two tons at 20 cents. Growers think that only about half the prices are offered in advance that will be given afterwards.

**A BEE DESTROYER.**—The other day J. D. Enas killed a skunk that measured two feet five inches in length, in the vicinity of his apiary, and by so doing has put a stop to the wholesale destruction of his bees that has been going on some time; and also put a stop to other unpleasant bad actions by the creature.

## SAN BENITO.

**PAJARO VALLEY.**—*Pajaronian*, Sept. 13: Crops all over the Pajaro valley are good this year, and many of the farmers with whom we have conversed say they have "come out ahead."

## SAN BERNARDINO.

**PRUNING ORANGE TREES.**—*P. S. Russell in Riverside Press*, Sept. 13: Let us take a ride over Riverside to-day and see what the outlook is. We see on every hand orange trees small and large, with tops bending and almost breaking under the weight of their foliage. Trees five and six years old with tops as large as 10-year old trees should have, with two-thirds of the branches on one side, and still growing more top-heavy each year. Now let us take another look at Riverside, say 10 years hence, and we see orange groves miles in extent, with large spreading tops, loaded with their golden fruit, long bending limbs being held in place by being tied to poles resting on the ground, these poles being in number from five to ten to each tree (I once counted 19 poles under one of Mr. Van Leuven's trees) and the ground uncultivated, as no cultivating can be done after the poles are set up. How do you like the picture? Let those answer who do not believe in pruning. But this is the inevitable result of not pruning. If we would have our orange trees beautiful in shape and self-supporting, we must prune. There is no other way by which we can reach this result. And if we would have our trees perfectly healthy we must cultivate thoroughly and deeply, and this we can not do if our trees are held up by poles. This is a subject that pages might be written upon. I have said nothing of the cost of poles and the labor of propping up our trees. I have written this short article with the hope that the people of Riverside will stop and think before it is too late, where this non-pruning will lead them to.

## SAN DIEGO.

**FRUIT FOR THE STATE FAIR.**—*Union*, Sept. 9: A quantity of remarkably fine fruit was sent up to the State fair at Sacramento on the last steamer by Geo. C. Swan, including some beautiful Mexican limes, oranges and quinces. There were five varieties of pears, six varieties of apples, 10 varieties of grapes, five varieties of oranges, and 19 varieties of lemons. There were also some branches of coffee with the fruit, and a rare specimen of guava. [This display attracted much attention at the fair. Concerning his famous Olivia lemon, Mr. Swan wrote us recently that the coming crop promises to show a size which all critics must regard as satisfactory.—*Eds. Press.*]

**POISONOUS POTATOES.**—*News*: A farmer tells us that he has lost a good many chickens, especially of the young ones, from eating spoiled or imperfect potatoes, which were thrown to the pigs. Some of them died the same night of the evening on which they ate of the potatoes, and others died during the next day. It would be well for people having chickens to look to this matter closely.

## SANTA BARBARA.

**BEEKEEPERS' ASSOCIATION.**—*Press*, Sept. 13: A regular meeting of this association was held on the 6th inst., President Gilchrist in the chair. The question of propagating flower-producing plants for bee-pasturage was again discussed. The president stated that he had written to A. I. Root, of Medina, Ohio, and

others, with a view of ascertaining the most valuable and profitable plants for the purpose, and that he would report at the next meeting; also that he had sent for a quantity of the seed of the yellow "Spanish Needle," with which to experiment for the purpose of ascertaining how the plant will thrive in this locality. It was voted that the members present exert themselves to the end that a full attendance of the members of the association be had at the next meeting, to especially discuss the question of propagating flower-producing plants for bee-pasturage by all apiarists; also as to the best and most economical methods of wintering bees, and other questions of interest to apiarists. As to foul brood, the members present reported that, so far as they had any knowledge, the apiaries in this county are free from it, but that all should be thoroughly acquainted with the disease, that they may be able to detect it readily, and apply the proper remedy before great loss is sustained. There followed a lengthy and interesting discussion on apiculture generally, which was freely participated in by all present. The meeting then adjourned to meet at the office of the secretary, on the first Saturday in October, at 1:30 P. M. J. N. Gilchrist, President; Frank Flint, Secretary.

## YUBA.

**SHIPPING SWEET POTATOES.**—*Wheatland Recorder*, Sept. 5: On Thursday last S. D. Wood of this place shipped a carload of sweet potatoes to Denver, Colorado.

**BANANAS.**—*Marysville Appeal*: At the garden of Lucien and Augustus Christian is a banana tree, about three years old, which stands 14 feet high. Four others are shooting from its root. The boys have also pine-apples and dates which seem to be flourishing.

## SONOMA.

**DRY CREEK.**—*Cor. Healdsburg Enterprise*, Sept. 11: The grain is nearly all threshed on the creek. The yield is much better than last year, and contains less trash. A. Hartsock's wheat averaged 29 bushels per acre, and is the cleanest wheat on the creek. Miss Helen Richards showed me a radish that weighed four pounds, which grew volunteer in a corn field on the Price place.

**SHEARING.**—On some ranches sheep shearing has been commenced.

**GRAPE PRICES.**—*St. Helena Star*: A private letter from Sonoma to this place says: "We can hardly say what is the fixed price for grapes in this valley. So far, few positive sales have been made. The lowest prices I have heard of thus far are as follows: \$25 for Zinfandel and Riesling. All other foreign except Peru, Hamburg and Tokay, \$21. Mission, with the three last named, \$16. It is my opinion, the most of our grapes will go higher than these figures. \$18 has been offered for Mission and refused, and I think they, with the lower class of foreign grapes will rate at \$20. Riesling and Zinfandel will bring \$30, and, perhaps, \$35; others, \$25. Our crop here is very light, and not a half crop. The frost caught the vineyards in the lower part of the valley, and the hot sun played havoc with the balance."

## NEVADA.

**THE RAILROAD AND THE HAY GROWERS.**—*Reno Journal*, Sept. 6: For some time past our farmers have been shipping hay to points east on the Central Pacific, and the hope was to work off the crop in that section, as the demand in Virginia City and the western part of the State was light. The price for hay loaded on the cars was \$15 per ton. All at once it was discovered that the C. P. rates from Sacramento to Winnemucca and Battle Mountain were \$75 per carload, equal to about \$6 per ton, as steam pressed hay is loaded from Marysville and other points, and about 12 or 13 tons can be got in a car. This hay only costs \$8 or \$9, so we find it selling in Winnemucca for \$15, the price now asked here loaded on the cars. The rate from here is \$52 per car load, but only from six to nine tons can be put in a car, which makes the freight from \$5 to \$9 per ton, according to the manner in which it is pressed. Some of our farmers are disgusted at this turn of affairs. We know of a standing offer for 1,500 tons of loose hay at \$6.50 per ton.

## IDAHO.

**WHEAT GROWING.**—*Idaho Statesman*: The crop on the Morris farm the present season far exceeds the most sanguine expectations of those having the property in charge. The yield will be nearly an average of 40 bushels per acre. During a portion of the forenoon of Tuesday, 475 bushels of wheat was cut and threshed from less than 16 acres, and this from a portion of a field of 700 acres, which was considered below the average of the tract cultivated. The grain is well filled, plump and hard, and will compare favorably with any wheat we ever saw. This land lies on the plateau opposite the lower portion of the city, and is of the same general texture and quality with that of the entire Snake River plain, which has heretofore been regarded as an arid sage desert. The farmer to whom the land was rented this year says that he is satisfied that another year's cultivation will give a result of 50 bushels per acre. He intends to rent and cultivate the entire tract of 1,100 acres the coming year. The result thus far is very satisfactory as showing the value of this sage land, and what may be done by a proper system of cultivation. Just below and adjoining this tract there are several thousand acres of choice land which can be made equally productive.

## PATENTS AND INVENTIONS.

## List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS TO DEWEY & CO.'S MINING AND SCIENTIFIC PRESS PATENT AGENCY.]

FOR THE WEEK ENDING SEPTEMBER 9TH, 1879.

219,467.—GANG PLOW—Reuben Hart and M. P. Nicholson, Santa Maria, Cal.  
219,512.—CAR TRUCK—W. E. Payton, Stockton, Cal.  
219,521.—MITER BOX—J. Reid, Portland, Ogn.  
219,530.—PORTABLE ENGINE BOILER—H. W. Rice, S. F.  
219,530.—FIRE-PLACE—F. A. Sage, St. Helena, Cal.  
7,664.—CIGARS—Trademark—Sanderson & Horn, S. F.  
2,060.—TITLE "SYRUP OF FIGS"—Label—W. Pinnering and R. E. Queen, Reno, Nev.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & Co., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

## News in Brief.

ENCOURAGING news is received from the mines in Alaska.

The gold fever in Queens county, Nova Scotia, shows no abatement.

ENGLAND will have to import 16,000,000 quarters of wheat this year.

THE cotton operatives on strike at Ashtou, Eng., number 8,000 to 10,000.

EVERYTHING is quiet at Sitka, and the civil government is working smoothly.

THERE is a great scarcity of food in Kashgar and people are suffering severely.

Low water has caused a suspension of navigation on Snake river in Oregon.

THE Washington county fair will open at Hillsboro, Or., on the 22d inst.

GREAT distress among the working classes in England is apprehended this winter.

THE British Residency has left Mandalay, fearing a repetition of the Cabul massacre.

SILVER in London, 51½d; consols, 97 11-16; 5% U. S. bonds, 105½; 4s, 105½; 4½s, 108½.

HOP picking on Puget sound is now fully under way, being mostly done by Indians.

GOLD to the amount of 28,000,000 francs will leave France for the United States this week.

THE opening of the Industrial fair at Portland, Or., has been postponed until October 20th.

THE Austrians have begun the occupation of Novi Bazar, and have met with friendly receptions.

IN the second ballot at Bordeaux for member of the Chamber of Deputies Blanqui was defeated.

AT Liverpool wheat is quoted at 8s 9d@9s 7d for average California white, and 9s 7d@10s for club.

A MINER was found dead in the Savage incline at Virginia Sept. 16th, his flesh being fairly cooked.

ORDERS have been issued to the British troops to occupy Cabul with or without the Ameer's consent.

A TERRIBLE storm on the coast of Bolivia recently destroyed a great deal of property and some lives.

THE rural population of Roumania is suffering from famine caused by the failure of the maize crop.

AN African King has abolished slavery throughout his dominions, liberating about half a million slaves.

A REPORT has reached Candahar that the Ameer has called upon the Chilizies to rise against the British.

THE President of the Howard Association of Memphis is in New York, seeking aid for the yellow fever sufferers.

SIXTY THOUSAND workmen are affected by the trouble between the earthenware manufacturers and their men in England.

A REMARKABLE increase of Chinese has taken place in New York, Boston and Philadelphia during the past two years.

DAILY, the California champion, was defeated by Capt. Webb in their swimming match at Coney Island last Sunday.

A NUMBER of farmers have sailed from Liverpool for Canada, to investigate the advantages of settlement in the Dominion.

IN San Francisco half dollars are quoted at 99½ buying, 99½ selling; trade dollars, 97 buying, 98 selling; Mexican dollars, 91 buying, 92 selling.

THE Massachusetts State Greenbackers at Boston have nominated Gen. B. F. Butler for Governor and Wendell Phillips for Lieutenant Governor.

THE loss of cotton in Louisiana and Mississippi from the late storms is placed at 250,000 bales, and of sugar in the former State at 50,000 hogsheds.

IN New York Government bonds were quoted at 101½ for 4s of 1907; 102½ for 5s of 1881; 104½ for 4½s; sterling, \$4.82@4.84; silver bars, 111½; silver coin, ½@1 discount.

AMERICAN EXCHANGE.—All parties coming to San Francisco will find excellent accommodations at the American Exchange Hotel, corner Sansome and Halleck streets. Families can enjoy good parlors; gentlemen will find comfortable reading rooms, and all can find pleasure in a social chat at the table. The prices are: board and room from \$1.25 to \$2.00 per day, and reductions made on time. A free coach may be found at the cars or boats.





## Mechanic Art.

[By JULIA CLINTON JONES.]

The following poem was read at the late fair of the Mechanics' Institute by request of the Managers:

O, grand Mechanic Art! born in the prime  
Of loving Nature, nurtured in her cause;  
Thy temple, the vast Pantheon of Time,  
Whose walls are graven with symbols of thy laws.  
Thy pathway, strewn with wrecks of ages, lies  
Thro' mists of old, from deep Euphrates' wave;  
Thy stride majestic shook the morning skies,  
Each tamed element thy willing slave:  
On thro' the centuries go, with stately tread,  
Replacing with new births thine ancient dead.

Thy cradle, Asia, nursed at India's breast,  
And nourished in the lap of Egypt's lore;  
A ruined world thy primal power confessed,  
Revived and cherished on Hellenic shore.  
By Jeneas borne to Latium's sheltering strand,  
Thy Penates the seven-hilled city kept,  
Guarded by fair Italia's fostering hand,  
While Alexandria flamed and Science slept.  
Thus, when thine infancy was swathed in light,  
The ages bled thee to renew thy might.

In varied forms, as rolls of the Past,  
The crumbling monuments of dome and arch  
From thy vast magazines are strewn broadcast,  
And ground to dust beneath the centuries' march,  
Memphis and Thebes arose beneath thy hand,  
And Ghizeh's pyramid, and Karnac's fane;  
While that huge tower, high piled 'gainst God's com-  
mand,  
An unknown ruin lies on Sblar's plain.  
Earth's arms, grown weary by such weight oppress,  
The mighty burden sank into her breast.

Great Nimrod's city, proud Assyria's boast;  
With haughty Babylon, whose craft supplied  
All nations of the earth; Phoenicia's coast  
And Chaldea's plain, owned thy dominion wide.  
Thy looms were rich in fabrics; rare their skill  
In a mechanic, hidden from our ken;  
Those artificers old, who wrought thy will,  
Were taught by thee in strange devices thou;  
Our peers and rivals for thy favor fair,  
Thy buried all their learning deeply there.

Thy hand upreared Ephesus Diana's shrine,  
And lighted Pharo's warning lamp; amid  
Corinth, thy workshop; Grecian art was thine,  
With Labyrinth, and Minos's tomb; while hid  
Was thy wise thought in hieroglyphic sign;  
So, jealous of thine old renown, lest we  
From stone or papyrus might yet divine  
Thy storied wisdom, and as cunning he,  
In ancient catacombs, now calmly sleep  
Those mummied artisans, the keys who keep

Of thy strange secrets whose full worth they proved.  
Oh! could those stony lips but tell what hand  
Those circles drew,—what mechanism moved  
Each ponderous block aloft—what science planned  
Such wonders! We who pride ourselves to-day  
On what we have accomplished, need to turn  
Back to the dead Past's catacombed way,  
Thro' buried Egypt search, sift Asia's urn  
And question Greece, to find lost art again:  
Time's hidden archives mock our quest as vain.

Atheulan temples rose—thy labors crowned  
With beauty born of Art, Zeus's spoke  
From living canvas; Phidias' marbles found  
Forms like to life; Dædalian skill awoke  
In that great master, less in naught than they  
Who forth from marble and from canvas brought  
Their grand creations! Thine the Apollon way,  
And thine the wondrous lost Campanian wrought.  
Archimedes thy marvelous laws described  
Which Newton, after, studied and applied.

Sinking awhile in medieval rest,  
Still did thy broken dreams e'en then beget  
New laws and forms superb. Thy high behest  
Arabia heard, and mosque and minaret  
Arose; Alhambra's dome, proud Mecca's shrine,  
With shaft and arch upreared; while still she sought  
From crucible and mathematic sign,  
And by alchemic aid, to learn thy thought;  
Sbe, in that gloomy time, preserved thy lore  
To nourish Europe, later, from her store.

Then, slumbering giant! thou uprearedst thy head,  
Aroused by Galileo's stern command;  
Fair Renaissance her rays around thee shed,  
While Torricelli wrought and Huygens planned.  
Thy tones, thro' Bacon's voice, still filled the air,  
And of achievements vast had promise given;  
Thy piercing eye of mechanism rare,  
Discerned the distant things of earth and Heaven;  
While, for deep thought, thy microscopic sight  
The least created atom brought to light.

Thus, from the darkness of that gloomy hour,  
Did thine awakened form advancing, loom  
Thro' morning mists dispersed by thy power;  
Till now, the offspring of thy mighty womb  
Stand round about thy path and mark thy way  
Thro' tunneled Atp and channeled continent;  
Flash thro' earth's pulses living thoughts to-day,  
And hark with iron the broad world's extent.  
Long the Egyptian Sphinx its answer sought;  
Our Sphinx to-day replies "Work, Skill and Thought!"

For land and ocean are thy monarchies!  
They own thy potent sway. Lo! at thy beck,  
The white-lipped billows of the sister seas  
Meet and embrace on Suez's narrow neck.  
Menai's rude stream is forced at thy command  
To guard that structure strong of tube and stone;  
While France and fair Italia have joined hand  
Thro' Cenis' rocky beard. Nor these alone—  
But triumph equal our own shores can claim,  
And equal laurels bring to crown thy name.

Pent in the clouds, and bound with lightning's chain,  
To deafened ear and dazzled human eye,  
For ages past thy electric voice in vain,  
From out the dread artillery of the sky,  
For freedom called: till our own Franklin beard  
Its strong entreaty, brought within thy reach  
As precious gift; by thee, taught sign and word  
Thro' Morse; while earth and sea thrill with mute  
speech.

A bond enduring, joining land with land,  
Defying time and space, at thy command.  
See where he stands, the gifted Edison!  
Bathed in a flood of new created light,  
Dispersing treasures from thy garner's won;  
See Science supplement rude Nature's might!

Lol shown by thee some curious secret old,  
Thy servants form the artificial stone;  
While Time stands by agast, to there behold  
The work of ages thus become thine own.  
Discrowned by thee is Kronos old, and space  
Annihilated in thine onward race.

With fiery breath thy wheeled Cyclops baste  
O'er tracks of steel upon their lightning course;  
Mountains how down, and blooms the arid waste,  
And cities rise thro' thy resistless force.  
Gianis, thy slaves! and by thy heated breath  
Are wrought the marvels of this century grand.  
Thy skill supplies the arsenals of death,  
While new Armadae speed at thy command;  
And yet, thro' thee shall war and discord cease,  
Thy wreath no laurel, but the bough of peace.

So, with each stride in thy swift course  
Rise mighty deeds and fresh inventions still;  
As willing vassal, every natural force  
Hangs on thy footsteps to obey thy will.  
Thy voice, machinery; all the arts that sprang  
To civilize and elevate from old,  
Had birth upon that earliest forge, where rang  
The strokes of Tubal Cain, mechanic bold.  
So now, the skilled constructing engineer  
Shall tower, Colossus, on his grand career.

Thine iron arms embrace the land and sea;  
Thy hand of metal weave the Future's robe;  
Thro' thine electric veins in sympathy  
Beat the full pulses of the friendly globe.  
Thy car of Progress, in its sure advance,  
Impelled by those great motors, Thought and Skill,  
Shall crush beneath its wheels blind Ignorance,  
E'er onward guided by thy mighty will!  
While yet shall sprig from age to age again  
Newtons and Franklins from thy fruitful brain.

## Mountain-Top Letters.—No. 4.

[Written for the RURAL PRESS by JEWELL.]

In our various trials and vicissitudes of life,  
our griefs, sufferings, joys; our days of poverty  
and riches, to me there is nothing dearer or  
nobler than true friendship. A friendship that  
expects no return for proffered aid or sympathy,  
is spontaneous and pure from worldliness. It  
feels for you and gives as willingly as the flow-  
ing fountain at whose side we sit and drink,  
and cool brow and brain, thankfully in our  
hearts. Words of thanks would seem out of  
place, knowing as we do that the blessing we  
receive is generously given, and should teach  
us to go and do likewise, giving all we can to  
any of God's children needing what we have to  
give. But such friendship is rare to meet with  
in our social world, and is usually called *charity*.  
The "set" we move in perhaps is in no need of  
sympathy or aid in any way from us. We meet  
at church, party, lecture and occasional calls,  
and a few nearer and dearer friends visit in a  
more informal way, and a general sympathy is  
extended for any special occasion. But only in  
great trials like sickness and death is the  
friendship really put to the test, and then if  
the sufferers are wealthy money hires nurses,  
servants, undertakers, doctors and ministers,  
so that a friend has little to offer in the way of  
aid. But if poverty is their lot, what a bless-  
ing a friend is in time of need, and if you are  
that friend, what joy to your heart to feel  
that you are able to help the stricken friend to  
bear her burden; how willingly your hand turns  
to any service needed to be done—let it be  
watching with the sick or dressing the dear  
dead.

No matter for home duties—your friend needs  
you. And if you are the afflicted one, how  
your heart goes out to the friend who comes to  
you in your sorrow, and silently shows her real  
sympathy in deeds of love. Each friend who  
assists you has won an everlasting place in  
your heart, and although miles separate, such  
name lingers upon your lips long and often. And  
if we never meet to return like kindnesses, we  
pray our friend may never need friends in hours  
of trial, while we feel more like going to "do  
likewise" to others needing what we can give.

So far as I can reason, the poorer part of  
humanity have truer friendships and many bless-  
ings the richer are denied by their very wealth.  
I remember a remark a rich woman once made  
to me: "I sometimes feel that I have no friends!  
All my acquaintances want something of me;  
if it is not money for some object, it is a posi-  
tion I can give them in society."

I have never been placed in her position and  
never felt to doubt my friends, and God grant I  
never may! For while one does not care to be  
an object of charity to a friend, yet it is well to  
be so situated that you can feel a healthy glow  
in the hand-shake of a friend, or a fervent "God  
bless you;" or at the mention of another you  
feel in gratitude that "A friend in need is a  
friend indeed." It is well enough to have a  
time of need to test one's friends, as well as to  
teach us the value of friendship.

Poverty is a rough, hard school, but it teaches  
many valuable lessons in life, one being to rely  
on one's self, and another the blessings of sym-  
pathy. The first wins friends, and the other  
keeps them; and together they enable us to be  
true friends in return.

Deer Ridge Farm, Sept. 7th, 1879.

INCREASE OF PERNICIOUS LITERATURE.—Occa-  
sionally an editorial paragraph or stray maga-  
zine article invites the public attention to the  
lamentable condition of literature for the young,  
and there the matter ends. With these rare  
exceptions, the subject remains untouched; the  
trade in cheap and filthy literature increases,  
and that *laissez faire* principle of our easy-going  
American social code restrains parents from a  
too close examination of their children's mental  
food; the clergy are silent. If this is an abuse  
in fact, and is to be remedied, it seems to be  
full time that it was begun and carried on with  
the energy its importance justifies.—*Sunday*  
*Afternoon*.

## Labor, Physical and Mental.

The power of labor is visible everywhere—  
we need only look at improvements around us to  
see it. It is limited only by the skill of the  
laborer. A good, well-cultivated brain is vastly  
more essential to the power of labor than  
good muscle, though the latter is very necessary  
as far as it goes; but all the physical force of  
men and animals could alone effect compara-  
tively little. Look at our great cities and see  
what an immense amount of labor it required  
to build them; but the labor itself is small  
compared with the skill required to manage  
and apply that labor to advantage. A horse  
may pull a wagon, but he cannot make one; a  
man who is a skillful mechanic can both make  
and pull a wagon. The bootblack and the  
house-painter may apply the brush as vigorously  
and with much more physical labor than an art-  
ist, yet never be able to produce as great re-  
sults. A man may be a giant physically; if he  
has no skill or mental power of applying his  
labor properly, he is no better than a horse. If  
the power of labor did not extend beyond mere  
physical strength, we should have no splendid  
buildings, fine monuments, great railroads,  
steamboats, and public improvements; our do-  
mestic machinery and conveniences would be  
sadly deficient. The great Niagara has a power  
in its own way that challenges the wonder and  
the admiration of the world; but what is it  
after all? A great, noisy, turbulent bully of a  
river that makes the very earth tremble with its  
power and fills the air with the mist of its  
breath, threatening to destroy everything that  
comes in its reach; while those quiet, unassuming  
little streams that pass through our meadows  
and valleys, are turning the grist mill, saw mill,  
woollen mill, iron factory, and carrying heavy bur-  
dens of freight; these small streams do this, while  
the blustering Niagara does nothing but make a  
monotonous display of power. The little streams  
are adapted to the mental power of man, by  
which their power of usefulness is limited only  
by the age of man and the world; while Niaga-  
ra is a mere thing of power without the utility,  
reminding us of a great many men and boys in  
the world. They have physical or brute force  
—great, ignorant, noisy, conceited, of no  
earthly use beyond a natural curiosity. Labor  
is powerful only when accompanied by the  
necessary skill to direct it. The savage has all  
the physical power of labor for constructing  
railroads, steamships, machinery, but he lacks  
the skill; consequently his labor has no con-  
structive or real power. Labor has great power  
when backed with good brains, but mere  
physical labor, without skill, is comparatively a  
weak thing.—*Cultivator*.

APPEAL TO MOTHERS.—If you are ever to ac-  
complish something in life, it is because you are  
accomplishing something now. So many women  
say, after my house and grounds are in perfect  
order, after my wardrobe is made exactly to  
suit me, after we have become rich, after I have  
secured perfect health, then I intend to give  
more time to my husband and children, to so-  
ciety and philanthropy, and life rounds itself  
into an inglorious aftermath. It is as suicidal  
to postpone happiness and usefulness as it is for  
a mother to leave her children to a nurse through-  
out their early years, and expect to win their  
deepest love afterward. The present days, the  
present hour is rich with glorious opportunity  
for women to render royal service to the home,  
the State, and nation. There is "blessed work  
to be done, blessed work, with blessed wages,"  
and it is pitiful to see women of education, of  
experience, women who believe in "immortal-  
ity," bending all their energies to shopping ex-  
cursions and the matching of ribbons, and saying  
to all the vast interests that vitally affect the  
happiness of millions, "bide your time, wait.  
I know children are starving and the hearts of  
women are breaking, fathers and mothers wail  
in agony over dishonored sons and daughters;  
red-handed 'crime' and 'slander' endanger alike  
the innocent and guilty. The world needs help,  
number me among the helpers. I will go to  
work soon, but then, you know, I have not de-  
cided upon the shade and shape of my fall  
bonnet."—*Mrs. Herbert, in Inter-Ocean*.

THE MELODIOPHON.—Several contrivances  
have been invented to record the notes of melo-  
dies played on a piano, organ, or other key in-  
strument, but were all more or less useless on  
account of their complexity, imperfectness, or  
expense. Zigliani's melodiophon is very sim-  
ple, usable and cheap. A double flat spring  
placed under each key is connected with a  
battery and with a recording apparatus, which  
consists of a comb provided with insulated teeth  
gently resting on a copper cylinder. A strip of  
ruled and chemically prepared paper is drawn  
over this roller by a clock-work, and receives  
the impressions or marks of the teeth of the  
comb. This clockwork can be regulated so as  
to cause the paper to move in conformity with  
the time kept by a person playing the instru-  
ment. Every time a key is depressed the cir-  
cuit is closed, and the electricity, passing  
through one of the teeth of the comb, makes a  
mark corresponding to the key that has been  
depressed.

The chief secret in comfort lies in not suffering  
trifles to vex one, and in prudently cultivating  
an undergrowth of small pleasures, since very  
few great ones are let on long leases.

## Happy Homes.

Rev. Edward Everett Hale lately preached  
upon the subject of "happy homes." Of a  
hundred novels, said the speaker, tracing the  
fortunes of a young life, 99 end in the establish-  
ment of a happy home. Hunted up and down,  
through a thousand dangers, a young happy  
husband and his young happy wife look their  
last on the reader as they open the door which  
is to admit them into the untold blessings of a  
happy home. Thus precisely does the novel  
show what is the chief and central work and  
duty of life—the creation of a happy home.  
Erskine's definition was: "They will tell you of  
this or that detail, but at bottom, the reason  
men form government, and the object for which  
government is to be sustained, is that men may  
live in happy homes." The prodigal son after  
his wanderings returns home. We should find  
place for more thorough study as to the duty of  
making homes and maintaining them, so that  
we may show the kingdom of God on earth  
most distinctly and most often. While you  
spend years of a boy's life in teaching him a  
smattering of the dead languages, might you  
not occupy his mind with thoughts and his life  
with habits which would tend to make for him  
a happy home when he shall be a man? Per-  
sons who spend their time to show that women  
ought not to have the suffrage, say that it is  
woman's business to make home happy. So it  
is. But it just as much man's business. To  
both it is by far the most important business  
they have in hand. Special political duties,  
special duties as church members, their success  
in their shops or at the bench, is as nothing  
compared with the duty and success in making  
home bright and happy as the very kingdom of  
the living God.

There are many tendencies of modern life  
which turn persons away from their duties in  
regard to home. One is the tendency to do  
things on a large scale. Our public school sys-  
tem, because it is large, is asked to accept and  
discharge duties which belong at home. Public  
school teachers are expected to train children  
in good manners, but the home is disgraced  
which has sent unmanly children to school.  
Industrial schools are formed to teach boys  
duties which they learned at home 100 years  
ago. Colleges are proposed for women, in which  
they should be taught how to make bread, how  
to broil a steak, and even how to amuse a child  
and how to set a table. As if there were any  
place where a girl could learn any such thing  
nearly as well as she could, if she chose, under  
the humblest roof in America. For substantial  
amusement as well as for fundamental educa-  
tion there is no place like home. In the Swiss  
system of watchmaking the workman does his  
part at home, and the parts made in different  
homes are brought to the shop and fitted. In  
the American system the workman and the  
workwoman come to the shop to work, leaving  
their children to the chances of the district  
school. The American system may prove the  
best for watches, but the Swiss system is the  
best for children. It is said that in old Paris  
the artisans were scattered throughout the city,  
living near their shops; but that Napoleon's  
avenues and boulevards drove them from such  
homes and forced them to huddle together, and  
to such crowding was due the excesses of the  
Commune. From such facts, wherever found,  
such a result must follow. I have no doubt  
that the greatest political question of all will be  
decided by reference direct to the home.

Our American experiment in conceding the  
suffrage to every man over 21 has not been a  
remarkably successful one. I do not believe  
the suffrage is to be doled out by property as it  
used to be in England. The suffrage belongs  
to those who have a vital interest in the preser-  
vation of the social or organic life of the State.  
It belongs to people who have established  
homes, and it is my belief that to a homestead  
suffrage the free nations of the world will  
ultimately recur. Children should be so trained  
that at 15 they will love home better than any  
other place. Our amusements should be such  
as not to separate father from mother or child-  
ren from parents. Children should find in their  
parents their best companions, from whom they  
have no secrets. Fathers and mothers should  
make home glad, cheerful and beautiful. The  
original trinity is the sacred trinity of the father,  
the mother and the child. In the last inter-  
view of the Saviour with the twelve, at the  
moment when he drew furthest the veil which  
separates this world from the other, he did so  
by saying, "In my Father's house are many  
homes. Heaven, when we pass from earth,  
will be a life of homes. We need not wait till  
we die to enter that Heaven. The Kingdom of  
Heaven is at hand; wherever faith and hope  
and love combine is Heaven.

A STORY OF OLD PETER WILLARD.—Peter  
was apt to be very short of funds, and one 4th  
of July, being in need of a little money to  
"celebrate" with, he hit upon an excellent ex-  
pedient for a draft from one of his particular  
friends, Judge Paine. Going up to him, he  
said: "Judge Paine, I drove twelve geese out  
of your mowing to-day." "Did you?" replied  
the Judge, kindly, "then you ought to have a  
quarter," passing it over to him. Peter left,  
but soon after returned, saying: "Judge Paine,  
I didn't tell you the whole story—I drove the  
geese in first."



## Chaff.

"If there's no moonlight, will you meet me by gaslight, dearest Juliana?" "No, Augustus, I won't," she replied; "I'm no gas meter."

"GREEN street!" called out the conductor. "Green's treat, eh?" ejaculated an inebriated individual in the corner of the car; "all right, (hic) just's lieve drink off Green (hic) 's any other man."

On a homeward-bound Charlestown car a jolly-looking Irishman was saluted with the remark: "Tim, your house was blown away."

"Deed, thin, it isn't," he answered, "for I have the key in my pocket."

PROFESSOR—What is monarchy? Freshman—A people governed by a king. Professor—Who would reign if the king should die? Freshman—The queen. Professor—And if the queen should die? Freshman—The jack.

NEWSPAPER estimates on crops do not take into consideration the damage done by an old man in chasing his sons across ten acres of growing wheat with a fence rail, because they happened to remark that it was a good day for fishing.

A WOMAN cured her husband of staying out late at night by going to the door when he came home and whispering through the keyhole, "Is that you, Willie?" Her husband's name is John, and he stays at home every night now, and sleeps with one eye open and a pistol under his pillow.

THE story is told that Longfellow and Fields were making a short pedestrian tour some few years since, when to their surprise an angry bull stood in the pathway, evidently intending to demolish both poet and publisher. "I think," said Fields, "that it will be prudent to give this reviewer a wide margin." "Yes," replied the poet, "it appears to be a disputed passage."

A GERMAN clergyman, who was traveling, stopped at an inn much frequented by wags and jokers. The guests used all their artillery of wit upon him without eliciting a remark. The clergyman ate his dinner quietly, apparently without observing the gibes and sneers of his neighbors. One of them at last said to him: "Well I wonder at your patience! Have you not heard all that has been said to you?" "Oh, yes, but I am used to it. Do you know who I am?" "No, sir." "Well I will inform you. I am chaplain of a lunatic asylum. Such remarks have no effect upon me."

FUTURE OF THE PACIFIC SLOPE.—There are possible homes on this coast for two hundred millions of people, and there are or will be two hundred millions of people to occupy them. The advance guard is here, and it has the pluck, the grit and the intelligence to carve out those homes, and it intends to do it. The soil of nearly the entire slope is more perfect and better adapted to the production of food than that of the Atlantic slope. Energy and intelligence will turn every acre of it to human uses. If we refuse to perform the work somebody else will take our vacant places and carry the enterprise to a successful termination. If we don't like the prospect we can emigrate. The triumph will be achieved nevertheless. There are lumber, stone and other materials in abundance to build houses, stores and barns for these millions. The construction of all this work will make millions rich and prosperous. There are mines enough, or will be, to make other millions rich and prosperous. Every conceivable thing that man finds in the earth for use and profit, exists here in abundance. Energy will dig and find whatever we may need, and men will be found to do the work, whether we growl or not. The islands, coasts and forests yield valuable furs, and their capture and sale will furnish untold thousands with occupations. The extensive fisheries of the coast, will, at no distant day, provide occupations for more people than now occupy California. Alaska alone gives more scope for commercial fishing than the North Atlantic Coast, which sustains a million of people, chiefly dependent upon that industry. —*Sac. Bee.*

THE VOICE OF WORSHIP.—This is the appropriate title of a collection of music for choirs, singing schools, and musical conventions. By L. O. Emerson. The members of choirs and singing classes, like other people, like what is new and fresh, although the new may not be better than the old. Hence Mr. Emerson's books, which appear with a certain regularity, and which are in every respect first-class, are always heartily welcomed. "The Voice of Worship" is somewhat smaller than previous church music books by the same author, but is of lower price, its "\$9 per dozen," carrying us back to prices "before the war." It has about 175 psalm tunes, 60 anthems, and about as many glees, with 100 exercises, solfeggios and easy tunes for singing school use. The anthems will furnish opening pieces for a choir during the greater portion of a year. The new psalm tunes will, it is to be hoped, enable us to hear some variety of singing, which will partly relieve the monotony of the 10 or 12 well-worn congregational "airs," which are getting to be a little wearisome to musical ears, and the whole 300 or 400 melodies in the book furnish abundant material, with which a wide awake singing school teacher may make his winter classes a constant delight to all comers. The publishers are Oliver Ditson & Co., Boston, Mass.

## Young Folks' Column.

## Our Puzzle Box.

## Numerical Enigma.

I am composed of 45 letters.  
My 23, 41, 12, 21, signifies principal.  
My 38, 14, 36, 40, is the side of a building.  
My 5, 1, 10, 3, is a large apartment.  
My 2, 29, 24, 19, is a narrow passage.  
My 44, 8, 7, is to propel in water.  
My 6, 9, 35, is to sin.  
My 4, 17, 44, 11, 42, is behind time.  
My 13, 20, 23, 22, is a familiar mineral substance.  
My 15, 16, 41, 42, is to remain.  
My 18, 8, 29, 27, is benevolent.  
My 24, 32, 11, is the termination.  
My 30, 34, 43, 22, is reward.  
My 33, 1, 33, is a tropical fruit.  
My 31, 44, 36, is before.  
My 39, 20, 45, 15, is to depart from us.  
My whole is one of the illustrious sayings of Shakespeare.

UNCLE CLAUDE.

## Hidden Plants and Trees.

1. Amos said he should go away.
2. The hash has become quite cold.
3. George has gone to Akron.
4. I see the top spin every day.
5. The map pleased the lady much.
6. A pea resembles a ball in shape.
7. She gave Tom a pleasant smile.
8. I purchased the goods at a shop in Kane.

DORA.

## Diamond Puzzle.

1. In fortunate fairies.
2. A price for services rendered.
3. Apprehensions.
4. To commit error.
5. Found in sinful transgressions.

UNCLE CLAUDE.

## Charade.

In her close cage, morose and stern,  
Despondent lurked my first one day;  
Her mind then seemed on evil bent,  
For from all friends she turned away.

Till suddenly she starts and screams—  
A fierce, wild scream as of demons dire—  
Then tugs at her grim prison bars,  
And howls my second in her ire.

Her dinner brought, her anger cools;  
The meal is not, her self she knows,  
An one such as my whole describes,  
She eats, and soon she placid grows.

MELANCHTON.

## Metagram.

Whole, I am a carriage; change my head, and I become to slap; again, and I am to prate; again, and I am a Hebrew measure; again, and I am to blab; again, and I am queen of the fairies; again, and I am to seize; again, and I am a tag; again, and I am a stick used by masons in mixing hair with mortar.

J. W. H.

## Answers to Last Puzzles.

CROSS WORD ENIGMA.—Forget-me not.  
BLANKS.—1. Pear, pea; 2. Part, art; 3. Acre, ace; 4. Pent, pet.  
DOUBLE ACROSTIC.—

M are H  
O bje C (t)  
R igh T  
S em I  
E i F

PROBLEM.—FIVE.  
ARITHMETICS.—1. Florida; 2. Missouri; 3. Malabar; 4. Jamaica; 5. Mobile; 6. Minneapolis.

## The Great Railroad Accident.

It was on the back piazza where the accident happened, and the railroad was the hammock. One day Mamie, Florence and Bob came out from breakfast with their arms full of dolls and tin soldiers, to take a ride. They made believe that the train was going very fast indeed, and they had a great time getting on board. Bob was the engineer, Mamie the conductor, and Florence the brakeman, who called out the names of the stations. Before they started, all the dolls and the soldiers had been put on the bay-window seat, to be taken up as passengers along the road. Bob, the engineer, took hold of the rope which was fastened to the blind-catch in the side of the house, Mamie, the conductor, shouted "All aboard!" and Florence, the brakeman, called out "Fan Sanfrisco" before they had gone an inch!

You see that the engineer, by pulling on the rope, could swing the hammock back and forth, and when the train was going very fast the conductor could reach her passengers on the window-seat and drag them on board. One would think that it ought to take a long time to go from San Francisco, California, to New Jersey; but in about two minutes the brakeman called out "Newark!" the conductor made a grab at the passengers on the window-seat, and hauled on board a big handful, although two tin soldiers and a rubber doll fell to the ground and were instantly killed. On rushed the train, passing rapidly through "London," "New York" and "Africa"; but just as they were approaching "Quashville," the very last station on the time-table, and where they always stopped for refreshments, a cow got upon the track. Then there was a great ringing of make-believe bells and whistling of make-believe whistles—enough to make a buffalo run for his life. But, alas! The rope that held the hammock had been swinging on the big iron hook a little too long, for it was nearly worn through, and just as the cow jumped off the track, bang went the railroad down on the piazza! The china-doll passengers were broken all to pieces, and the tin soldiers were bent up double; but what was worse, the engineer, conductor and brakeman were dreadfully bumped up. Yet they must have reached "Quashville" in due time, for I saw them having their refreshments as usual, with just as good appetites as ever, although there was a piece of wet brown paper on each of their little white foreheads.—*N. Y. Tribune, Jr.*

## GOOD HEALTH.

## Blistering as a Remedy.

Dr. H. S. Anderson, in his recent "Harveian Discourse," published in the *Edinburgh Medical Journal*, speaks as follows of the uses of blistering:

Another remedy, which I fear is somewhat unduly neglected also, is counter-irritation by means of blistering; and I think I have observed in some young practitioners an approach to something like terror when blistering is spoken of as a remedy that may frequently be used. Certainly, as regards children's diseases, there is more of this fear than there should be. It has frequently, for example, been my experience to see children, in consultation with a younger practitioner, when blistering in acute head affections had never been dreamed of. In nearly all acute inflammatory affections of the brain, tubercular or not, in children, I am strongly of opinion that after shaving the head the application of blistering fluid has a most rapid and satisfactory effect. Inflammatory attacks also of the peritoneum and chest in children are often controlled by blistering, although the size of the vesicatory and the length of time applied must be carefully considered. And in the rheumatic affections of the joints in adults repeated blistering has often the happiest results. For many chronic conditions, also, counter-irritation has always held a high place in my list of remedies. In chronic tubercular affections of both chest and abdomen I think occasional and repeated blistering is frequently beneficial, and also in chronic and obscure head and other affections of the nervous system. For example, a blister over the roots of the nerves in herpes zoster often relieves the neuralgic pain so generally present, and often so difficult to get rid of. In diphtheritic paralysis, also, blistering the nape of the neck, and even down the spine, often expedites cure in a wonderful way. In the uterine or ovarian pain so often complained of in the left side there is no better remedy, sometimes, than a succession of fly-blisters, and the tenderness of spinal irritation is frequently relieved, if not got rid of by the same means. In chronic effusions the use of blisters is still fully acknowledged, and do not, therefore, call for special mention.

## Peach Juice for Bee Stings.

EDITORS PRESS:—When I began picking peaches, the bees did not like to be interrupted in their feast, and notified me to stop taking the fruit by repeated stings. The application of the juice of the peach has prevented pain and swelling; whereas, heretofore, clay, ammonia, sweet oil, internally and externally, have been applied without success. The "little fuf" was found "too heavy." I have even been laid up for two or three days, the poison assuming the form of erysipelas. The peach juice has proved an effectual remedy. Others affected in like manner may be benefited by the remedy.

GEO. C. SWAN.

San Diego, Cal.

ANTAGONISTIC AGENTS.—*Morphia*—The antagonistic action of morphia and atropia upon respiration is brought out in strong contrast, and attention is called to the similarity of their action upon the reflex mechanism. In the coma of opium sleep or poison there is a low blood pressure, while the delirium of belladonna poison is due to the high blood pressure, induced by this agent. It is suggested that belladonna will enable the centers to continue in action under large doses of morphia without marked interference with the action of the latter upon the cerebral spinal centers. *Strychnia*—This agent exerts a powerful influence over poisonous doses of chloral, and chloral exerts even a greater power in counteracting the toxic effects of strychnia. From this fact it is argued that strychnia stimulates respiration, and the author recommends its use in chronic bronchitis, emphysema, etc., especially as it is also known to act as a cardiac stimulant. Dr. Fothergill considers strychnia superior to digitalis as an antidote to aconite.

A NEW ANÆSTHETIC.—The Paris correspondent of the *Lancet* gives some particulars of Prof. Bert's new method of producing anaesthesia. A mixture of 85 parts of nitrous oxide and 15 parts of oxygen was inhaled by a patient under increased atmospheric pressure. The experimenters were subject to the same pressure, but it was not sufficient to cause serious discomfort. In about 15 seconds the patient was completely insensible and the muscles relaxed. Dr. Labbe then operated for ingrowing toe nail, and the patient recovered consciousness in less than a minute after the anaesthetic was withdrawn. Under ordinary pressure the mixture does not produce any anaesthetic effect.

THE DEATH-RUN.—An eminent English surgeon states, on no account, except that serious fire was on hand, or to save a life, should any person ever run after having reached 50 years of age. The reason alleged was, that a tendency to heart disease, apoplexy, etc., might suddenly be brought to a climax by violent exertion, and especially with corpulent persons. Mr. William Adamson, aged 56 years, residing at Germantown, Pa., lately ran a considerable distance to reach a train of cars and fell dead. A post-mortem examination showed that he died of heart disease.

## DOMESTIC ECONOMY.

## Mr. Delmonico Says, "Save the Pieces."

Some newspaper correspondent has been interviewing Delmonico, the famous New York restaurateur, and gains the following practical advice: Americans ought to copy "the French method of utilizing small bits of raw meats and fowls, and of re-cooking all kinds of cold joints and pieces of cooked meat which remain day by day from every dinner in almost every family." The success of such dishes depends mainly on the sauce, which is best made from broth. The following is his recipe for a favorite sauce: "Take an ounce of ham or bacon, cut it up in small pieces, and fry in hot fat. To this add an onion and carrot, cut up, thicken with flour, then add a pint or quart of broth, according to quantity desired; season with pepper and salt and any spice or herb that is relished (better though without spice), and let simmer for an hour; skim carefully and strain. A wine-glass of any wine may be added if liked." Cold roast or broiled beef or mutton may be cut into small squares, fried brown in butter, and then gently stewed in the sauce above described. Mr. Delmonico describes croquettes as the attractive French substitute for American hash, and tells how to make them: "Veal, mutton, lamb, sweet-breads, almost any of the lighter meats, besides cold chicken and turkey, can be most deliciously turned into croquettes. Chop the meat very fine. Chop up an onion, fry it in an ounce of butter, and add a teaspoonful of flour. Stir well, and then add the chopped meat and a little broth, salt, pepper, and nutmeg. Stir for two or three minutes, then add the yolks of two eggs, and turn the whole mixture into a dish to cool. When cold, mix well together again. Divide up into parts for the croquettes; roll into the desired shape in bread crumbs. Dip in beaten egg, then into bread crumbs again, and fry crisp—a bright golden color. Any of these croquettes may be served plain, or with tomato sauce, or garniture of vegetables."

GRAPE JAM.—Clara Francis gives the *Prairie Farmer* the following: Choose dead ripe, tender-skinned grapes; stem them, then weigh and allow half a pound of sugar to each pound of fruit. Push the pulp from the skins and stew it in a porcelain kettle until it can be separated from the seeds by straining through a sieve. Put the strained pulp and skins, together with the juice, into a preserving kettle and cook, closely covered, until the skins are tender, after which put in the sugar and stir until well dissolved. When the jam is just ready to boil again, put it into glass jars and screw down the tops tight. Be sure that the rubbers are close and firm. Set the jars on a wet towel and put a silver spoon in each while filling, to prevent their cracking. Tighten the tops as the fruit cools until they can be moved no further. Keep in a dark, cool place.

REMOVING OBSTINATE GLASS STOPPERS.—The obstinate sticking of glass stoppers in bottles is a constant source of trouble, not to say of profanity, in the laboratory, and many methods of loosening them have been suggested. These are all useful, though each of them fails in certain cases, and another has to be tried. The following, given in the *English Mechanic*, will be likely to answer the purpose when the shape of the stopper and of the neck of the bottle admits of its use: "Take two pieces of wood, put them between the neck of the bottle and the lower part of the stopper. Having fixed them securely by a piece of string, soak the whole affair in water, say ten hours; if the wood has not swelled enough, then pour some hot water over the wood, and as it swells (which it must) out comes the stopper."

STAINING PINE.—The *Northeastern Lumberman* recommends the following manner of staining pine to present black walnut: Put pulverized asphaltum into a bowl with about twice its bulk of turpentine and set where it is warm, shaking from time to time until dissolved; then strain and apply with either a cloth or a stiff brush. Try a little first, and if the stain be too dark, thin it with turpentine. If desirable to bring out the grain still more, give a coat of boiled oil and turpentine. When the wood is thoroughly dry, polish with a mixture of two parts shellac varnish and one part boiled oil. Apply by putting a few drops at a time on a cloth and rubbing briskly over the wood.

BAKED INDIAN PUDDING.—Put one quart of milk on the stove in a saucepan; as soon as scalding hot, stir in a teaspoonful of corn meal, remove from the stove and add another quart of milk and cream (if it is all cream it will not spoil the pudding), one teaspoonful of molasses, a little salt, half a teaspoonful of ginger, and one teaspoonful of allspice. Pour into a pudding dish and bake about three hours. Do not have the oven very hot, as it will scorch easily. Coarse meal is much better than fine for a baked pudding.

CRACKERS.—To one quart of light bread dough add one teaspoonful of shortening and half a teaspoonful of soda, then knead in flour until you have a very stiff dough; roll and pound with the rolling pin for 15 or 20 minutes, then knead and roll thin and cut with a small cutter, put in a dripping pan, pick with a fork and bake. Graham crackers may be made in the same way.





DEWEY & CO., Publishers.  
A. T. DEWEY. W. B. EWER.  
Office, 202 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.  
ADVERTISING RATES: 1 week, 1 month, 3 mos. 12 mos.  
Per line..... .25 .80 \$2.00 \$5.00  
Half inch (1 square)..... \$1.60 \$3.00 7.50 24.00  
One inch..... .2.00 5.00 14.00 40.00

The Scientific Press Patent Agency.  
DEWEY & CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. G. H. STRONG

SAN FRANCISCO:  
Saturday, Sept. 20, 1879.

### TABLE OF CONTENTS.

**EDITORIALS.**—The Cuthbert Raspberry; The Growth of California; Hungry Europe, 177. The Week; Filth in the Dairy; Notes on the Wool Trade, 184. Derrickson's Ten Feet Extension Rule, 185.  
**ILLUSTRATIONS.**—The Cuthbert Raspberry—A New Market Variety, 177. Derrickson's Ten Feet Extension Rule, 185.  
**QUERIES AND REPLIES.**—Root Grafting—Almond Growing; Poisoned Water; Alfalfa in Contra Costa; The Diabrotica, 184.  
**HORTICULTURE.**—The Best Fruits to Cultivate; A Frugivorous Colony; Cherry and Grapes; California Fruit in the East, 178.  
**POULTRY YARD.**—A Grievous Chicken Parasite in Australia; Salt for Poultry, 178.  
**THE FIELD.**—Egyptian Corn and Pop-Corn, 178.  
**THE STOCK YARD.**—Stock Quarantine in South Australia; Improved Refrigerating Apparatus; Curing Beef by Injecting Brine, 179.  
**THE DAIRY.**—International Dairy Fair in New York; Green Rye as Dairy Feed, 179.  
**ARBORICULTURE.**—Fruit Tree Tap Roots, 179.  
**PATRONS OF HUSBANDRY.**—The Progress of California. Grange Suggestions, 180.  
**AGRICULTURAL NOTES** from the various counties of California, Nevada and Idaho, 181.  
**NEWS IN BRIEF** on page 181 and other pages.  
**HOME CIRCLE.**—Mechanic Art (poetry); Mountain-Top Letters—No. 4; Increase of Pernicious Literature; Labor, Physical and Mental; Appeal to Mothers; The Melodiograph; Happy Homes; A Story of Old Peter Willard, 182. Chaff; Future of the Pacific Slope; The Voice of Worship, 183.  
**YOUNG FOLKS' COLUMN.**—Our Puzzle Box; The Great Railroad Accident, 183.  
**GOOD HEALTH.**—Blistering as a Remedy; Peach Juice for Bee Stings; Antagonistic Agents; A New Anæsthetic; The Death-Run, 183.  
**DOMESTIC ECONOMY.**—Mr. Delmonico says, "Save the Pieces;" Grape Jam; Removing Obstinate Glass Stoppers; Staining Pine; Baked Indian Pudding; Crackers, 183.  
**MISCELLANEOUS.**—Live Stock at the State Fair, 185. Twenty-nine Years a State; Fraud.—No. 1; Belt Lacing, 186. The State Fair; The State Fair Premium List, 188. Golden Gate Fair Premium List, 189.

### Business Announcements.

Money to Loan, Exchange & Mart, Santa Cruz, Cal.

### The Week.

Not less than five agricultural fairs are in progress as we write in as many different districts and counties of our State. The week may, therefore, be considered as a gala time in many neighborhoods. Work is for the time laid aside, and while the farmer and his good wife pack the smaller children into the capacious wagon and jog on through the dust with one of the farm teams, it is quite likely that the oldest son and the oldest daughter are spinning along, in separate buggies but not alone, behind two of the highest steppers in the neighborhood. Pa and Ma, Sissie and Bobbie, representing the long and short of the family, are consigned to each other's old-fashioned company, while the unrest, the aspirations, the heartaches, or the ecstasies, are shipped off by themselves in the finest packages which the rural dressmaker and tailor can fabricate. Thus they go to the fair; in various diverse occupations the day passes, and the homeward trip is undertaken. Now the speed reverses, and while father pokes his horses into a lively trot and mother does her best to hold the sleeping babies in the seat beside her, the buggies may be seen creeping through the twilight, as though the miles were far too short for the discussion of the momentous affairs which lie near the throat, but might as well be in the boots for all the tongue can reach them. And thus the opportunity is lost—perhaps forever. For before another fair can bring its favoring twilight ride and solitude, bolder voices will say the words and win the wives.

Aside from the fairs, the agriculture of the State is full of life. The wool clipping, the hop picking, the grape gathering for vintage or raisins, the plucking and boxing of the later fruits, the canning of cords of corn and tomatoes—all these and other special lines of work are progressing rapidly. Thus again we are drawing near the season of short days and long storms, the reign of drenching and darkness which will be the surety of another year's prosperity.

### Filth in the Dairy.

The quality of butter and cheese probably suffers more from want of cleanliness in dairy operations than from any other one cause. Much as the evil has been preached against, anyone who goes abroad among the dairies of any country, will find that the factor of dirt enters largely into the equation of milking or dairy manufacturing. This evil has for years received the most emphatic denunciation from those who had the best interest of the dairy at heart. An old dairy friend of ours in New York, whose righteous soul was frequently vexed by what he saw around him, once exclaimed: "The spectacle of a filthy man milking a filthy cow in a filthy stable, with filthy hands into a filthy pail—this is the perfection of filth." Indeed, unless this filth can be annihilated from dairying, there is little hope for any general improvement of the product. Dr. Voelker, in a treatise upon cheese-making, says: "No amount of experience will ever make men or women first-class cheese-makers if they do not naturally possess habits of great cleanliness, manipulative skill, and do not take pride in performing, with unremitting attention, perseverance, steady alacrity, downright hard work; for such is the work devolving upon the cheese-maker if he wants to turn out first-class cheese, whether he be assisted by labor-saving machinery or dependent entirely upon his manipulative skill. Treatises on cheese-making are all very good in their way, but they never can impart to the operator those desirable habits to which allusion has been made, and at the best they only afford useful hints to experienced cheese-makers, but are not calculated to teach an inexperienced hand an art which depends so much on practical skill and industrious and good habits as that of cheese-making."

It has often been explained that milk is most prone to take up any foul odor to which it may be exposed, and this evil is certainly transmitted to the butter and cheese. But there are cases constantly coming to light where the uncleanness of the milker results in the incorporation of material filth in the milk. Every town milk buyer should take some steps to assure himself that the source whence his milk comes is not of this character, for be it remembered it is not merely a question of tastes and prejudices, but the filth which may be introduced into the milk is prone to engender disease in us, and especially in our little ones whose main source of sustenance may be from the can of the milkman.

A case of unmitigated abomination has come to light in a Pacific coast town, not located in this State, however. A newspaper correspondent has made a tour through the little valleys whence the town's milk is obtained, and these are some of his observations: "The milkers sit down to milk their cows without washing, their hands all dirt and slime, and their clothes reeking with filth. To a cleanly person who has had experience in milking cows the dirty practice of immersing both hands in the milk-pail in order to dampen the teats would seem unbearable; but to these dairymen it is in no wise considered as uncleanly, and is in all cases practiced. The dirt and filth from their hands thus becomes moistened and runs into the bucket, mingling with the milk and giving it a dirty color. No strainer can be procured fine enough to separate this dirt from the milk. Now we will follow the milkers into the dairy, and see if their practices there can compete with those of the milking-yard. Of all places unpleasant to the olfactory organs this is among the worst. And why? Among the most important reasons is that of establishing their hopen in close conjunction with the dairy-house, so that no trouble may be had in carrying the refuse milk to the swine. No thought of being in any wise clean seems to enter the heads of these worse than Chinamen—worse, so far as cleanliness is concerned."

This evil seems great enough, but there are evils greater still. A case has lately been tried in an English court, and a dairymen convicted for this most heinous offense. The milk inspector of the town caught a milkman putting water in his cans from a little stream which they call a "reen." The inspector traced the reen from one end to the other, and found it in a filthy state, very much like a cesspool. At another time the inspector watched the milkman and saw him take one tin down to the reen, and took three measures of water from the reen and put it into the tin. Then he walked up to a cow, and commenced milking into the tin which held the water. The reen is the receptacle for filth from water-closets and piggeries. Upon the trial, Dr. Davies, the officer of health for the borough, said from the evidence he had heard and the liability to foul this ditch, he was of opinion that the milkman's practice was calculated to produce typhoid fever. When such water is mixed with milk it cannot be detected by casual observation. The milkman was convicted in spite of his sneaking denial, and the judge pronounced the case, as the worst which could be brought forward under the act for the punishment of such offenses.

We cite these abominations to show how great lengths uncleanliness in the dairy can reach. There are many minor forms of the evil which are apt to creep in, unless the owner of a dairy keeps most vigilant watch upon his men. It should be a matter of conscience to ensure purity in dairy practice, and it is also a matter which may materially affect profits.

### QUERIES AND REPLIES.

#### Root Grafting—Almond Growing.

**EDITORS PRESS:**—What is the best time for grafting in the root? Will almond trees grow on adobe hills—that is, adobe surface but crumbling limestone underneath? What kinds of fruit trees will do best on such a situation and soil? There is no rain in summer. The location is in Contra Costa county, to the south and on the east of Mount Diablo.—READER, Antioch, Cal.

**EDITORS PRESS:**—In answer to the above questions we would say, First. Root grafting is a very simple and successful mode for making apple, pear, quince, and plum trees. The best time is in January. The root of the seedling should be exposed below the surface of the ground, and after grafting should be well wrapped with a strip of cloth previously dipped in melted grafting wax. The cloth is prepared by dipping it into hot grafting wax, and then drawing it out between two pieces of board so as to leave as little as possible of the melted wax in the cloth. It is then spread out to cool; and afterwards torn into strips, one-half inch wide for small trees. The seedlings may be taken up and the roots cut into pieces six inches long, and a scion grafted on each. The trees thus made should be healed out in moist sand until the ground is in good order for planting; that is, not too wet. To plant a tree in wet ground is as fatal as putting the roots into a fire. Wait until the ground is suitable for planting corn; even if it should not come until April. Root-grafting may be performed any time after the leaf falls until the buds commence to burst in the spring.

Adobe ground is unsuitable for the almond and peach. If there is a light, porous, moist soil within a foot or two of the surface, it will do. Often we find in the warm belt of the mountain sides a loose, rocky soil, well suited for its growth. It is no use to plant in hard, dry land. There has been a vast amount of useless experiment in planting. We are learning that this nut may be produced in great perfection on mountain sides, almost useless for other purposes. There is very little doubt but that we will soon supply the United States with all the almonds consumed; and to do this we must have cheap labor. We cannot compete with France, where labor can be had for from 15 to 25 cents a day.

As to the land south and east from Mt. Diablo, there are places where any tree will grow but the land spoken of, with a calcareous subsoil, would indicate a location for grapes. Fruit trees must have plenty of water within reach of the roots.—W. W. BRIER, Centerville, Cal.

#### Poisoned Water.

**EDITORS PRESS:**—In your issue of September 13th Mr. E. W. Hilgard makes many plain statements which I believe to be true. I have resided in California eighteen months, and have been surprised at the quantity of "galvanized" pipe used for water. Some eight years ago the matter was fully discussed in Boston and New England papers, and the pipe condemned as unfit for use. The Boston *Journal of Chemistry*, after full investigation, warned the people against its use for conveyance of water, and my impression is that but small quantity of such pipe is now used in the Eastern States.

I think all waters act upon zinc, and in no case is it safe to drink water after it has passed through "galvanized" pipe. I have known of one death, and many cases of sickness where the cause was traced directly to the use of water through "galvanized" pipe.

While visiting the Deaf and Dumb Institution at Berkeley I called attention to the large amount of "galvanized" pipe in use for conveyance of water in that institution. I sent to Boston for papers giving the analysis of water through "galvanized" pipe; also, the action of a town near Boston in regard to "galvanized" pipe. I am told the matter was submitted to the State assayer for investigation.

Some of the symptoms of zinc poison: Pains over and about the eyes, soreness in the pit of stomach, weakness of knees, numbness of hands and feet.—W. P. S., Veleano, Amador county.

#### Alfalfa in Contra Costa.

**EDITORS PRESS:**—Will alfalfa grow on the hillsides south and east of Mount Diablo?—READER, Antioch.

**EDITORS PRESS:**—Alfalfa will not grow on adobe hills without irrigation, only as clover or hay-making grasses grow; reaching maturity and dying from lack of moisture. When irrigated, it is perennial upon the hillsides and in the valleys. In the tule region it needs no irrigation, but when flooded by an inundation is injured, and sometimes killed. In the valleys alfalfa becomes perennial when well set and its tap roots are down to moisture, otherwise it will mature and die. Gophers seem to be the natural enemies to alfalfa, and, unless destroyed, will inevitably ruin the crop. Alfalfa is the most profitable of all hay-making grasses, but the hardest to establish in dry regions.

On the plains, south and east of Mt. Diablo, alfalfa may be cultivated without irrigation with success if once well set. Favorable seasons are essential to this, and these do not ordinarily follow on the plains. An exception to the rule was taken advantage of by Mr. Matt Bollinger, of Point of Timber, who is, by the way, a model farmer. The result of his care and cultivation may be seen to-day near Point of Timber store, where he has 40 acres of alfalfa in splendid condition. From this he has cut this season three crops of hay. My informant

remarked, "If he cuts any more he will have to move it off to stack it."

Mr. C. Preston and Mr. Henry McCabe have some fine patches of alfalfa, which have been cultivated like Mr. Bollinger's, without irrigation. Some years ago, an effort was made on Marsh creek to establish alfalfa. Lack of moisture and abundance of gophers prevented this, but some roots remain and are perennial, showing that when the tap roots go down to moisture success is assured. There is a patch of alfalfa in or near Antioch, belonging to Mr. Wills; this from some cause is not prospering. In the San Ramon valley, on the Hemme ranch, in the Johnson field, alfalfa is being cultivated (I presume as an experiment). If it goes down to moisture, it will be a success. At present it is problematical. It is green in patches.

The propensity of alfalfa for moisture causes it to seek for it, the tap root boring through hard pan, going down six feet and more from the surface. Near Babbe's landing, the levee broke and inundated a field of alfalfa; when the waters receded, the alfalfa withered and died.

The conclusions reached are these: Alfalfa and gophers cannot live together. Alfalfa will not grow on adobe hills without irrigation. It will grow in the valleys, when once properly set, without irrigation, and become perennial. It will go down to moisture or die. The above will apply to all parts of California.—W. H. T., Martinez, Sept. 15th.

#### The Diabrotica.

**EDITORS PRESS:**—Please enclosed to find, in a small box a sample of the bug I wish to be informed on, its habits and mode of reproducing itself.—A. E., Haywards, Alameda Co. Cal.

This insect is the diabrotica, as we supposed from the hint of its work which our correspondent gave in his inquiry printed in the *RURAL* of September 6th. The diabrotica were fully discussed in our issues of June 14th and June 28th, 1879, to which our querist is referred. We are not aware that the steps of reproduction of this insect (*Diabrotica 12-punctata*) have been described. Its next of kin, the striped cucumber bug (*D. vittata*) has been fully studied. The larva is a small grub which lives in the ground and is believed to subsist on the roots of plants, etc. It enters the chrysalis state also in the ground, and comes forth from the ground a perfect beetle. This species requires about two months for its transformations, so that there are several generations during a summer. The *D. 12-punctata* is also quite as prolific, for we have noticed two broods already this summer, and the third is about due now if it is to come. To some entomologist who has time for the study, we would suggest that a good monograph on the *D. 12-punctata* would be a public benefit, for it is one of our severest pests and is yearly extending over wider areas.

#### ROAST BEEF IN THE NEW CONSTITUTION.

The most ingenious discovery of the astute is that there is a question of roast beef involved in our new Constitution. We read in an English exchange an article on the future of the imported beef supply of Great Britain these words: "The question that troubles real farmers most seriously, next to their present distress and indebtedness, is the likelihood of the American importations of fresh meat continuing or increasing. Everything seems to point to increase. Unless the wording of the new California Constitution should break up some of the hitherto untaxed ranches in that State, there is nothing at present that threatens to trammel the meat business." Now even if it should prove that the new Constitution should break up some of our "untaxed ranches," it would have no more effect upon the supply of beef to England than would the success of the Jeannotte expedition. The days of California as a great grazing State are over, and although we might produce a good quantity of beef if enough money could be had for it, there is no possibility of competing in price with the great States and Territories of the interior. The fact is that a good part of the San Francisco beef supply comes from beyond our borders. Either the English writer is a first-class prophet and discerns in the future a profitable industry for California, for which we have now no hope nor prospect; or else he is a little confused in his geography, and expects our new Constitution to smash up the great ranches of Texas and other States east of the "rockies," whence beef-cattle are now taken to England.

**SEEDLING PEACH.**—Seedling peaches are coming forward in considerable numbers. Captain Bradford, of San Rafael, sends us one of three peaches which ripened on a three-year-old seedling in his garden. The size is good, viz: Eight and one-half inches in circumference, the skin is very light creamy yellow, with the faintest suggestion of a blush on one side; the flesh is deep yellow, verging on the Crawford color, and deep red at the pit. The effect is rather startling, as the exterior of the fruit would lead one to expect a pale-colored flesh; although some varieties do show the contrary combination. The flesh is of good flavor and quite juicy, although it is rather coarse fibered. The stone is quite free. For so late a peach, with these good points, we should consider the seedling well worth propagation.

A DEFICIENCY of over \$20,000 has been discovered in the funds of the county treasury of Santa Cruz, and the Treasurer has been placed under arrest.



## Live Stock at the State Fair.

[Written for the Press by ROBERT ASHSURNER.]

Since our last visit to the State fair two years ago, there have been some important additions to the improvements on the grounds in the erection of sheds for the exhibition of farm machinery and implements, with shaft and pulleys for the working of any machinery by steam that exhibitors wish to have in motion. There has also been a spacious and well-ventilated amphitheater put up for the special purpose of exhibiting live stock before the judges, who are thus enabled to do their work without being exposed for some hours during the middle of the day to the heat of the sun.

In addition to the Short Horn cattle exhibited at Oakland, there were 13 head from Mr. Overhiser, of Stockton; some half dozen or so exhibited by Mr. Scoggins, of Tulare county; and a few head, chiefly grades, by Mr. Comstock, of Sacramento; and a good four-year-old bull, by Gen. Bidwell, of Chico; in all, about 70 head of Short Horns. Mr. Bement, of San Mateo, had 10 Ayrshires, and there were about 70 head of Jerseys, which the exhibitors appear to bring in whole herds, whether they are worthy of any position as show cattle or not. However, it is to the Short Horns that we shall chiefly address ourselves, and in doing so will take occasion to speak of the way in which some of the awards went at Oakland by way of comparison with those at the State fair, where they gave much more general satisfaction; in fact, of all the premiums awarded to Short Horn cattle, we only heard of two cases in which any fault was found by the public, or dissatisfaction expressed by exhibitors, of which we shall speak in due course.

Of four-year-old bulls, there were four present, two of them belonging to Mr. Younger, one to Mr. Overhiser and one to Gen. Bidwell, who took the second prize, while Mr. Younger took first with his Red Thorndale; Airdrie Thorndale very properly taking nothing, though he was placed before Red Thorndale at Oakland, a decision which took most people by surprise, and some of us even began to think that we must change our tactics in Short Horn breeding, from aiming to breed short-legged, compact animals to leggy, long-middled and shallow-bodied ones, with hard hair and stiff hides. In fact, if we were to be in any way ruled by that and some other decisions at Oakland, that we were going all wrong in breeding.

J. D. Carr's Sixth Duke of Gabilan, being the only one in the three-year-old class, deservedly took the first premium.

Of two-year-olds, there were only three entries, Mr. Carr's Maynard, a long-middled bull, with short and plain hind quarters, taking the first premium over Mr. Comstock's much neater bull, Leopard, which, we think, on the whole, better than the premium bull; if not quite so large, he is much more compact, well up in the crops, with good fore flank, which gives him great depth, with a good thickness through the heart. He might be ribbed out a little better and fill out more in the rounds than he does, but in either of these points he is at least equal to the winner. Mr. Overhiser exhibits a short-legged, compact bull in this class, but as he had been running out, he did not look well in his hair or feel well in his flesh; had he been otherwise in showing condition, he would no doubt have been equal to the occasion.

There was a poor class of three yearlings, Mr. Younger taking first with a rather narrow, poorly ribbed red bull, and Mr. Carr second, with his Fourteenth Duke of Gabilan, a roan bull that approaches the indescribable for uncompactness, coupled with an abundance of leg and thin flesh, which did not by any means add to his attractions as a show bull, and he certainly was a detractor from the general good appearance of Mr. Carr's total exhibit. The other one in this class was exhibited by Mr. Scoggins, and ought, in our opinion, to have been placed before Mr. Carr's Fourteenth Duke, and would have been good for the first premium but for his deficiency in neck vein and brisket and his altogether too long and feminine looking head; from the shoulder points back he is tolerably good. This was one of the unpopular decisions of the judges. We would suggest to Mr. Scoggins that in his next choice of a bull, he select one with more masculine character and substance throughout, as the heifers that he exhibited are altogether too fine and sadly deficient in substantial width and depth, with a lack of good, soft hair.

In the bull calf class at Oakland, Mr. Carr took first with Twenty-first Duke of Gabilan, the worst bull calf he had on exhibition, being hard in both hair and hide and altogether deficient in quality, and we cannot at present see anything in him that is likely to make him much heard of hereafter as a show bull. He was very properly placed nowhere at Sacramento, Mr. Younger taking first with a good, thick, level calf, and Mr. Carr, the second, with his Oxford Beau, a square-built, neat calf of exceeding good quality, which, but for a little deficiency in size, might have been placed first.

The four-year-old and upwards cow class was a good one, as a whole, Mr. Younger's Rosa Nell, though put second to Mr. Carr's Pet of Geneva at Oakland, was rightly placed first at Sacramento, while the Pet was left out in the cold, whether justly or not is rather doubtful, for she has always been a favorite, her want of size being

her almost only fault. The second premium was awarded to Hope Twenty-second, which is somewhat light in the thigh, but otherwise of good substantial merit and of good quality, but being nearly nine years old, may be considered past her best days for showing.

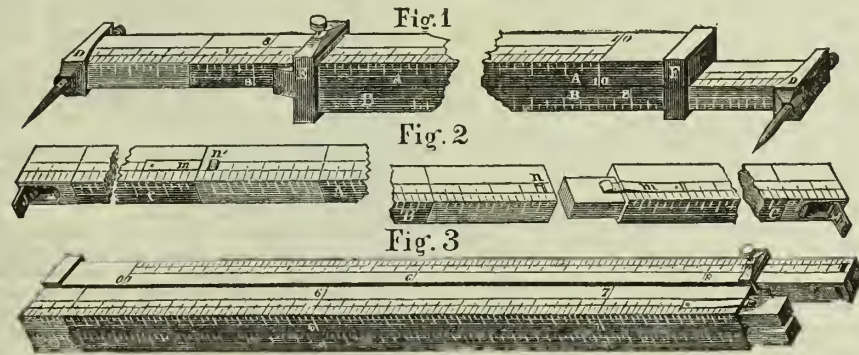
The next three classes of three, two, and one-year-old heifers were made up of a few select animals, and the prizes in all these classes were taken by Messrs. Overhiser, Carr, and Younger.

In the heifer calf class Mr. Younger took the first with a good square-built calf on short legs, with plenty of substance and good quality, and Mr. Carr the second with a good calf, very neat in front, but not so good in the hind quarters, thighs, flank and ribs as the first prize calf; the Oakland decision was in this class as usual, rightly reversed.

The next class calling for notice is that for Sweepstake bulls in which the Oakland decision was again reversed, but not rightly in this case, we think; and we are not alone in our way of thinking, for we heard murmurs of disapproval when the blue ribbon was handed to Mr. Younger's Red Thorndale, which is not of so good a quality, or so neat a bull as Mr. Carr's 6th Duke of Gabilan, whose greatest failing is in his short hind quarters, and this is the only point in which we could see that his rival had the advantage over him. In back, ribs and loins, and for evenness in laying on of flesh, especially in those parts where flesh is most valuable Mr. Carr's hull has a most decided advantage. Then, too, he is pleasant to meet, and shows well on his legs when he walks away from one.

Mr. Younger's Rosa Nell easily carried off the sweepstakes for the best cow of any age, though she was put second to Pet of Geneva at Oakland, while at Sacramento poor Pet had to go without a ribbon, another cow of Mr. Carr's taking the second place. It took the judges a good while to decide, but after a good deal of hovering around the Pet and long consultation the red cow won—probably the color influenced a little in favor of the latter.

In the next class—the herd class for best bull and four cows—we witness another reversion of the Oakland decision, where Mr. Carr's took the first and Mr. Younger's the second with his worse herd of cows with the worse of his two four-year-old bulls at the head; this last named



DERICKSON'S TEN FOOT EXTENSION RULE.

herd went unnoticed here. Mr. Younger's Red Thorndale, with four grand roan cows—unnoticed as a herd at Oakland—took first here, and Mr. Carr's sixth Duke and four cows were placed second, in this class. Mr. Overhiser showed an even lot of cattle, but as he had put in practice what he advocated at a late Grangers' meeting, viz., showing cattle direct from the pasture, his herd did not have the blooming coats and soft feel of those that had a fair but not undue amount of preparation for the purpose. Mr. Overhiser's cattle carried flesh enough for all practical purposes, and were thought worthy of commendation by the judges; but it is practically useless to exhibit cattle without any preparation against those that have been put in suitable condition. Whatever amateurs may say about people being able to judge cattle when they are thin of flesh, so that they can "see the frame better," it won't do in practice. The less we see of the real frame the better; we want rather to see what cattle will come to with fairly good feeding, and if they get that, and are what good cattle ought to be, unless under a very heavy yield of milk, they won't show much of the foundation frame. It is only under favorable circumstances that cattle are really profitable, and in the judging of them one will express the most favorable opinion of those that make the best showing under those circumstances—supposed or real.

The next class, herds of bull and four heifers under two years old, was an uneven one. Mr. Carr, who took the first premium, had four good heifers, with 21st Duke of Gabilan, upon whom we have already expressed our opinion; as also on Mr. Scoggins' herd; while Mr. Younger showed a herd very unequal in age, size and quality.

Of graded cows there were but few present, though the premiums offered are liberal; there is, however, something inconsistent in offering a premium of \$40 for the best cow, four years old and over, and only \$30 for the best milch cow; as dairying has heretofore been one of the most profitable branches of agriculture in the State, we think it ought to receive every encouragement from the agricultural societies. Then, again, we can see no reason why this premium should be confined to graded cattle, just as if thoroughbred cows could not be as good milkers as grades.

As to the cow exhibited as a four-year-old or over, she may be a cow of no practical value except for beef—merely a barren cow kept for

the purpose of exhibition, for any rule the Society has to exclude such, and we think all agricultural societies ought to have a rule to exclude barren cows and impotent bulls from exhibitions of breeding cattle. Under the present ruling a cow that takes the four-year-old premium of \$40 may be worth no more than that amount as a butcher's beast, while a dairy cow that is good enough to take the premium in her class may reasonably be supposed to be worth three times as much—if she be only a grade.

But it appears there is a limit to the goodness of grade cows if we are to be ruled by the action of the judges of the grade classes here, who ruled out one cow because they thought her too good for a grade. "She must be a thoroughbred," they said. So be careful, ye who are breeding grades; just get them bred up to a certain standard of merit, and then what? Are we to go back and begin at the bottom again, writhing under the judgment of those who would say, "Thus far shalt thou come and no further."

## Sheep.

The same fine woolled sheep that were exhibited at Oakland were at the State fair. The fine large French Merinos belonging to Mrs. Blacow are greatly improved in size and quality since we first knew the flock. Next to the improvement in size is their freedom from wrinkles, which gives an even fleece and better wool all over. We are given to understand that this is the improvement of the day in French Merinos, and it is a desirable one, we should think, judging from our own standpoint. We believe there were none of the breed exhibited beside Mrs. Blacow's, and whatever they got in the way of premiums, their fine forms, large size and good quality fully entitle them to it.

The Spanish Merinos were represented by large exhibits from the flocks of Mr. Woolsey, of Berkeley, and Mr. Strobridge, of Haywards, Alameda county. We leave the premiums on sheep entirely with the judges, hoping that they gave satisfaction to all parties. Mr. Strobridge's sheep show higher artificial feeding than Mr. Woolsey's. We are also given to understand that they are kept on richer land, which will of itself naturally give more size.

## A Ten-Foot Extension Rule.

William J. Derickson, of Clayton, Contra Costa county, has recently patented, through the MINING AND SCIENTIFIC PRESS Patent Agency, a very convenient tool for carpenters, bridge builders, and all persons who use a ten-foot pole. It is simply a ten-foot extension rule, properly graduated, and made in four pieces.

Figure 1 shows the first two parts of the rule, connected by the slides, E and F, which allow of the parts sliding by each other. When a desired measurement is reached the parts are secured by means of a set screw, on the slide, E, when the measurement may be read on the face of the slide, E. Some of the rules are made with a cam, instead of a set screw, an arrangement somewhat more convenient, as more quickly connecting or disconnecting the parts.

Figure 2 shows the ends and connections of the ten-foot extension. The left shows the joint, connected and held in place by means of the spring, m, entering the slot, n, from the inside, which is relieved by pressure when the joint is withdrawn. The right shows the joint withdrawn.

Outside measurement may be taken by means of the callipers, J J, Fig. 2; and there are similar callipers in the five feet extensions. The calliper measurements are read on the narrow edges of the rule, and indicated by the point on the sides of the slide, E, Fig. 1, which accounts for the space taken up by the callipers. Figure 3 shows the compact form of the rule when placed in a chest, 1 foot 8 inches by 1½ by 1½ inches.

This rule will describe circles or curves of any desired radius of 10 feet or less, by the use of the trammels, D D, Fig. 1. A common pencil may be screwed in the place of either point, if desired. The points being parallel with the clamps, they may be placed flush at the ends, using the extension to measure; or, they may be used on one of the pieces, by moving one of the clamps to the measurement desired.

The callipers, on plates J J, are provided with springs on their spindles, so they will be kept down flush when closed, and may be raised by the thumb in taking outside measurements.

To measure circles, or arcs of circles, the trammel clamps are put in place on the ends. The parts are adjusted by each other until the proper size is reached, when one point is placed down, and the other describes the arc or circle of the required size. The trammels may be put on the ends of the short pieces, A A, or may be slid up or down either of the parts to suit requirements.

The ordinary ten-foot rules used by carpenters, bricklayers, and other workmen, are very troublesome from their inconvenient size. New ones have to be made very frequently, and the fractions of feet have to be measured with the two-foot rule, they not being marked on the poles. Two rules have, therefore, to be used to get one measurement.

Then again, two pieces are lapped upon each other and nailed together, and then measured, for taking inside measurements. Mr. Derickson's device overcomes these obstacles by making the rule in the four parts which slide by each other as described; and whenever a measurement is taken, either inside or outside, the dimensions are marked on the scale accurately in feet, inches and fractions of inches, as shown. The whole rule may, when closed, be placed in the chest with the ordinary tools.

NOTES ON THE WOOL TRADE.—Walter Brown & Co., in their Boston wool circular for Sept. 1st, make several comments on the outlook in the wool trade which will be interesting to those who are now taking off the fall clip: The market has continued firm for all wools, with considerable activity in medium grades, and a further improvement in prices. These wools have been sought after by manufacturers with sufficient sales to establish an advance of two cents per pound, and the available stocks have become very materially reduced. The popular taste for wools continues to demand fabrics of a rough finish, such as Cheviots, etc., with no prospect of an early change in styles, and with the consumption of the mills greater than last year, and their products closely sold up, it is possible that an actual scarcity may prevail in the corresponding grades of the raw material before the season is over. There has been rather more inquiry for fine fleeces, and although the sales have been much smaller than of medium wools, they have been effected at higher figures than were obtainable a month ago. Holders are generally firm, feeling that their stock will be wanted, at prices that will enable them to realize without loss. Combing and delaine wools have been freely taken at prices within the range of quotations, and at present the assortment is quite small. In regard to the future, we think there is every probability of a healthy trade during the next few months, with perhaps a gradual hardening of prices, not, however, sufficient to warrant any decided speculation, but enough to insure a fair return to owners, on the balance of this year's clip.

ON FILE.—"Poultry Queries," S.; "Amber Cane," C. W. M.; "The Merced Harvester," M. D. A.; "Strawberry Grub," E. K. E.; "The Interest Question," D. A. L.; "God Speed Thee Well," W. H. T.; "Milk House," C.; Eden Grange R. P.; "Nietos," G. K. M.

As I had only one full day at the fair I did not get time to see the horses at all, and had no more than time to "walk over" the pig pens, noticing at the time some very fine specimens of the Berkshire breed, all of which I submit to the premium list for exhibitor's name and merits of the animals exhibited.

HORTICULTURAL SOCIETY.—A small but interesting meeting of those favoring the organization of a State Horticultural Society was held on the 17th, in accordance with the call printed in our last issue. Temporary organization was effected by selecting J. Lewelling, of Napa county, for chairman, and C. H. Shinn, of Alameda county, for secretary. A committee was appointed to draft a constitution and by-laws, to be submitted for approval at the next meeting, which will be held about the middle of October. The exact date and place of meeting will be announced hereafter. The sentiment of those present was strongly in favor of proceeding to permanent organization. A letter from Thomas A. Garey, of Los Angeles, urging such action, was read and well received. The new society seems to have had a fair beginning, and we look for the next meeting to be a rouser.

OSTRICH FARMING.—The Commercial News reports the shipment of young breeding ostriches to this coast, but does not state whether they are for the purpose of a trial of ostrich farming in this State or not. We trust the facts will come to light ere long. It seems that such an enterprise is already under way to New South Wales, the birds being brought from South Africa, and arriving in good health and spirits. Ostrich growing is a good example of "high farming," for the resulting feathers range in value from \$50 to \$500 per pound. The transportation question would have but little terror to the ostrich farmer. Who is he?

FLORAL PREMIUMS.—The following awards were made at the recent fair of the Mechanics' Institute: The first premium for the best continual display of plants and flowers during the exposition to F. A. Miller & Co., of the Exotic Gardens, \$75; second best display, Woodward's Gardens, \$50. Best display of foliage plants and ferns, Woodward's Gardens, \$50. For the best display of cut flowers, between dates, Thomas Saywell, \$20; second best display, F. A. Miller & Co., \$10. For the best display of roses in bloom, F. A. Miller & Co., \$15.



## Twenty-Nine Years a State.

On the evening of September 9th last, the 29th anniversary of the admission of California to the Union, was celebrated with appropriate ceremonies by the Territorial Pioneers, at the B'nai B'rith hall, Eddy street, San Francisco.

There is very little in the mere announcement of this anniversary to distinguish it from any other anniversary, unless we recall to our mind's eye the progressive development of California from her admission to the Union to the present time; her condition and prospects then, and her prominent position in the world now. There are men now living, and they are comparatively young, who came to our shores when the whole of the Pacific slope was either so thinly settled as to be a comparative wilderness, or contained a different race of men than those who now throng its hills and valleys.

Long ago, before our rich mineral and agricultural resources were known to the world, a writer in drawing conclusions from the early history of mankind, predicted that the greatest civilizations and power of the vast territory of the United States would, in some future period, be found in the narrow strip of country west of the Rocky mountains. The prediction now seems like an inspired prophecy, and near its fulfillment.

In the year 1848 there was nothing in the "signs" which pointed to California either as an El Dorado, or as an empire within an empire. On the 19th of January, 1848, James W. W. Marshall, picked up in the race of a mill, on the banks of the American river, a piece of bright, yellow metal. He was ignorant of its nature. Mrs. Elizabeth Jane Winner, who lived in the vicinity, pronounced it gold, from her knowledge of that metal while living at the gold mines of Georgia. That was all. From this simple find was to arise the greatest civilization of the vast territory of the American continent. From all parts of the world came a vast motley crowd. Where were the mines of gold and silver of other parts of the world that up to this time had been so well and so favorably known? They were still yielding, as they are now, and as they will, perhaps, to the end of time, a meager supply of the world's medium of exchange. The world took cognizance of the magnitude of California as an El Dorado, as if it had received a revelation. The world's supply of gold and silver was inadequate to the needs of increasing commerce. Governments were endeavoring to solve the problem of how to increase the money supply, to prevent the languishing of what was foreseen to become gigantic international commercial relations. Statesmen had in vain pondered over the matter and recommended measures, but in vain. The small, bright, yellow piece of metal found on the American river at Sutter's mill solved the problem; introduced a new philosophy; a new system of political economy among nations. From that time to this, only 30 years, hardly one generation, untold millions have been yielded up from the treasure stores of our State, and an empire has its foundation laid in the solid rock of prosperity. The grand achievements resulting from this shining yellow piece of metal are not confined to our own State. They spread over the whole world and have brought about a civilizing influence. A cosmopolitan, international spirit has pervaded the entire mass of humanity upon the earth, and the world has progressed. Would it have been as far advanced if California were still unknown? We are bold enough to utter an emphatic denial. Our wealth is yet untold. The surface of the ground has alone been imperfectly touched by the pick of the miner. The refuse of early days is now yielding wealth to more careful hands. Our veins of gold and silver are exhaustless, for nature is not eccentric in the deposit of her riches. She has placed her most precious minerals within our borders, and to find one line of mineral is to find promise of another. Gold and silver mining is as old as the first gathering of the human race into nations. No history refers to an epoch anterior to the use or search of the precious metals. Their discovery, obtainment and use, have exerted a refining influence, and those nations engaged in their production and circulation were proportionately progressive in wealth, power and arts. Where are the signs of decay in our mines? Only 30 years in all and but few of those 30 years spent upon veins, nearly all upon placer mining. Centuries have not exhausted known and well-defined metalliferous veins, they are productive as long as power can be provided for their working. Such has been the experience in Europe, and greater than that will be the experience of California, inasmuch as her golden veins are richer and more numerous. The scepter of power and civilization has been within our grasp but a short time only, for our State is but an infant in age, though of strong promise, but a future generation looking down from its advanced position, will still feel all the wonder at 60 years of growth, as we now feel at only 30. Our mines are waiting the fruition of the prophecy alluded to in the beginning.—*Mining and Scientific Press.*

**DRILLING GLASS.**—Take a common drill, run a little fast; do not press on, the weight of the drill-press is enough. Drill from both sides, keeping the glass and drill wet with turpentine. Be very careful when the two holes meet, not to let the drill catch. After a hole is made large enough for a small round file, file to the desired size, keeping the file and glass wet with turpentine.

## Fraud.—No. 1.

Were we to write about all the frauds that exist in and around this great city of ours, we would require more paper than four or five paper-mills could furnish, even though they should run night and day, up to their full capacity. We have time, paper and space, however, to speak about one big fraud, which we denominate "Fraud No. 1," because it is the first one to pop into our mind; and because it is a swindle on a large scale, aiming at the industrial classes in its nefariousness, and injuring the reputation of California as an honest State.

The perpetrators of Fraud No. 1 lie in wait for—nay, seek out—those who are looking out homes, for those who are planning the growth of vines and fig-trees, under which they may sit, with no one to molest or make them afraid. In other words, the particular fraud under consideration hunts out those families who wish to build up homes. Then the home-hunters must have some capital to begin with; otherwise, the fraud conductors will drop them "like a hot potato." The man who wants a home need have only two or three hundred dollars in order to become the subject of the anxious solicitude of the promoters of Fraud No. 1.

Fraud No. 1 organizes himself into a company. He gets himself an office. He has furniture, maps and all such things. He then gets through smooth talk and under pretense of developing the resources of the State, the names of respectable business men and the names of high state and municipal officials to use in entrapping the unwary. Fraud No. 1, having thus opened his bunko den, and having secured the endorsement of good names, proceeds to business. He invites the flies into his spider parlor. He sends out his circulars, and the circulars are written up in the most philanthropic way. Fraud No. 1 is not helping himself in this business; he is securing homes for people, and a good and producing class of citizens for the State. For the proof of this, see his circulars, distributed all over the land.

And fraud No. 1 gets a lot of land in some out-of-the-way place, and he subdivides it. He generally cuts it up into 20-acre farms, for the reason (as he is ready to assert), that 20 acres of that kind of land will make any man rich, besides raising for him a very large family. The fact is the land is not worth a tinker's anathema, unless it can be irrigated. Here the genius of our fraud comes in. He puts a canal on that land (on paper, of course), and he pours plentiful and fertilizing streams all over it. He sells land and water for \$100 cash down, and the balance up to a thousand or so dollars on time and in easy installments. Some man with a few hundred dollars drops on the circular of our fraud, and pays up the \$100, and flatters himself that in raisin culture and in fruit drying he has an easy life of it and is traveling right along on a smooth road to a comfortable fortune. He finds out his mistake when he tries the land and discovers that if he raises grapes at all they are of a poor quality, and that his raisins are worth less than the cost of transportation to market. The ditch that was to irrigate failed either because it was never constructed or because the source from which it pretended to take the water was as dry, at the time water is wanted, as any powder house should be. The home dries up, and the land reverts to Fraud No. 1, who immediately proceeds to reset his trap. The man who tried to build up that home, however, has lost the money that he paid up, and has lost his valuable time and more valuable courage.

Again, Fraud No. 1 makes himself into another company, and gets respectable names to use, and he begins the business of bringing together those who want to purchase lands and those who have lands to sell. His circulars in this matter are as beautiful as his homestead scheme. He imposes on country papers everywhere, because his is a patriotic and not a selfish business, and he gets free notices and plenty of praise from such papers. Of course he is "on the make," as the slang mongers have it, and every home seeker who falls into his hands is plucked of all he has.

Yet, people who ought to have better sense patronize such schemes. Yet, people of apparently good sense patronize many transparent frauds. That has been the case since the world began, and will continue until the sounding of the last trumpet. We advise home hunters to beware of Fraud No. 1. He who wants a home had better hunt one up for himself, and not seek the intervention of any fraud.

**BELT LACING.**—A mill-owner says: "Eel-skins make the best possible strings for lacing belts. One lace will outlast any belt, and will stand wear and hard usage where hooks or any other fastenings fail. Our mill being on the bank of the river, we keep a net set for eels, which, when wanted, are taken out in the morning and skinned, and the skins are stuck on a smooth board. When dry, we cut them in two strings, making the eel-skin, in three hours from the time the fish is taken from the water, travel in a belt."

**A PNEUMATIC DISPATCH TUBE.**—Shavings from a planing mill in Chicago are, by an air-blast, blown 700 feet, through a 15-inch sheet iron pipe, to a distillery, where they are burned for fuel.

## DEWEY &amp; CO.

## American &amp; Foreign Patent Agents,

OFFICE, 202 SANSOME ST., N. E. COR. PINE, S. F.

**PATENTS** obtained promptly; Caveats filed expeditiously; Patent Reissues taken out Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences Prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Agency Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons; and our success and business are constantly increasing.

The shrewdest and most experienced Inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

## Foreign Patents.

In addition to American Patents, we secure, with the assistance of co-operative agents, claims in all foreign countries which grant Patents, including Great Britain, France, Belgium, Prussia, Austria, Baden, Peru, Russia, Spain, British India, Saxony, British Columbia, Canada, Norway, Sweden, Mexico, Victoria, Brazil, Bavaria, Holland, Denmark, Italy, Portugal, Cuba, Roman States, Wurtemberg, New Zealand, New South Wales, Queensland, Tasmania, Brazil, New Granada, Chile, Argentine Republic, AND EVERY COUNTRY IN THE WORLD where Patents are obtainable.

No models are required in European countries, but the drawings and specifications should be prepared with thoroughness, by able persons who are familiar with the requirements and changes of foreign patent laws—agents who are reliable and permanently established.

Our schedule price for obtaining foreign patents, in all cases, will always be as low, and in some instances lower, than those of any other responsible agency.

We can and do get foreign patents for inventors in the Pacific States from two to six months (according to the location of the country) SOONER than any other agents.

The principal portion of the patent business of this coast has been done, and is still being done, through our agency. We are familiar with, and have full records, of all former cases, and can more correctly judge of the value and patentability of inventions discovered here than any other agents.

Situated so remote from the seat of government, delays are even more dangerous to the inventors of the Pacific Coast than to applicants in the Eastern States. Valuable patents may be lost by extra time consumed in transmitting specifications from Eastern agencies back to this coast for the signature of the inventor.

## Confidential.

We take great pains to preserve secrecy in all confidential matters, and applicants for patents can rest assured that their communications and business transactions will be held strictly confidential by us. Circulars free.

## Home Counsel.

Our long experience in obtaining patents for Inventors on this Coast has familiarized us with the character of most of the inventions already patented; hence we are frequently able to save our patrons the cost of a fruitless application by pointing to them the same thing already covered by a patent. We are always free to advise applicants of any knowledge we have of previous applicants which will interfere with their obtaining a patent.

We invite the acquaintance of all parties connected with inventions and patent right business, believing that the mutual conference of legitimate business and professional men is mutual gain. Parties in doubt in regard to their rights as assignees of patents or purchasers of patented articles, can often receive advice of importance to them from a short call at our office.

Remittances of money, made by individual inventors to the Government, sometimes miscarry, and it has repeatedly happened that applicants have not only lost their money, but their inventions also, from this cause and consequent delay. We hold ourselves responsible for all fees entrusted to our agency.

## Engravings.

We have superior artists in our own office, and all facilities for producing fine and satisfactory illustrations of inventions and machinery, for newspaper, book, circular and other printed illustrations, and are always ready to assist patrons in bringing their valuable discoveries into practical and profitable use.

## DEWEY &amp; CO.

United States and Foreign Patent Agents, publishers Mining and Scientific Press and the Pacific Rural Press, 202 Sansome St., N. E. corner Pine, S. F.

## PIANOS

## LARGEST MUSIC HOUSE

On the Pacific Coast.

WHOLESALE AND RETAIL.

## Lowest Prices and Best Goods.

Write for information concerning any Musical Instrument, and terms of sale. It will be given with pleasure.

ESTABLISHED IN 1850.

## KOHLER &amp; CHASE,

137 and 139 Post Street, San Francisco.

## NEW EDITION.



## WEBSTER'S UNABRIDGED.

1928th Edition. 3000 Engravings.

Four Pages Colored Plates.

Now added, a SUPPLEMENT of over 4600 NEW WORDS and Meanings, including such as have come into use during the past fifteen years—many of which have never before found a place in any English dictionary.

ALSO ADDED, A NEW

## Biographical Dictionary of over 9700 NAMES

of Noted Persons, ancient and modern, including many now living, giving Name, Pronunciation, Nationality, Profession and Date of each.

GET THE LATEST.

NEW EDITION contains a Supplement of over 4600 new words and meanings. Each new word in Supplement has been selected and defined with great care.

With Biographical Dictionary, now added, of over 9700 names of Noted Persons.

GET THE BEST

edition of the best Dictionary of the English Language ever published.

Definitions have always been conceded to be better than in any other Dictionary.

Illustrations, 3000, about three times as many as in any other Dictionary.

The Dictionary recommended by State Supts of 35 States, and 50 College Presidents.

In Schools, — about 32,000 have been placed in Public Schools in the U.S.

Only English Dictionary containing a Biographical Dictionary, — this gives the same with Pronunciation, Nation, Profession and Date of over 9700 persons.

Published by G. & C. MERRIAM, Springfield, Ma.

ALSO

## WEBSTER'S NATIONAL PICTORIAL DICTIONARY.

1040 Pages Octavo. 600 Engravings.

## The California Grape Picker.



PATENT APPLIED FOR.

In offering this article to the Wine and Raisin Growers of California, we call your attention to some of the important advantages over the ordinary knife used heretofore in picking grapes, and some of the principal reasons why every Vineyardist should use it.

1st.—A man can pick twice or three times as many Grapes with it in a day as he can with a Knife. 2d. It can be used with both hands at the same time. 3rd. Your Knife never gets lost and is always ready for use when needed. 4th. You have the use of your hands to handle basket or tray, and the picker is no incumbrance. 5th. It is made entirely of metal, the knife of cast steel, tempered in oil, and easily sharpened, and not liable to get out of order. 6th. No Grape Grower can afford to be without it, as it combines simplicity, durability, economy, convenience and cheapness.

Price, \$1 each, \$9 per dozen. Agents wanted in every county in the State. For particulars apply to JAS. L. FINK, Box 1287, San Francisco, Gen'l Agt. for U. S. and Europe.

## IMPORTANT INVENTION.

—FOR THE—

## Grape Growers of California.

From a friend in southern Russia, I came in possession of a process to preserve Grapes in a fresh state for a year and longer. The high importance of this invention I do not need to explain. I am willing to part with it, and ask interested parties to write for particulars.

R. WEINHOLD,

Florist and Nurseryman,

Los Angeles, Box 303

## THE HOME KNITTER!

Simple, light, durable. New in form and method of operation. Knits stockings in woolen or cotton yarn, without a stitch of sewing; narrows and widens perfectly; no weights; no "setting up" of work. Retail price, \$25. Send for descriptive circulars. Reliable agents wanted.

HOME KNITTER CO., Canton, O.



## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS.

OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

PETER SAXE & SON, 520 Bush St., S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

## SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

## POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Dors, etc. Eggs for hatching. Send for price list.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Thoroughbred Berkshire and Poland-China Swine. Light Brahma and Black Cochon Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

## BEES.

JOS. D. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## Nurserymen.

## A New Forage Plant.

## THE 'GREEN VALLEY GRASS.

The WONDER of the NINETEENTH CENTURY, yields 10 to 14 tons of hay per acre, and from 3,000 to 4,000 bushels of roots, which far exceeds artichokes as feed for hogs.

## Grows without Irrigation.

For price list of seed and roots, address

ARTHUR TAYLOR,

Watson, Atchison Co., Mo.

## Phylloxera-Resisting Vines.

Vineyard Proprietors desiring to plant American Grape Vines, which with resist to the attacks of the Phylloxera, either as Grafting Stock, or for direct production, which proves to be the only salvation and means of reconstructing the destroyed Vineyards of France, will do well to address

BUSH & SON & MEISSNER,

Bushberg, Jefferson Co., Mo.

## MONEY TO LOAN

## AT LOWEST RATES

On Country Real Estate and Grain in Warehouse.

McAFEE BROTHERS.

202 Sansome Street, San Francisco.

## ROOMS TO RENT.

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

TRADE



MARK.

## LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price, \$2 per gallon. For directions and testimonials, apply to

FALKNER, BELL & CO.,

Sole Agents, 430 California Street, S. F.

## READING RANCH.

Shasta Co., Cal.

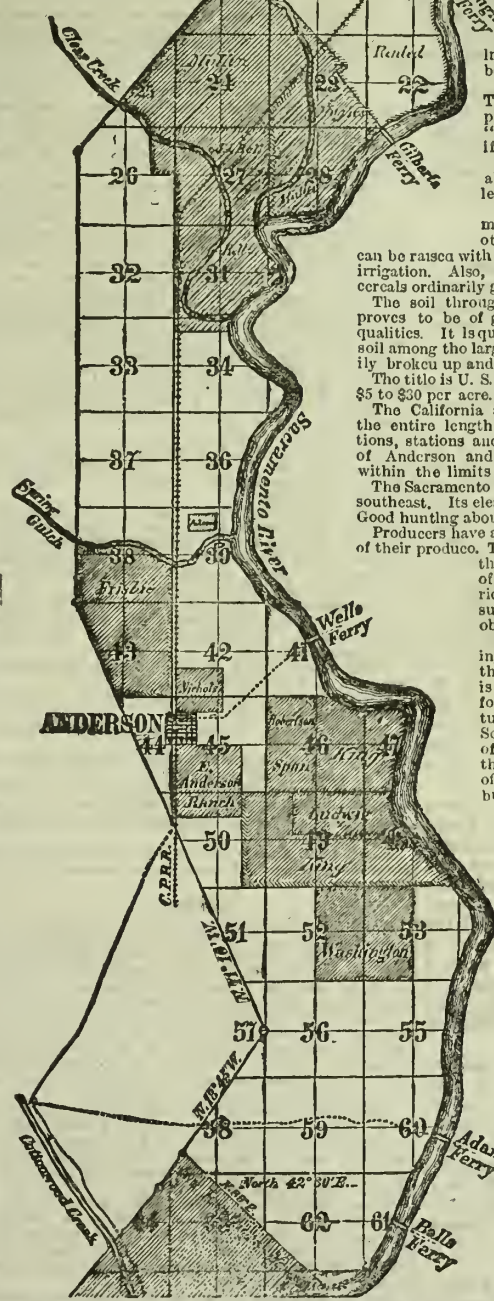
Good Land!

Sure Crops!

HEALTHY CLIMATE!

Prices Low. Terms Easy.

TITLE PERFECT.



The Reading Ranch, in the Upper Sacramento valley, originally embracing over 28,000 acres of choice grain, orchard and pasture land, is now offered for sale at low prices and on favorable terms of payment, in subdivisions to suit purchasers.

The ranch was selected at an early day by Major P. B. Reading, one of the largest pioneer land owners in California. It is situated on the west side of the Sacramento River and extends over 20 miles along its bank.

The average rainfall is about 30 inches per annum, and crops have never been known to fail from drought.

The climate is healthy and desirable. The near proximity of high mountain peaks give cool nights during the "heated term" which occurs in our California summers.

Pasturage, wood and good water are abundant. The tillage land is mostly level, with complete drainage.

Figs, Grapes, Peaches, Prunes, Almonds, English Walnuts, Oranges and other temperate and semi-tropical fruits can be raised with success on most of the tract without irrigation. Also, Alfalfa, Vegetables, Corn and all other cereals ordinarily grown in the State.

The soil throughout the tilled portions of the ranch proves to be of great depth and enduring in its good qualities. It is quite free from foul growths. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

The title is U. S. patent. Prices range principally from \$5 to \$30 per acre.

The California and Oregon railroad traverses nearly the entire length of the tract. There are several sections, stations and switches, besides depots at the towns of Anderson and Reading, all of which are located within the limits of the ranch.

The Sacramento River borders the whole tract on the southeast. Its clear waters are well stocked with fish. Good hunting abounds in the surrounding country.

Producers have a local market, which enhances the value of their produce. The railroad transportation route is level throughout to San Francisco. A portion of the land is auriferous and located near rich mines now being worked. Land suitable for settlers in colonies can be obtained on good terms.

Town lots are offered for sale in Reading, situated on the Sacramento river, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

Purchasers are invited to come and see the lands before buying here or elsewhere. Apply on the ranch, to the proprietor.

EDWARD FRISBIE,

Anderson, Shasta Co., Cal.

P. S.—Send postage stamp for illustrated paper containing information about Shasta county and these lands, and say advertised in this paper.

## Location of Shasta County.

Shasta County lies not far from midway between the two most important ports on the Pacific shore, i. e., San Francisco and Portland, Oregon, and directly on the overland route, which in the future will become the grand thoroughfare from Mexico to British Columbia. The town of Reading, at present, and probably for years to come, the head of railroad transportation on the California side of the mountains intervening below Oregon, is distant from San Francisco by railroad (via Vallejo) 255 miles; from Sacramento City, 169 miles; from Marysville, 117 miles.

## LAND FOR SALE OR RENT IN SUB-DIVISIONS.

## Educational.

**HEALD'S** BUSINESS COLLEGE,  
24 Post Street,  
Near Kearny,  
San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and the system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

W. E. CHAMBERLAIN, JR.

THOS. A. ROBINSON

**PACIFIC** Business College,  
320 POST ST.  
SAN FRANCISCO.

SEND FOR CIRCULAR.

Dewey & Co. { 202 San- } Patent Ag'ts  
some St.

## Seedsman.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses.

RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco



B. K. BLISS & SONS,

Importers, Growers and dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address

B. K. BLISS & SONS, 34 Barclay Street, N. Y.

## EXOTIC GARDENS.

F. A. MILLER & CO., Mission St., opposite Woodward's Gardens. Send for Catalogue and Price List.

Engraving done at this office.

## Lands for Sale and to Let.

## BERKELEY PROPERTY.

## Residence and Business Lots

FOR SALE VERY LOW AND ON EASY TERMS.

The Cheapest and most Desirable Property for Investment or for Home-steads in the State.

Lots worth \$200 sold on installments of \$5 per month. Lots worth \$300, \$10 down; installments of \$5 per month. Lots worth \$500, \$50 down; installments of \$10 per month. Lots worth \$1,000, \$100 down; installments of \$20 per mo.

Within 40 minutes of the business center of San Francisco, reached at an expense of 15 cents for single trips or \$3 for monthly tickets, being a point at which all the important railroads of the State will center, and where the University and other educational institutions of the coast are located. With fine view and delightful climate and its present rapid improvement, all combine to make this the most desirable place to locate.

Give us a call and we will give entire satisfaction, as we have property in all parts of Berkeley, and can sell cheaper than any others. Call on

S. A. PENWELL,

652 Market Street, San Francisco.

Or at residence, cor. 6th and Bristol Sts., West Berkeley.

## Farm For Sale.

Yields an Income of \$4,000 a Year.

Price, \$10,500.



My Farm and Poultry Business yield over \$4,000 a year. The place—116 acres—with orchard, vineyard and improvements, has cost me \$15,000. The good will of the business is worth fully \$8,000. I will sell the business and farm for \$10,500, half cash, or exchange for San Francisco property. It is a bargain such as is seldom offered.

M. EYRE, Napa, Cal.

Law Office in San Francisco, No. 636 Clay St., Room 25. I am in Napa each Saturday and Sunday; other days in San Francisco.

## FOR SALE.

700 Acres. The Finest Stock and Grain Farm in Northern California.

Price, \$25,000, including Farming implements. The whole under fence.

The Stock upon this farm, all thoroughbred and graded, embracing some of the finest in the State, will be sold at private sale. Among the stock is some that has been awarded different premiums at State and County Fairs. This is one of the finest opportunities for a man of means in the State. For full particulars apply to

D. B. HAYS,

Real Estate Agent, Oroville, Cal.

## C. C. RODGERS,

CALIFORNIA LAND AGENCY,

Office, 276 First St., San Jose, Cal.

GENERAL LAND, REAL ESTATE, U. S. PENSION AND BOUNTY AGENT.

Will buy and sell Land Warrants; Locate and Survey Public Government Land, Pre-emption Homesteads, Soldier's and Sailor's Homesteads, Timber and Wood Lands, Desert Lands, Etc.

## FARMING LAND

For Sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

## LAND

Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$2,500,000,

In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

## OFFICERS:

PRESIDENT.....G. W. COLBY.

MANAGER AND CASHIER,

ALBERT MONTPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

## Grangers' Co-operative Business Association, of Sacramento Valley.

Location: K & 10th Sts., Sacramento, Cal

Dealers in GENERAL PRODUCE, RETAIL GROCERIES, and sale of FRUITS. Desire the co-operation and trade of farmers in general. Pay the highest market rates for all produce, and sell for the smallest profit. Our orders are cash on delivery. Goods shipped; marked C. O. D.

W. H. HEVENER, Manager.



## The State Fair.

[Written for the RURAL PRESS by J. H. W.]

Even the first day of this year's State fair did not lack for interest, but with the parade of troops, the music of bands and the arrival of a large number of strangers the town was, with September 8th, thoroughly awakened to the coming week's excitement and amusement. All during Saturday and Sunday cattle, sheep, goats, hogs and agricultural machinery had been arriving, and by Monday morning the exhibits were well started. Not until the following evening, however, was everything in shape and complete.

### The Machinery.

Among the machinery at the park may be noticed the following most prominent exhibits: Heavy wagons, by J. F. Hill, of Sacramento; Studebaker wagons, by Studebaker Wagon Co., of Indiana; Sweepstake wagon, by Sweepstake Plow Co.; Shuttle wagons, by M. C. Hawley; and ordinary heavy wagons, by Holman, Stanton & Co., of Sacramento. M. C. Hawley had also on exhibit gang plows, ordinary plows, sowers (broadcast and drill), cultivators, etc. A new sub-irrigation scheme was exhibited by E. M. Hamilton, of Los Angeles, which gained many favorable comments.

Further on is found the excelsior gate; then a display of harvesting and farming machinery, by Osborn & Co., probably the largest and most complete of any at the fair; straw-burning engine by M. C. Hawley, together with reapers, separators, plows in goodly number, also a line of the Howe scales. A large number of carriages, buggies and light wagons were exhibited by J. J. Davis, of Sacramento; and among other exhibitors of light wagons were Pike & Young, J. Henchel and Studebaker Bros. There was a novel fruit picker by L. H. Titus, a patent spindle and box by B. N. Bugby, and a large number of harvesting machines by H. N. Linnell & Co., of Sacramento. More machines were shown by J. L. McCormick, of Chicago, and W. F. West had a useful invention—a farm feed and grist mill. After these follows a useful wagon jack by N. Beauregard, pruning shears by John Witz, patent tree-feller by Ransome, grain separator by Nash & Klees, a three-piston pump by E. Evans, a portable engine and horse-power by Reynolds & Rix, a feeder for threshing machines by W. Lockhart, plows, garden mowers, cider presses, etc., by Holman, Stanton & Co. There were sulky plows made by Oliver; hinged extension step-ladder by W. H. Dyer, and the following windmills: Pacific, Vaneless, Bachelers, Regulator, Challenge and Excelsior. Lastly may be seen the California horse-power by Lanfkatte & Guttenberger, which is a ponderous machine of fine appearance.

### The Military Encampment

At the fair was at Richmond Grove, within easy street-car communication with both agricultural park and the pavilion in the city. Here the companies enjoyed a beautiful camp ground, had their platform on which to dance, and by the merry music of the bands many an evening was passed joyfully. This plan may have been detrimental to the finances of the pavilion, for many found attraction sufficient at the camp to induce them to forego the pleasure of witnessing the exhibit at the pavilion.

### The Pavilion.

All was hurry and bustle at the pavilion on Monday; there was the usual delay about getting the exhibits in place; and in consequence of the unfinished condition of arrangements the attendance was small. The parties exhibiting on the lower floor of the pavilion were at quite a disadvantage, as the light was very poor during the day. On this basement was all that pertains to fruits, vegetables, cereals, and small farming and kitchen implements. There was also the printing press which printed the *Fair Gazette*, a daily circulated free. On the main floor were exhibited the marble, agate ironware, stoves, ranges, sewing machines, pianos, the two latter being very few in number compared with the usual exhibit in this line. There was furniture of all kinds, in which Sacramento made the principal showing. Off from the main room, on one side, was a room filled with ladies' fine work, embroidery, wax work, etc., filling many cases, and making a very creditable display; also a fine mineral collection by Mr. W. B. Ewer, of San Francisco. On the opposite of the main room was the art gallery, which was well lighted, and filled with good pictures, many of which had been exhibited during the month previous at the Mechanics' fair at San Francisco. After the first day of the fair, the pavilion was well patronized. During the day one might move freely and enjoy the sights, but in the evening it was almost impossible to crowd through, or see anything but the people as they jammed here and there, with an evident desire to sit down, but an inability to do so.

The general interest taken by our farmers in poultry raising and especially in artificial incubation, was plainly shown by the numbers who watched the working of the Eclipse incubator, shown in operation at the pavilion. The agent for this machine, knowing the lack of confidence our people have in incubators, caused by repeated failures with worthless machines, is trying to place this machine where farmers can

watch its working for themselves. This same machine was exhibited at San Francisco the previous week, and containing the eggs which hatched here, was brought here on the cars. Its perfect self-government while here, and the good work it did, even under more staid circumstances, have proved it a successful hatcher. Its being also portable is an entirely new feature.

### At the Park

The shooting tournament began at 10:20 A. M. on Monday, and continued almost unremittently throughout the week. Some very good scores were made, but bobtail pigeons were often seen to wing their escaping flight over the stand to the city. At 2:40 P. M. the races began, and every afternoon of the week brought its races, either running or trotting. Twice the spectators were favored with hurdle races. The races in general went off very well, no accident happening to mar the pleasure; and considering the fact that the exhibit of fine horses was unusually large, one may suspect that there was some of the best stock on the track.

On Wednesday the ladies' riding tournament drew large numbers, and resulted in great credit to the "fair ones," seven in number, who competed for the prizes. The premium was won by Miss Cross, of Woodland, who, on the following morning, gave an exhibition of her skill in riding and training horses.

### The Cattle Parade

On Thursday, at 10 A. M., was one of the features of the fair. First, there came the horses, of which there never was a finer exhibit in the State; then came the cattle. Col. Younger led off with his famous bull, "Red Thorndale," and after him followed the remainder of his fine Durham cattle. In the train were Durhams by Jessie Carr; Durhams by Byron Scoggins; Jerseys in good number and fine by R. Noell; graded cattle by J. Bidwell; Durhams by P. Yolo; Durhams by Peter Burns; premium graded cattle by P. H. Murphy; Durhams in good number and fine appearance by Overhiser; premium graded cattle by E. Comstock; Durham bull by M. Sprague; Alderney by J. Shafter; graded cattle by Wm. Demming; Jersey bull by S. P. Pond; premium Jersey cattle by F. P. Thompson; Jerseys by J. M. Estudillo, of Brighton; Ayrshire cattle by George Bement, of Redwood City—one of the few owners of this kind of cattle in the State; Jerseys by Robert Beach, of Brighton; premium Jerseys by P. Stanton, of Brighton; graded cattle by S. H. Pugh, of Brighton; Jerseys by E. F. Aiken, and premium Jerseys by F. J. Barretto, of Los Angeles. All these were paraded in fine style before the stand and back again.

Mr. Bidwell had, in addition to the above, his four-year-old heifer, which is 16½ hands high, weighs 2,400 pounds, is white, and has a beautiful yellow skin. This is a monstrous cow; but at the last of the fair there arrived from Oregon a larger animal in the form of a steer. He was exhibited by J. F. Clark, and had the following dimensions and weight: In height, 6 feet 4 inches; from breast to back, 4 feet 4 inches; across the foreleg above the arm, 13½ inches; weight, 2,300 pounds. He is four years old, and although not as heavy as Bidwell's, has a much larger bone and frame.

While noticing the cattle it may be well to give the sheep, goats and hogs exhibited. We have a large number of thoroughbred Angora goats, by J. S. Harris and Gilmore. Of sheep, there were French Merino by R. Blacow; Spanish Merino by L. U. Shippee; large and fine exhibit of Spanish Merino by E. W. Woolsey, of Berkeley; 80 head of Spanish Merino by J. H. Strobridge; Southdowns by J. Berment; and Southdowns and Spanish Merino by J. D. Carr.

Of hogs there were on exhibition, Poland-China by E. Gallup, by Mr. Scoggins, and by Mr. Robert Roberts; Berkshire by Comstock; Essex by L. U. Shippee; Sweepstake by M. Sprague; Berkshire by Thos. Waite; Berkshire and Essex by Jno. Kennedy, and Berkshire by John Rider, he having a very good display and carrying off eight premiums.

Of chickens, there were those of Mrs. C. H. Sprague, a large and good display; S. H. Pugh, J. W. Slaven, E. Kraus and A. B. Gilbert. Much might be said, but lack of space prevents, to the credit of the above exhibitors, who took no small amount of trouble in showing up their department to the best possible advantage.

On Friday came the great sham battle, which had been advertised throughout the State, and which created no little excitement at Sacramento on this great day.

At 9 A. M., the time at which the battle was to begin, the whole fair exhibited a livelier aspect than it had before or did after. The great stand, with reserved seats, was crowded to a jam, the white fence which surrounded the campus, was lined with people, and on the ground the teams were here and there sandwiched in among the jostling crowd.

The battle began with a skirmish and firing was brisk from the start. A large force of infantry on one side was opposed to a smaller force on the opposite side, which latter possessed the cannon, booming away as it did and making the noise of a great celebration. They fought, rallied, retreated and skirmished, but never once came to a charge, and after about two hours in a sweltering heat, an accident happened which ended the affray. One of the rammers at the cannon had his hand blown off by an accidental discharge.

Much interest was manifested at the giving out of the above premiums and unusual happiness graced the receivers.

With Saturday afternoon, during which were

the most exciting races of the fair, and the evening at the pavilion, the fair ended. There were a number of drawbacks operating against it, but in spite of hard times consequent upon the late election and the election itself, the State fair has turned out a perfect success. There was more than the usual display of fine stock, machinery and improvements for the farm, and more attention, perhaps, was paid to the above and less to the racing than heretofore. The attendance was on some days more and on others less than on corresponding days of the previous year, and although, financially, they may not come out ahead, still, as a whole, it may be put down as a brilliant success and unsurpassed by any former State fair.

## State Fair Premium List.

The following are the awards for the leading classes of agricultural exhibits made at the State fair held last week at Sacramento:

- Horses.**  
Thoroughbred Stallions—First Premiums.—Four yrs old, C. Helverson's Baywater, \$60; 3 yrs old, E. J. Baldwin's Lexington, \$40; 2 yrs old, Theo. Winters' Flood, \$30; 1 yr old, Theo. Winters' Duke of Norfolk, \$25; colt, Chas. Murphy's Lattell, \$15.  
Thoroughbred Mares—First Premiums.—Four yrs old, with colt, Chas. Murphy's May Watson and colt, \$50; 4 yrs old, Theo. Winters' Mattie Glenn, \$40; 3 yrs old, Theo. Winters' Neapolitan, \$30; 2 yrs old, Chas. Thomas' Armada Howard, \$20; 1 yr old, W. L. Pritchard's Chestnut, \$15; mare colt, W. L. Pritchard's chestnut filly, \$10.  
Families.—Thoroughbred sire, with 5 colts, to W. L. Pritchard's Leinster, \$100; thoroughbred dam, with two of her colts, to W. L. Pritchard's Tibby Dunbar, \$50; stallion, other than thoroughbred, with 5 colts, W. O. Jennings' Dave, \$75; dam, other than thoroughbred, with 2 colts, Ben. E. Harris' Lady Silva, \$50.  
Horses of all Work—Stallions.—Four yrs old, L. U. Shippee's Henry Clay, \$40; 3 yrs old, L. N. Scott's Young Langford, \$30; 2 yrs old, J. P. Odbert's Coronado, \$20; 1 yr old, Wm. Bandman's Selim, \$15; sucking colt, C. Helverson's Baywater, Jr., \$10.  
Mares.—Four yrs old, with colt, Ben. E. Harris' Lady Silva and colt, \$40; 4 yrs old, E. Comstock's Coaly, \$30; 3 yrs old, C. Helverson's Lady Grant, \$20; 2 yrs old, D. H. Murphy's Belle, \$15.  
Draft Horses—Stallions.—Four yrs old, C. Helverson's Franklin, \$40; 3 yrs old, Mrs. Bridget Strobidge's Johnny Brue, \$30; 2 yrs old, L. U. Shippee's Prince Consort, \$20.  
Mares.—Four yrs old, with colt, C. Helverson's Queen and colt, \$40; 4 yrs old, E. Comstock's Maud, \$35; 3 yrs old, with colt, E. Comstock's May, \$25.  
Roadsters.—Four yrs old, M. W. Hicks' Buccaneer, \$60; 3 yrs old, W. K. Robinson's Odd Fellow, \$40; 2 yrs old, Ben. E. Harris' Arthur H., \$30; gelding 4 yrs old, R. J. Merkeley's Ewen Skaggs, \$50.  
Mares.—Four yrs old, S. N. Killip's Lou Whipple, \$50; 3 yrs old, M. W. Hicks' Rachael, \$40.  
Carriage Horses.—Matched span, W. R. Foye, of Sacramento, silver goblet, \$50.  
Roadster Teams.—Double team, Nelson McDonald's Betty and Jim, \$50.  
Saddle Horses.—Saddle mare, Marion Biggs' Gypsy, \$25; second, Ben. E. Harris' Pluto, \$15.  
Sweepstakes.—Stallion, L. U. Shippee's Henry Clay, \$150; second, W. K. Robinson's Odd Fellow, \$50; mare, R. J. Merkeley's Nellie, \$150; second, A. L. Chapman's Lady Norfolk, \$50.  
Jacks and Mules.—Four-year-old jack, Marion Biggs' Humboldt, \$40; span of mules, John Adamson's Jack and Lillie, \$25.  
**Cattle.**  
Class 1.—Durhams.—Bulls, 4 yr old, C. Younger, San Jose, Red Thorndale, \$40; second, John Bidwell, \$40; 3 yr old, J. D. Carr, Monterey, Sixth Duke, \$40; second, M. Sprague, \$20; 2 yr old, J. D. Carr, \$40; second, E. L. Comstock, \$20; 1 yr old, C. Younger, \$30; second, J. D. Carr, \$15; bull calf, Col. Younger, \$20; second, J. D. Carr, \$10.  
Cows.—Four yr old, Col. Younger, Rose Nell, \$50; cow and calf, J. D. Carr, \$50; second, 4 yr old, J. D. Carr, \$25; 3 yr old, Col. Younger, \$50; second, W. F. Overhiser, \$25; 2 yr old, Col. Younger, \$30; second, J. D. Carr, \$15; 1 yr old, J. D. Carr, \$20; second, J. D. Carr, \$10; heifer calf, Col. Younger, \$20; second, J. D. Carr, \$10.  
Alderneys and Jerseys in one class.—Bulls.—Four yr old, P. J. Shafter's Surprise, \$40; second, S. P. Pond, \$20; 3 yr old, Robert Beck, \$40; second, O. S. Freeman, \$20; 2 yr old, F. J. Barretto, \$40; second, P. Stanton, \$20; 1 yr old, R. Noell, \$30; second, F. P. Thompson, \$15; bull calf, P. Stanton, \$20; second, F. J. Barretto, \$10.  
Cows.—Cow and calf, R. Noell, \$50; 4 yr old, R. Noell, \$50; second, E. F. Aiken, \$25; 3 yr old, J. M. Estudillo, \$50; second, P. Stanton, \$25; 2 yr old, P. Stanton, \$30; second, F. J. Barretto, \$15; 1 yr old, F. J. Barretto, \$20; second, P. Stanton, \$10; heifer calf, F. J. Barretto, \$20; second, Robert Beck, \$10.  
Devons, Herefords, Ayrshires, Holsteins, and folderfenses, in one class.—Bulls.—Three yr old, George Bement, \$40; second, George Bement, \$20; 2 yr old, George Bement, \$40; bull calf, George Bement, \$20.  
Cows.—Cow and calf, George Bement, \$50; 3 yr old, George Bement, \$50; 2 yr old, George Bement, \$30; 1 yr old, George Bement, \$20; heifer calf, George Bement, \$20; herd, 2 yrs old, Col. Younger, \$100; herd under 2 yrs old, J. D. Carr, \$60.  
Class 2.—Graded Cattle.—Cows.—Four yr olds, P. H. Murphy, \$40; 3 yr old, E. Comstock, \$25; 2 yr old, E. Comstock, \$20; 1 yr old, Robert Beck, \$15; milch cow, Peter Burns, \$15.  
Class 3.—Sweepstakes.—Bull, of any age or breed, Col. Younger, \$75; second, J. D. Carr, \$25; cow, Col. Younger, \$75; second, J. D. Carr, \$25; bull and three calves, J. D. Carr, \$100.  
**Sheep.**  
Spanish Merinos.—Ram, 2 yrs old, E. W. Woolsey, \$30; second, J. H. Strobridge, \$15; 1 yr old, J. H. Strobridge, \$22.50; second, J. H. Strobridge, \$7.50; three ram lambs, J. H. Strobridge, \$22.50; second, E. W. Woolsey, \$7.50; pen of three ewes, J. H. Strobridge, \$22.50; second, E. W. Woolsey, \$15; pen of five 1-yr-old ewes, J. H. Strobridge, \$22.50; second, J. H. Strobridge, \$15; pen of five ewe lambs, J. H. Strobridge, \$15; ram and five of his lambs, J. H. Strobridge, \$30; second, E. W. Woolsey, \$15.  
French Merino and Silesian.—Ram, 2 yrs old, Mrs. R. Blacow, \$30; second, Mrs. R. Blacow, \$15; ram, 1 yr old and over, Mrs. R. Blacow, \$22.50; second, Mrs. R. Blacow, \$7.50; three ram lambs, Mrs. R. Blacow, \$22.50; second, Mrs. R. Blacow, \$7.50; pen of five ewes, 2 yrs old, Mrs. R. Blacow, \$22.50; pen of five ewe lambs, Mrs. R. Blacow, \$22.50; ram and five lambs, Mrs. R. Blacow, \$30; second, Mrs. R. Blacow, \$15.  
**Goats.**  
Thoroughbreds.—Buck, 2 yr old and over, J. S. Harris, \$35; second, J. S. Harris, \$20; buck, under 2 yrs, J. S. Harris, \$30; second, J. S. Harris, \$20; pen, not less than three does, 2 yrs old, —, Gilmore, \$35; second, C. P. Bayley, \$20; pen, not less than three does under 2 yrs, C. P. Bayley, \$30; second, Gilmore, \$15.  
Graded.—Pen, not less than three does, 2 yrs old, Gilmore, \$20; pen, not less than three does, under 2 yrs, Gilmore, \$15.  
Sweepstakes.—Buck, J. S. Harris, \$40; second, Gilmore, \$20; doe, Gilmore, \$20; second, Gilmore, \$15; pen, not less than 10 kids, C. P. Bayley, \$30.  
**Swine.**  
Berkshire.—Boar, 2 yrs old, John Rider, \$60; boar, un-

der 2 yrs, E. Comstock, \$20; boar, 1 yr, John Rider, \$15; breeding sow, John Rider, \$30; sow, 6 months, John Rider, \$15; pair pigs under 10 months, John Rider, \$30.  
Essex.—Boar, 2 yrs old, L. U. Shippee, \$30; boar, under 2 yrs, L. U. Shippee, \$20; boar, 1 yr, John Kennedy, \$15; breeding sow, L. U. Shippee, \$30; sow, 6 months old and under 1 yr, L. U. Shippee, \$15; pair pigs, under 10 months, L. U. Shippee, \$30.  
Poland China and Chester White.—Boar 2 yrs, Elias Gallup, \$30; boar 1 yr, L. N. Scott, \$20; breeding sow, Robert Roberts, \$30; sow 1 yr, Byron Scoggins, \$15; pair pigs, Elias Gallup, \$30.  
Sweepstakes.—Boar, John Rider, \$50; sow, John Rider, \$50; pen of 6, E. Comstock, \$30; family, John Rider, \$50.  
Poultry.—Mrs. C. A. Sprague, of Woodland, gets 38 premiums of \$5 each and the sweepstakes.

## Dairy and Domestic.

Cheese one yr old \$15, cheese under one yr old, \$10, display of cheese, dip and \$20, McClaughy & Rider, corn bread, \$5, Mrs. H. W. Johnson; baker's bread, \$3, W. F. Peterson; wheat bread, \$5, Mrs. W. F. Hicks; rye bread, \$5, Mrs. H. Cronkite; best display of butter, \$25, Mrs. E. F. Aiken; display of domestic bread, \$25, Mrs. J. P. Odbert; domestic brown bread, \$5, Mrs. E. F. Aiken; firkin butter, three months old, \$15, I. R. Jewell; roll butter, dip and spec men, F. Babel; roll butter, dip and spec men, Mrs. M. Sprague; roll butter and firkin, dip, P. Burns; wheat and corn bread and biscuit, spec men, Mrs. H. Cronkite; domestic rye bread, spec men, Miss Alice Odbert; biscuit, spec men, Mrs. J. P. Odbert; domestic brown bread and corn bread, dip, Mrs. E. N. Flint; domestic brown bread, domestic wheat bread, biscuit, dip, Mrs. Wm. Bassett; sugar, \$20, California Sugar Refinery; patent cube, spec prem, syrup, \$10, Bay Sugar Refinery.

## Wine.

White wine, sweet, \$25, red wine, dip, Mrs. H. Cronkite; California port, \$25; California sherry, \$25, special wines, pen and dip recm, R. Chalmers; wine, sparkling, \$25, J. Landberger; blackberry brandy, dip, A. C. Fisher; white wine, dry, \$25, J. Gundlach; grape brandy, \$25, Weinrich & Bartels.

## Machinery, Etc.

M. C. Hawley & Co., portable steam engine, \$40; B. B. Brewer, Sacramento, steam engine, \$50; Sweepstake Plow Co., best display of agricultural implements of California manufacture by one house, \$50; H. L. Linnell & Co., hay press, \$20; N. Beauregard, channel iron harrow, \$10; A. W. Lockhardt, Sacramento, self-feeding threshing, \$25; field roller, \$10; Sweepstake Plow Co., cultivator, \$10; flenry Brightman, Placerville, farm gate, \$15; Nash & Klees, fanning mill, \$5; Jones & Wood, Woodland, windmill, \$25; W. F. West, S. F., feed mill, —; Wm. Guttenberger, water raiser for irrigating pumps, \$20; H. G. Knapp, Half Moon Bay, side-cult plow, \$5; Sweepstake Plow Co., gang plow, \$50; sulky plow, \$15; John Watt, Sacramento, farm wagon, \$15, top buggy, \$20, dog cart, \$5, spring wagon, \$15, two-horse carriage, \$30, open buggy, \$15, two-seated open carriage, \$20; Pike & Young, lady's phaeton, \$15.

## Field Products.

Two varieties wheat, special prem, J. Reith; white corn, \$10, H. W. Johnson; varieties wheat, \$25, sample Nepari barley, \$10; J. Bidwell; oats, \$10, F. Deming; samples grain and flour, dip recm, S. F. Produce Exchange; flour, dip recm, H. Davis & Co.; garden seeds, dip recm, Trumbull & Co.; Australian wheat, dip recm, G. W. Colby; California tobacco, three varieties, special prem recm, O. A. Davis; California tobacco, second crop, honorable mention, M. F. Mannux; California tobacco, \$25 and silver medal, Briggs & Co.

## Vegetables.

Red potatoes, \$5, F. Babel; sugar beets, \$3, D. Flint; tomatoes, \$3, John Smith; garden peas, dry, \$3, C. S. Lowell; 1 general and 17 special prem, Felici Fabrielli; long blood beets, \$3, crookneck squashes, \$3, Mrs. M. Sprague; tomatoes, Acme, Bascom's favorite, hon mention, peppers, \$3, G. T. Bascom; sweet corn, green, \$3, pumpkin, \$5, A. B. Gilbert; sweet potatoes, \$5, 12 parsnips, \$3, carrots, \$3, heads of cabbage, other varieties, \$3, heads of cauliflower, \$3, heads of lettuce, \$2, yellow onions, \$3, celery, \$3, marrow squashes, \$3, cucumbers, \$2, white beans, dry, \$3, vegetables exhibited by the producer, \$25, F. Bursi & Co.

## Fruits.

Pears, \$3, figs, \$5, P. H. Murphy; display of peaches, \$15, plums, \$10, 5 varieties plums, \$5, general display of fruit, \$40, E. M. Smith; tropical fruits, special prem, D. C. Hayward; apples, \$20, R. Williamson; tropical fruits, \$40, Williamson & Co., 6 varieties apples, \$5, 6 varieties pears, \$5, 6 varieties peaches, \$10, 1 variety plums, \$3, L. S. Bamber; 12 varieties apples, \$10, 3 varieties apples, \$3, display of pears, \$20, 12 varieties pears, \$10, display of fruit by the producer, \$40, O. O. Goodrich; greatest number and best oranges, \$20, greatest number and best lemons, \$20, G. C. Swan; best seedling fruits, \$10, R. Williamson; apples, plums and pears, silver medal, Luke G. Sresovich; apples and peaches, spec men, J. Bidwell.

## Jams, Jellies, Etc.

Raspberry jam, \$5, blackberry jam, \$5, strawberry jelly, \$5, blackberry jelly, \$5, red currant jelly, \$5, Mrs. H. Cronkite; raspberry jelly, \$5, Miss Kittie Henley; display of preserves, \$10, Mattie F. Hunt; quince jelly, \$5, Mrs. E. F. Aiken; Muscat grape jelly, spec prem, branded peaches, \$5, Mrs. G. T. Bascom; strawberry jelly, currant jelly, blackberry jelly, raspberry jelly, blackberry jam, spec prem recm, Mrs. F. A. Ebel; pickles, \$5, jellies and jams, spec men, Mrs. A. S. Fisher; display of fruit in glass, \$10, J. D. Enas; best honey to ff. K. Cummings, but not entered; premium to Mr. Cummings, if a member; if not, to J. F. Harbison.

## Dried Fruit.

Dried berries in variety, \$5, Mrs. H. Cronkite; dried apples, \$5, Mrs. E. F. Aiken; dried figs, \$5, Albert Root; dried plums, \$5, Luke G. Sresovich & Co.; soft-shell almonds, \$10, C. S. Lowell; English walnuts, \$10, peanuts, \$10, E. F. Aiken; best package for shipping small fruit, \$5; package for grapes, \$5, package for peaches, \$5, package for plums, \$5, package for pears, \$5, Cooke & Son; table grapes, \$10, wine grapes, \$10, raisin grapes, \$10, P. H. Murphy; second best and greatest variety of grapes, \$15, E. M. Smith; table grapes, \$5, G. A. Duke; table grapes, \$20, wine grapes, \$20, wine grapes, \$5, variety of grapes, \$25, raisins, \$25, J. Rutter; best working still, \$25, Dietrich & Doorman.

## Miscellaneous.

Teazels, John Smith, hon men; flavoring extracts, R. B. Scott & Co., dip; salmonberry, dip, E. W. Melvin; orange and lemon trees, D. C. Hayward, hon men; Coddling moth exterminator, Hutchings & Co., hon men; zincograph stencils, M. Schmidt, dip; stencil printing, Cooke & Son, dip; honey extractor, comb foundation machine, pure Italian bees, J. D. Enas, dip; seeds from forest trees, G. M. Hutchings, hon men; mustard, H. C. Hudson & Co., hon men; leaves of Victoria Regia, Golden Gate Park Commissioners, hon men and spec prem recm; Eclipse incubator, H. W. Caldwell, dip; water filter, Hobby & Harper, hon mention; display of whip lashes, mohair goods, \$40, goods from Angora skins, \$20, gloves and glove skins, \$5, to C. P. Bailey; Pacific Rural Press, handbook, and other valuable works, W. B. Ewer, hon men; *Journal of Commerce*, W. H. Murray, hon men; pillow sham holder, F. F. Dye, dip; system of dress cutting, Mrs. W. A. Mott, silver medal; tools, Faulkner, Bell & Co., silver medal; patent overalls, P. Bauner, silver medal; calf weaners, Henry C. Rice, hon men.

## Fine Arts.

The premium list having been withdrawn in this department, and awards made in proportion to merits of exhibitions, the amount of each award is yet undetermined. The gold medal in this department was awarded to Thomas Hill, of San Francisco, for the most meritorious display.



## Golden Gate Fair Premium List.

The following is the list of awards in the live stock classes at the Golden Gate fair, held during the week ending September 6th, in Oakland:

## Horses.

Thoroughbred Stallions.—Four yr old, Thad Stevens, R. P. Clement; 1-yr-old colt, Sunday, H. Stimpson; colt under 1 yr, Hubert, by Thad Stevens, out of Katie Pease, James Mee.

Mares.—Four yr old with colt, Katie Pease, James Mee; 4 yr old, without colt, Abbie W., J. Cardinell; 2-yr-old filly, Arinda Howard, Charles Thomas; 1 yr old, Minnie Howard, J. Mee; sucking colt, Cecil, John Silvy.

Families.—Thoroughbred dam, Miami, and two colts, Wm. Boots; Thoroughbred stallion, Billy Hayward, and 5 colts, Mr. Edwards. [A protest by Mr. Mendenhall—family was not exhibited as required by the rules.] Dam, other than thoroughbred, Libilla, and 3 colts, W. H. Clark.

Graded Stallions.—Four yr old, Young Synthesis, W. H. Clark. [A protest by Dennis Gannon.] Three yr old, Captain, P. Martin; 2 yr old, Sinfort, Dennis Gannon; 1 yr old, Arthur H., J. Sylva; sucking colt, Master Hayward, H. A. Mayhew.

Graded Mares.—Four yr old, Mollie Munson, D. McCarthy; 4 yr old, with colt, Lady Sylva, J. Sylva; 2 yr old, Clevea, S. Harris; 1 yr old, Flora, M. Mendenhall.

Stallions of all Work.—Four yr old, Conductor, E. W. Marston; 3 yr old, Pedro, G. W. McNear; 2 yr old, Stock-ton Boy, E. W. Marston; 1 yr old, Mac, R. Duncan.

Mares.—Four yr old, Poscora Belle, A. A. Mayhew; 4 yr old, without colt, Nellie, Joel Merchant; 3 yr old, Corisa, Joel Merchant; 2 yr old, Laura, Joel Merchant.

Draft Stallions.—Four yr old, French Spy, R. B. Chisholm; 3 yr old, Kirkwood, Chisholm.

Mares.—Four yr old, with colt, Julia, B. Bowman.

Roadsters.—Stallions.—Four yr old, Pinote Patchen, S. J. Tennant; 3 yr old, Duster, J. Donnelly; 2 yr old Burlington, J. Donnelly.

Mares.—Four yr old, Mollie Drew, J. Price; 3 yr old, Agnes, C. H. Cushing; 2 yr old, Clara A., M. Mendenhall.

Double Teams.—Best double team owned and run by one man, Mac and John, W. H. Clark, San Mateo, prize, a silver goblet valued at \$50.

Saddle Horses.—Pluto, John Sylva, first; Faunie, George Taylor, second.

Buggy Horses.—Whisper, C. Younger; 2-yr-old colt, Locbinyar, special diploma, Hammond & Hall.

Carriage Teams for Family Use.—Miniature team, Charlie and Jessie, by sons of G. I. Taggart.

Sweepstakes.—Stallion, Early Pearl, Otis Hill, first prem, \$100; second, Conductor, E. Marston, second prem, \$35; graded mare colt, Minnie, James Mee, first prem, \$75; second best mare, any age or breed, Katie Pease, James Mee, \$30; Jennette, Jessie, George Leslie, diploma.

## Cattle.

Durham Bulls.—Four yr old, Airdrie Thorndale, C. Younger; second best, Red Thorndale, C. Younger; 3 yr old, Sixth Duke of Gabilan, Jesse D. Carr; 2 yr old, Maynard, J. D. Carr; yearling, Thorndale, C. Younger; second best, Fourth Duke of Gabilan, J. D. Carr; bull calf, Twenty-first Duke of Gabilan, J. D. Carr; second best, Fifth Red Thorndale, C. Younger.

Durham Cows.—Cow and calf, Third Maid of Monterey, J. D. Carr; 4-yr-old cow, Pet of Geneva, J. D. Carr; second best, Rose Nell, C. Younger; 3 yr old, Rosa Forrest, C. Younger; second best, Dollie Thorndale, C. Younger; 2 yr old, Red Dollie the Second, C. Younger; second best, Red Dollie the Third, C. Younger; cow calf, Fourth Belle of Avenue Ranch, J. D. Carr; second best, Mild of Malvern, C. Younger; heifer, under 1 yr, Eighteenth Maid of Monterey, J. D. Carr; second best, Sixth Rosa Nell, C. Younger.

Jersey Bulls.—4 yr old, W. C. Stone; 3 yr old, Joe, Grant I. Taggart; second best, Mahomet, F. J. Barretto; 1 yr old, Blythe, F. J. Barretto; second best, Gory, Capt. M. A. Burns; 1 yr old, California Gold Dust, F. J. Barretto; second best, Rob Roy, J. Coleman; bull calf, Blythe the Second, F. J. Barretto.

Jersey Cows.—Four yr-old cow and calf, Fantail with calf Mizpah, F. J. Barretto; 4 yr old without calf, Lady Ethel, F. J. Barretto; second best, Ruby, Grant I. Taggart; 3 yr old, Cinderella, W. E. Miller; second best, Vanity, Mr. Shattuck; 2 yr old, Beechie, J. W. Coleman; second best, Mary M., F. J. Barretto; 1-yr-old heifer, Bessie, W. E. Miller; second best, Young Duchess, J. W. Coleman; heifer under 1 yr, Charity, S. B. McKee; second best, Lizzie Barretto, F. J. Barretto.

Ayrshire Bulls.—Three yr old, Mahanto Callaghan, G. P. Benn; 2 yr old, Louie Todd, G. P. Benn; bull calf, Archie, G. P. Benn.

Ayrshire Cows.—Cow and calf, Young Stella, G. P. Benn; 3 yr old, Highland Lassie, G. P. Benn; 2 yr old, Linda Pierce, G. P. Benn; 1 yr old, Stella, G. P. Benn; heifer calf, Highland Maid, G. P. Benn.

Herd.—Thoroughbreds over 2 yrs, Sixth Duke of Gabilan and four cows, Jessie D. Carr, \$100; second best, Airdrie Thorndale and four cows, Col. Younger; under 2 yr old, Twenty-first Duke of Gabilan and three cows, J. D. Carr; second best, Thornhill and four cows, Col. Younger.

Graded Stock.—Four yr-old cow, Sonpin, Hammond & Hall; 3-yr-old cow, Orphan Girl, L. D. Reynolds; 3 yr old, Rubina, Hammond & Hall; 1-yr-old calf, Amia, Hammond & Hall; best milch cow, Orphan Girl, L. D. Reynolds.

Sweepstakes.—Best bull, Sixth Duke of Gabilan, J. D. Carr; second best bull, Airdrie Thorndale, Col. Younger; best cow, any age, Pet of Geneva, J. D. Carr; second best, Rosa Nell, Col. Younger; 3-yr-old bull and three calves, Sixth Duke of Gabilan, J. D. Carr; second best, Red Thorndale, C. Younger.

## Sheep and Swine.

We have failed thus far to obtain a list of premiums awarded in the sheep and swine classes at the Golden Gate fair. We understand, however, that all the first premiums for Spanish Merinos were awarded to J. H. Strobridge; all the second premiums to E. W. Woolley. The French Merino premiums were won by Mrs. Blacow's flock.

NEW BIOGRAPHICAL DICTIONARY.—Prominent among the valuable features of the new edition of Webster's Unabridged Dictionary, just issued, is the "New Biographical Dictionary," comprising about 10,000 names of ancient and modern persons of renown, including many now living. It gives us the pronunciation of these names, the nationality, profession or occupation, date of birth, and if known, the date of death of each one. From its conciseness and accuracy it supplies a want long felt in this direction, and adds very greatly to the value of this always valuable work.

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

HOW TO STOP THIS PAPER.—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate the copy sent.

EXTRA COPIES can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.

## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, September 17th, 1879.

The chief change in the produce market is an improved value in wheat. Shipping is now proceeding in good amount.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday...	8s	6d	9s	6d	9s	6d	9s	10d
Friday...	8s	9d	9s	7d	9s	7d	10s	—
Saturday...	8s	9d	9s	7d	9s	7d	10s	—
Sunday...	8s	9d	9s	7d	9s	7d	10s	—
Monday...	8s	6d	9s	6d	9s	7d	10s	—
Tuesday...	8s	6d	9s	6d	9s	7d	10s	—
Wednesday...	8s	10d	9s	9d	9s	8d	10s	2d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1877...	12s	9d	12s	11d	13s	4d	13s	3d
1878...	10s	—	10s	2d	10s	3d	10s	5d
1879...	8s	10d	9s	9d	9s	8d	10s	2d

## The Foreign Review.

LONDON, September 16.—The *Mark Lane Express* says: The few samples of new wheat exhibited in Mark Lane have been wretchedly poor, both in quality and condition. A great deal of barley is also so stained as to be unavailable for malting. From 2½ to 3 quarters per acre seems to be the average yield of wheat, with, perhaps, some reservation in favor of oats. All spring crops are, to a great extent, failures, peas most especially, while root crops are but little better. Pending the arrival of the new crop, the supplies of all home-grown wheat have been exceptionally small. At 150 principal towns last week, farmers delivered a little over 16,500 quarters; against an average of 44,000 quarters for the corresponding week for four previous years. Prices for the insignificant quantities offered are unchanged. The principal feature in foreign has been a diminution in shipments from America, and comparatively light supplies in London, only amounting to 49,000 quarters up to Friday last.

Trade has been quiet; sellers have shown little desire to press sales, being encouraged by the certainty that the home crop is lamentably deficient, while the visible supply in America is diminished. Though a rise is hoped for by sellers before long, it is impossible to ignore the fact that America must control prices for the present cereal year, although it is more than probable that Continental requirements will absorb a large proportion of the available surplus which at present threatens to glut the United Kingdom markets.

At Mark Lane to-day (Monday) there was an active trade in foreign wheat. Fine American sorts in some cases were 1s. 6d. per quarter higher on the week. Flour advanced 1s. per sack. Barley was steady.

## Freights and Charters.

The *Commercial News* says: Wooden ships are to-day quotable on a basis of £2 3s. 6d. to Liverpool or Havre. Iron ships can be quoted at £2 6s. to Liverpool direct, or £2 6s. 6d. to Liverpool or Havre. The demand for tonnage is good at present, the list of disengaged ships in port and on the way being light for this time of year. We have now 53,969 tons in port loading wheat, against 56,704 tons in 1878. The disengaged tonnage foots up 23,778 tons; in 1878, 54,058 tons. The tonnage on the way is 155,189 tons.

## Eastern Grain and Provision Markets.

New York, September 16.—The merchandise markets are fairly active, prices firm. Flour is 5¢10¢ higher, active, with a better export demand for the British market. Wheat opened higher, but with a quiet market fell back. Pork active, \$8.90¢. Lard dull, 5¢ higher.

Chicago, September 13.—Wheat was excited during the larger part of the week, and prices, going rapidly upward, influence, in some degree, all other commodities. There has been an advance of 7¢ during the week, and prices close stiff at nearly the outside figures all around. The cause for the rise is found in strong European markets, and a growing belief that the Continental demand this year will be unprecedented, and will call for our large surplus of grain and also of produce. Recent statements by shrewd local judges confirm this feeling, and have served to advance prices. Sales of October were: Wheat, 87½¢; Corn, 33¼¢; Oats, 23¼¢; Barley, 75¢; Pork, \$3.17½¢; Lard, \$5.67½¢. The closing prices for October were: Wheat, 93¢; Corn, 34¼¢; Oats, 23½¢; Barley, 75¢; Pork, \$3.25¢; Lard, \$5.75¢.

## Eastern Wool Markets.

Boston, September 13.—The wool market is very firm and buoyant, and although there was no material change in prices, the tendency was decidedly upward. Sales continued largely to exceed those of last year. The demand during the past week was quite general, including all grades and qualities. Medium and No. 1 are sought after, and in some instances there was an advance of 1¢2¢ per pound realized. Transactions in unwashed and unmerchanted fleeces are large, comprising 100,000 lbs, mostly medium fleeces. Transactions in California wool comprise 367,000 lbs, mostly from 27¢ to 33¢ for good and choice Spring.

New York, September 16.—Wool is firm and in good demand. Pacific Coast Wools find more or less favor, and command full former rates. Thus far, all California has not sold to a great extent, the rates asked being considered rather too high, even with the ruling favorable conditions of trade.

PHILADELPHIA, September 16.—Wool is steady and firm, with prices tending higher. The supply is ample. Colorado washed, 15¢25¢; unwashed, 17¢20¢; extra and Merino pulled, 36¢33¢.

## Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon to-day as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Aug. 27.	WEEK. Sept. 3.	WEEK. Sept. 10.	WEEK. Sept. 17.
Flour, quartersacks...	30,569	4,558	59,473	28,334
Wheat, centals...	236,680	203,169	512,161	283,525
Barley, centals...	71,542	25,900	66,076	57,360
Beans, sacks...	2,038	609	1,053	2,501
Corn, centals...	982	277	2,178	2,608
Oats, centals...	8,349	1,342	7,421	7,089
Potatoes, sacks...	17,417	7,592	20,080	11,324
Onions, sacks...	1,320	724	2,520	1,990
Wool, bales...	2,672	788	2,210	3,230
Hops, bales...	127	25	383	406
Hay, bales...	2,352	801	1,898	1,570

BAGS.—The bag market is disclosing a tendency to re-turn to the combination figures, although some lots out-

side are still reported at 9¢10¢. The market is some what uncertain, and shows great variance between quotations from different parties.

BARLEY.—Prices are unchanged. We note sales: 500 sks choice Old Brewing, at \$1.02½; 600 sks fair New do, 77½¢; 400 sks Bay Feed, 75¢; 600 sks Coast do, 62½¢70¢; 925 and 200 sks do, at 67½¢ per cwt.

BEANS.—There has been a further decline in Bayo, But-ter, Pea and Small White Beans; as noted in our price list.

CORN.—Large Yellow enjoys an advance of 2½¢ per cwt, and there is talk of a sale as high as 95¢ per cwt. Other sorts are unchanged.

DAIRY PRODUCE.—The situation and prices are unchanged. The mass of the receipts sell at or below 25¢, but choice selections sometimes reach 30¢ for the single box.

EGGS.—Values are unchanged from last week.

FRUIT.—Grapes and peaches have ruled better, and to-day prices are quite firm and supplies well taken. The market is about bare of Oranges, except some Tahiti fruit which is held very high. Blackberries and Raspberries have re-appeared temporarily. Bartlett Pears, Quinces, figs and California Lemons have advanced. The Fruit trade is quite brisk. Mountain Peaches are now in their glory, and reach high prices.

HOPS.—Sales of new Hops have been made at 25¢30¢. The Eastern market is reported by telegraph as still firm, although no better prices have been gained.

LIVE STOCK.—The following sales are reported: 1,600 Sheep, at \$1.90; Wool on; 420 Lambs, \$1.45, in S. F.; Wool on; 2,215 Wethers, sheared, \$1.30; 2,000 Ewes, Wool on, \$1.65; 5 carloads Hogs, 3½¢ lb, delivered in S. F.; 3,000 Hogs, \$3.15 per cwt; 420 Steers, guaranteed 600 lbs, \$31 per head; 360 Calves, \$13.10, average 225 lbs.

OATS.—Oats are quiet and prices unchanged, except that \$1.00 is about the top for Surprise for milling.

ONIONS.—There is no change in this vegetable.

POTATOES.—Potatoes have stiffened up a little, and the choicest now command 40¢50¢ per sack. We noticed to-day a large lot boxing for shipment to Peru. Other exports are relieving the market a little.

PROVISIONS.—There is no change in rates nor tone of trade.

POULTRY AND GAME.—The opening of the Game season is bringing in Quail, Ducks, etc., in abundance, and prices have already dropped quite low, as may be seen by our list.

VEGETABLES.—A great glut in the Green Corn market is the most notable event of the week. Sales have been as low as 3¢ per doz.

WHEAT.—The price has thus far advanced about 5¢ per cwt, and the market is regarded as rising. Sales thus far are as follows: 100 tons gilt-edged Milling at \$1.77½; 700 cwt choice do and 540 sks good do, at \$1.75; 75 tons Shipping, \$1.73½; 1,300 sks good do, 150 tons do, and 800 tons do, at \$1.72½; 200 sks Coast, \$1.45; 150 sks off grade, \$1.40; and 180 sks do, \$1.30.

WOOL.—Northern fall clip has advanced about 1¢ per lb, during the week. Other grades are unchanged. Receipts have been small thus far, and the market is perhaps not quite fixed.

## FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., September 17, 1879.

Blackberries...	12½¢	15¢
Apples, box...	25¢	1 00
Apricots, box...	—	—
Bananas, bunch...	2 00	4 00
Blackberries, chst...	4 00	6 00
Cherries, chst...	7 00	8 00
Citrons, Cal...	100¢	8 00
Cocoanuts...	100¢	8 00
Crab Apples...	—	—
Currants, chest...	—	—
Figs, box...	50¢	75¢
Gooseberries...	—	—
Grapes, box...	50¢	60¢
Muscat...	60¢	1 00
Malvoisie...	50¢	75¢
Rose of Peru...	50¢	75¢
Bk Morocco...	60¢	1 00
Tokay...	75¢	1 00
Limes, Mex...	8 00	12 00
do, Cal...	4 00	5 00
Lemons, Cal...	60¢	75¢
Sicily, box...	8 00	12 00
Australian...	3 00	4 00
Nectarines, bsk...	—	—
Oranges, Cal...	15¢	35¢
do, small...	6 00	9 00
do, Tahiti...	35¢	40¢
Peaches, bsk...	1 00	1 50
do, Mountain...	1 00	1 50
Pears, bsk...	25¢	50¢
Bartlett...	1 50	2 00
Seckel...	75¢	1 25
Pineapples, doz...	4 00	6 00
Plums, box...	60¢	1 00
Prunes, bsk...	50¢	1 00
Quinces, box...	50¢	1 00
Raspberries...	8 00	10 00
Strawberries...	5 00	6 00

Asparagus, box...	1 25	1 50
Beets, chst...	40¢	—
Beans, String...	—	—
do, Cal...	1 00	1 25
Cantaloupes, dz...	75¢	1 00
Carrots, sk...	25¢	35¢
Cauliflower, doz...	30¢	40¢
Chile Peppers, bx...	25¢	35¢
Cucumbers, bx...	25¢	35¢
Egg Plants, bx...	1 00	1 25
Garlic, New, lb...	3¢	—
Green Peas, lb...	1½¢	—
Lettuce, doz...	10¢	—
Parasnis, lb...	1½¢	—
Horseadish...	—	—
Shubarb, lb...	—	—
Squash, Marrow...	6 00	8 00
do, Cal...	100¢	1 00
Summer Doz...	25¢	35¢
Tomato, box...	10¢	—
Turnips, chst...	40¢	50¢
White...	—	—
Wat'm'n's...	10 00	12 50

## DRIED FRUIT.

Apples, sliced, lb...	4¢	6¢
do, quartered...	2¢	3¢
Apricots...	15¢	—
Butter, California...	25¢	35¢
Choice, lb...	18¢	25¢
Eastern...	25¢	30¢
Lard, Cal...	18¢	20¢
Eastern...	20¢	25¢
Flour, ex. fam, bbls...	100¢	120¢
Corn Meal, lb...	23¢	25¢
Sugar, wh. crsbd...	12½¢	13½¢
Sifted Brown...	8¢	9¢
Coffee, Green...	23¢	35¢
Tea, Fine Black...	50¢	60¢
Finest Japan...	55¢	60¢
Candles, Adm'te...	15¢	25¢
Soap, Cal...	7¢	10¢
Rice...	8¢	12¢
Yeast Powder...	1 50	2 00
Can'd Oysters...	100¢	120¢
Syrup, S F Gold'n...	75¢	1 02
Dried Apples...	10¢	14¢
Ger. Prunes...	12½¢	10¢
Figs, Cal...	9¢	15¢
Peaches...	11¢	10¢
California...	50¢	60¢
Wine, Old Port...	3 50	4 00
French Claret...	1 00	2 50
Cal, doz hot...	3 00	4 50
Whisky, O K...	3 50	4 00
French Brandy...	4 00	6 00

## BAGS AND BAGGING.

JOBBING PRICES.]

WEDNESDAY M., September 17, 1879.

Eng Standard Wheat, 411	Elgbths	32¢
California Manufacture.	Hessian, 60 inch.	29
Hand Sewed, 22x36.	45 inch.	9
22x36.	40 inch.	8½
24x40.	Wool Sacks,	
24x40.	Hand Sewed, 3½ lb. 44	
24x40.	4 lb do.	47
Machine Swd, 22x36.	Manf.	13
Flour Sacks, halves.	Standard Gunnes.	7
Quarters.	Bean Rags.	13



## Agricultural Articles.

## The Famous "Enterprise."

PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babbitted boxes. Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information.

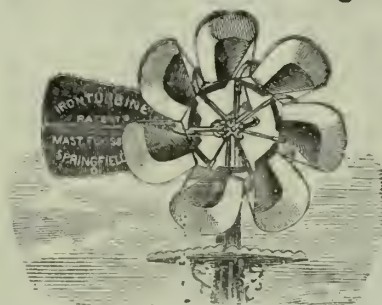


**HORTON & KENNEDY,**

GENERAL OFFICE AND SUPPLIES, LIVERMORE,  
ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE  
& CO., 401 Market Street.

## Iron Turbine Wind Engine



## AND BUCKEYE FORCE PUMP.

This machine made of iron, wheel, vanes, etc., made of No. 24 sheet iron, bound and braced with best quality of wrought iron, gives more power than any other wheel of same diameter. No wood to swell, shrink, rattle or be destroyed by the wind. The most durable and the best Windmill ever invented. For particulars, price lists, etc., address

D. E. GOLDSMITH, State Agent,  
410 Sansome street, San Francisco.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

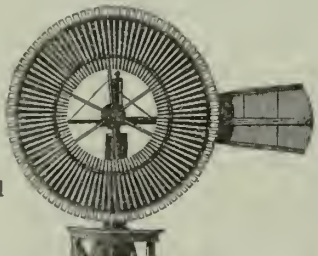
MATTESON & WILLIAMSON,  
STOCKTON, CAL.

**\$50.**

The New  
**Worthington**

Windmill

Manufactured  
by



W. D. PARSON,  
1384 San Pablo Avenue, Oakland, Cal.

Also, maker of the "Colorado Wind Engine," Wind Grist Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern of Deep Well and Artesian Lift Pump Cylinders. Circulars free.

## Anderson's Springs,

LAKE COUNTY, CAL.

Nineteen miles from Calistoga, five miles from Middletown, and ten miles from the Great Geysers; between which and Anderson's Springs there is a good stage road.

## HOT SULPHUR WATER

For Rheumatism, Paralysis, etc.; Cold Sulphur for Dyspepsia, Diseases of the Stomach and Bowels. Scenery unsurpassed. Climate mild and equable. Consumptives generally improve in health, and asthmatics are invariably relieved.

## TROUT FISHING ON THE GROUNDS.

## Deer Hunting in the Immediate Vicinity.

Accommodations and Cookery good. Board from \$10 to \$12 by the week.

ANDERSON & PATRIQUIN, Prop's.

## TREES, FRUIT STOCKS, AND TREE AND FRUIT SEEDS.

Our Complete

## CATALOGUES

Are just published, and will be mailed

FREE

on application.

We will send by mail free

10 Plants

of the Climbing Evergreen

Burning Bush (Euonymus radicans)

for \$1, and

3 Plants

of the new JAPAN SNOW

BALL

Viburnum plicatum.)

for \$1.



Viburnum plicatum.



Euonymus radicans

**THOMAS MEEHAN,**

Germantown, Philadelphia, Pa.

## Trall Hygienic, Medical and Surgical Sanitarium.

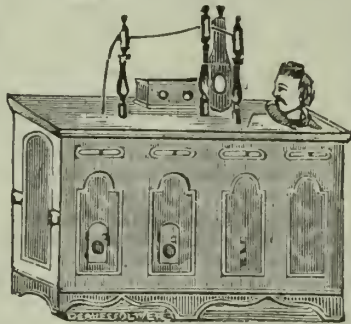
No. 8 Ellis Street, San Francisco, Cal.

Treatment by a Purely Scientific and Rational Method Without Drugs of any Kind.

THE TREATMENT DEPARTMENT EMBRACES ALL APPROVED REMEDIAL AGENTS, AS OXYGEN INHALATIONS, VACUUM TREATMENT, THERMO-ELECTRIC, TURCO-AMERICAN, ELECTRO-MAGNETIC, GALVANO-CHEMICAL, STEAM, VAPOR, WARM AIR, AND ALL FORMS OF WATER BATHS;

Swedish Movements, The Health Lift, Spirometer or Lung Strengtheners, Steam Atomizers, all Electric, Galvanic and Surgical Appliances, Sun Baths, and Solar Ray Surgery, new and perfect Truss for the Radical Cure of Hernia, lately discovered Chemical Compound for the speedy, safe, painless and permanent removal of Cancers, Scientific and successful method for the Cure of Piles, etc., etc.

Aims to keep Abreast with, if not in Advance of the Progressive Age.



It has been the mission of this System to mold public sentiment, and this Institution will hope to be no disgrace to the immortal name it has assumed. The time has come when Physicians of this School can afford financially to keep a conscience; in fact it is disastrous financially as well as morally to compromise the truth one iota; hence patients can rest assured that they will be treated by the Physicians after the most approved and scientific methods, out of pure and enlightened selfishness, recognizing the truth and beauty of this great principle: "The Universe is so ordered and arranged that the real and permanent good of every creature is best subserved in promoting the real and permanent good of every other being."

## THE BOARDING DEPARTMENT.

The table will be supplied with the best the exclusive market of the world affords, embracing fruits, grains, vegetables, meats, fish, fowl, eggs, cream, etc. Regular and transient boarders will be accommodated as well as patients. Business and professional men and women who are tired of restaurant fare, may appreciate eating to live a more healthful and enjoyable life. Pure food means pure blood. Pure blood means good health.

The vegetarian school has demonstrated beyond the possibility of a doubt that farinaceous dishes, sweet milk and fruit, are sufficient to maintain a hard working man in perfect health. Such a diet might certainly be substituted by sedentary people for their greasy steaks and ragouts. — Popular Science Monthly, December, 1878.

The Rooms are pleasant, warm, well ventilated and sunny; convenient to treatment rooms, so as to afford the best advantage of nursing and professional attendance.

## GENERAL PRACTICE.

Fevers, and in fact all cases may be treated at home successfully. Parturition, confinement cases are taken in the Institution or attended at home in any part of the city or country. Preparatory treatment in these cases is most important. Testimonials of extraordinary cases and cures can be seen on application. The most desperate cases, and especially those that have been given up as incurable by the old methods, are invited. Puerperal and typhoid fever and diphtheria cases, after all other methods have failed, may be said to be a specialty. Send for the TRALL HEALTH JOURNAL.

**DRS. D. C. & MRS. E. D. MOORE,**

Trall Hygienic Sanitarium, 8 Ellis St. S. F.

## Nathaniel Curry &amp; Bro.,

113 Sansome Street, San Francisco,

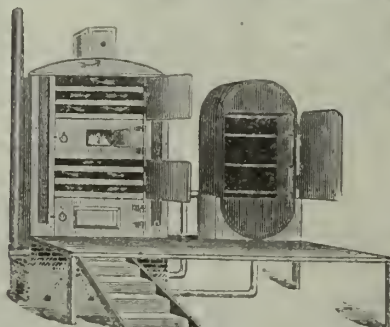


Sole Agents for the

## Sharps Rifle Co., of Bridgeport, Conn.

FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO.

Also Agents for W. W. GREENER'S Celebrated Wedgehead, Chokebore, Breech-loading DOUBLE GUNS; and all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America. AMMUNITION of all kinds in quantities to suit.



## 'BUTTS'

IMPROVED ANTISEPTIC "CHALLENGE"

## Fruit, Vegetable and Hop Drier AND CANNING APPARATUS.

The cheapest, quickest and greatest labor-saving Drier ever introduced. Retains the quality, color and flavor of the fruit. The Canning Apparatus has a capacity of from 500 to 4,000 cans per day. Machines varying from 500 lbs. to 10 tons capacity per day constantly on hand. For Circulars, prices, etc., address

**WM. BUTTS, Patentee,**

S. E. Cor. Spear and Mission Sts., San Francisco

P. O. BOX 1,859.

State, County and Individual Rights for Sale.

## Stock Notices.



## SPANISH MERINO SHEEP.

Choice stock of thoroughbred Bucks and Ewes, guaranteed free from disease. Purchasers are invited to examine. About 10 minutes' walk from the Railroad terminus, adjoining State University.

**E. W. WOOLSEY,**  
Berkeley, Alameda County, Cal.

## BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred pigs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

**JOHN RIDER,**  
18th and A Streets, Sacramento City, Cal.

## ANGORAS AT THE FAIRS.

The undersigned would announce to those interested in ANGORA GOATS, and the public generally, that he will have a lot of

## Choice Angora Bucks

On Exhibition at the State and District Fairs

This fall, namely: At the State Fair at Sacramento, the Golden Gate Fair at Oakland, the Nevada State Fair at Reno, and the Oregon State Fair at Salem.

These Bucks will be sold at fair rates.

**JOHN S. HARRIS,**

Hollister, San Benito Co., Cal.

## JOHN ROGERS &amp; SONS,

## GENERAL STOCK AND SALE YARD,

Corner Market and 9th Sts., San Francisco,

HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN. Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

## HERRMANN'S HATS

ARE THE BEST!



Try one and you will Wear no other

Spring and Summer Styles,

— AT —

336 Kearny St., bet. Bush and Pine,

— AND —

910 Market St., above Stockton.

Send for Illustrated Spring Style Catalogue.

## SEND FOR THE

**\$1.50**

## Homœopathic Medicine Case.

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address **BOERICKE & TAFEL,** Homœopathic Pharmacy, San Francisco.

## A Card to Grangers and Farmers.

HAY, GRAIN, HORSES and CATTLE.

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nos. 11 and 13 Union St., San Francisco.

## AGENTS, READ THIS

We will pay Agents a Salary of \$100 per month and expenses, or allow a large commission, to sell our new and wonderful inventions. We mean what we say. Send free. Address **SHERMAN & CO.,** Marshall, Mich.

Perfumed, gilt edge & chromo Cards, elegant case, name in gold, 10c. ATLANTIC CARD CO., E. Wallingford, Ct.



Do not begin your Singing Classes before  
examining L. O. EMERSON'S  
New Book  
**THE VOICE OF WORSHIP.**

While containing a large and valuable collection of  
Church Music in the form of Tunes and Anthems, it is  
perfectly fitted for the Singing School and Convention by  
the large number of Songs, Duets, Glee, etc., and its  
well made Elementary Course.

Price, \$9.00 per dozen. Specimen copies mailed for  
\$1.00.

Send for Circulars and Catalogues, with full list of  
standard Singing School Books.

The new 50 ets. edition of Pinafore (complete), sells  
finely, and Fatinitza (\$2.00), Sorcerer (\$1.00), Trial by  
Jury (50 ets.) are in constant demand.

**EMERSON'S VOCAL METHOD**, by L. O.

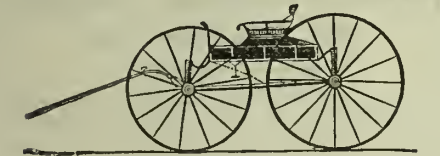
EMERSON, (\$1.50) is a valuable new book for Voice-Train-  
ing, containing all the essentials of study, plenty of ex-  
ercises, and plain explanations, and costing much less  
than the larger works on the same subject.

SUBSCRIBE now for the MUSICAL RECORD, and receive  
weekly all the news, and plenty of good music, for \$2.00  
per year.

In press, WHITE ROBES, a charming new Sunday School  
Song Book.

**OLIVER DITSON & CO., BOSTON.**  
C. H. Ditson & Co., 843 Broadway, N. Y.

**H. J. HASKELL,**



MANUFACTURER OF  
**CARRIAGES,**  
**BUGGIES,**

— AND —  
**SPRING WAGONS,**

At the Lowest Rates.  
Corner of Alameda and White Streets,  
**SAN JOSE, CAL.**

**THE WILSON ADJUSTABLE CHAIR,**  
With 30 Changes of Position.

Patented in the United States and Foreign Countries.  
**BEST CHAIR IN THE WORLD.**

Parlor,	Combining
LIBRARY,	Beauty,
Invalid Chair	Lightness,
Rocker,	Strength,
BED or	Simplicity
LOUNGE.	and
	Comfort.

Same Chair in Cane Seating, very desirable for summer.  
Manufactured of the best of wrought iron and rivets.  
Castors made purposely for the Chair. Everything to do  
exact science. **IT WILL LAST A LIFE-TIME.**  
Has been awarded Medals, Prizes and Diplomas for its  
superiority and merit wherever it has been exhibited.  
Orders by mail promptly attended to. Goods shipped to  
any address, C. O. D. Send for Illustrated Circular.  
Address the **WILSON ADJUSTABLE CHAIR MFG CO.,**  
535 Washington St., Boston

J. P. JONES. J. THOMPSON.  
**JONES & THOMPSON.**

Wholesale and Retail Dealers in  
**Hay, Grain and Feed.**  
Also, Store and Sell on Commission at  
Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will  
receive prompt attention, and returns forwarded as soon  
as sales are made. For further particulars address as  
above,  
1535 Mission St., San Francisco.

M. COOKE. R. J. COOKE

**PIONEER BOX FACTORY,**  
Corner of Front and M Streets, Sacramento.  
ALL KINDS OF  
**Fruit and Packing Boxes Made to Order,**  
**AND IN SHOOKS.**

Communications Promptly Attended to.  
**COOKE & SONS, Successors to COOKE & GREGORY.**

# Winchester Repeating Rifle,

MODEL 1873.



One-third size by Dr. E. H. Pardee.

The Strength of All its Parts,  
The Simplicity of its Construction,  
The Rapidity of its Fire,  
The Power and Accuracy of its Discharge,  
The Impossibility of Accident in Loading,

String measuring from center of tar-  
get to center of each shot, 32  
inches. Average distance of  
each shot, 1 9-100 inches.

Commend it to the attention of all who use a Rifle, either for Hunting,  
Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles  
of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set  
24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24  
26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—  
extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S.,  
known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines  
blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines,  
model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles  
and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands  
of Sporting Powder,

**JOHN SKINKER, No. 115 Pine Street, San Francisco**  
SOLE AGENT FOR THE PACIFIC COAST.

## BLACK POINT PACKING AND SLAUGHTER HOUSE.

MERRY, FAULL & CO., Proprietors.  
**TO OWNERS OF LIVE STOCK!**

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging mod-  
erately for killing, delivery and guarantee, and making advances to shippers on receipt at our  
Yards, which are supplied with every convenience. We assure our customers a

**SQUARE DEAL and FULL MARKET PRICES**

For their product, and invite their inspection of our facilities, which are the best on the Pacific  
Coast. We shall be pleased to give all information in our power as to Market Prices.

Please address our

Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.

## A BARCAIN IN BERKSHIRES.

The undersigned offers for sale for the next 30 days a limited number of Pure Bred Berkshires, aged from 3 to  
18 months. These pigs are all bred by myself from stock imported from some of the most noted breeders in the  
United States, and include several Boars fit for service, and a  
few choice Sows in farrow, to imported Boars. These pigs  
are not calls, but the choice pigs of their respective litters.



PRICE LOW FOR CASH.

A perfect and complete pedigree, and a written guarantee  
they are as represented sent with each animal sold. Corre-  
spondence solicited. Among purchases of my stock are the  
following gentlemen well known as men of careful discrimination:  
Dr. G. A. SHURTLEFF, Superintendent State Insane Asylum;  
GRANT I. TAGGART, Oakland; J. D. SMITH, Prof. Livermore Col-  
lege; LELAND STANFORD, by R. H. COVEY; Col. PETER SANE, San  
Francisco; L. U. SHIPPER, President S. J. V. Ag. Society; W.  
HESICK, Sacramento; W. C. HOPPING, P. M., Sacramento. For further particulars address

Bellota, San Joaquin Co., Cal.

ALFRED PARKER,

## MISSION ROCK DOCK AND GRAIN WAREHOUSES.

SAN FRANCISCO, CAL.

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

GRAIN consigned to us by water insured in open policy at Special Rates. Wheat shipped by railroads via Stock-  
ton, care of the CALIFORNIA STEAM NAVIGATION CO. will be received by them at Stockton and delivered at  
Mission Rock Warehouse at same rate of freight as to Oakland Wharf. Freight paid, Fire Insurance and Loans effec-  
ted and proceeds forwarded free of commission. Money advanced at bottom rates. Interest payable at end of loan.  
Fire Insurance 1 1/2 per annum. Short Rates of Storage—First month, 30 cents per ton, or 40 cents per ton if deliv-  
ered. Each month thereafter 20 cents per ton. Weighing in, free. Weighing out, 10 cents per ton.

**CHAS. H. SINCLAIR, Superintendent,**  
Or to the California Dry Dock Co., Office, No. 318 California Street. San Francisco.

**WELLS, RICHARDSON & CO'S PERFECTED BUTTER COLOR**  
Gives Butter the gilt-edge color the year round. The largest Butter Buyers recommend its use. Thousands  
of Dairymen say IT IS PERFECT. Ask your druggist or merchant for it; or write to ask what it is, what it  
costs, who uses it, where to get it. **WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.**

**Engraving.** Superior Wood and Metal Engrav-  
ing, Electrotyping and Stereotyp-  
ing done at the office of the MINING  
AND SCIENTIFIC PRESS, San Francisco, at favorable rates.  
Send stamp for our circular and samples.

**Patents** OBTAINED IN U. S. AND FOREIGN  
COUNTRIES; trademarks, labels and copy-  
rights registered through DEWEY & CO.'S  
MINING AND SCIENTIFIC PRESS Patent  
Agency, San Francisco. Send for free circular



Pyrethrum Cinerariæ Folium—A California  
Production.

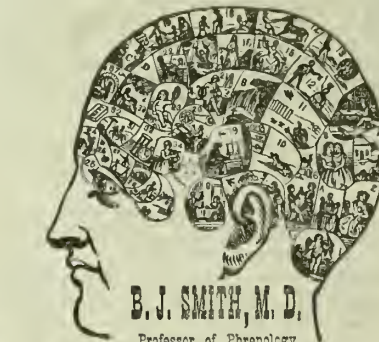
**THE MOST WONDERFUL DISCOVERY OF THE  
NINETEENTH CENTURY.**

This wonderful Insect Powder will exterminate Flies,  
Weevils, Caterpillars, Mosquitoes, Midges, Crickets, Cock-  
roaches, Spiders, Tarantulas, Scorpions, Ants, Hawk-bugs,  
Phylloxera, Plant Lice, Moths, Beetles, Grasshoppers, Lo-  
custs, Bed-bugs, Fleas, and every species of Insects.  
Remember that none is genuine unless my Trade-Mark  
is attached to every package.

\$100 WILL BE PAID IF IT FAILS TO KILL ANY INSECT.

Endorsed by Prof. E. W. Hilgard, of the University of  
California, and by Prof. C. V. Riley, Chief Entomological  
Commissioner at Washington, D. C. and pronounced supe-  
rior to any imported article, and perfectly harmless to man  
and beast.

G. N. MILCO.  
Patentee and Sole Manufacturer, Stockton, Cal.  
**CHARLES LANGLEY & CO.,** Wholesale  
Druggists, Sole Agents, S. F.



**MENTAL HYGIENE.**

Proprietor of the Hygienic Medical and Phenological  
Institute, 633 California Street, above Kearny.

This Institute has of late been entirely refitted, and is now  
far more healthful and conveniently arranged for the  
reception of patients and boarders than ever before, and  
by combining medical hygiene with the various Water  
Cure treatments and the most powerful Electro-  
Magnetic Magnet in the world, claims to cure speed-  
ily and permanently all forms of acute or chronic nervo-  
us derangements. Brain, Spinal and Heart diseases, St.  
Vitus Dance, Palsy, Epilepsy and all Rheumatic, Liver and  
Kidney troubles. The Institution has for the past 20 years  
made a specialty of treating all forms of weaknesses and dis-  
eases peculiar to males and females. By the use of hygienic  
remedies and electro-motopathy the worst forms of im-  
potency and seminal weakness in males and sterility in fe-  
males are speedily and permanently overcome. Hygienic  
baths, with or without room Temperature, moderate. Electro-  
thermal, Russo-Turkish and Medicated Baths given daily.  
Mrs. Dr. Smith as Matron has charge of the female bath-  
ing department.

DR. SMITH has practiced Phenology the past 30 years,  
and during the last 20 years has been constantly using the  
science connected with Physiognomy. In examining or diag-  
nosing disease in this city, and claims to have made discov-  
eries in the SCIENCE of Phenology that enables him, by an  
examination of the head, even blindfolded, to determine the  
disease to which the person is constitutionally subject, or  
whether the disease at the time afflicting the person, is the  
result of accident or hereditary weakness; whether CON-  
SUMPTIVE, DYSPEPTIC, RHEUMATIC, APOTHECTIC, NEU-  
RALGIC, LEUCORRHEAL, or SEMINAL. Especially does the  
form of the head indicate the strength of the uterine, gen-  
ital or reproductive system. The head is also an index of the  
natural strength of the lungs, heart, stomach, liver, kidneys,  
spleen, back or vertebra, and it determines the power of the  
system in warding off and overcoming disease of all kinds.

Ladies or gentlemen, desirous of obtaining a thorough and  
correct Phenological examination with Fowler and Wells' charts,  
will meet with a respectful reception at his consulting  
rooms. Parties can depend upon a reliable delineation of  
the character of their intimate male or female friends, by  
presenting a clearly defined photograph.

Phenological or Physiognomic examinations without  
charts, \$1.50; with charts, from \$2 to \$3.

**INVITATION TO INVALIDS**  
And all persons who are in any way out of health, who de-  
sire to know the nature and causes of their disease, may  
avail themselves of an examination through phenology in  
regard to health free of charge, between the hours of 9 A. M.  
and 8 P. M. Sundays from 9 A. M. to 12 M.

## PLEASANT SUMMER READING.

**THE NEW PENELOPE**

— AND —  
**Stories of California Life.**

By MRS. F. F. VICTOR.

The best delineations of Western character and incident  
ever produced on this coast. Agents wanted for this popu-  
lar work. Easy sales and large commissions. Address

MRS. F. F. VICTOR,  
721 Market St., S. F., Bancroft's Building, top floor.  
PRICE, \$2.00.

## Agricultural Books.

Orders for Agricultural and Scientific Books in general  
will be supplied through this office, at published rates.

**YOUR NAME PRINTED** on Forty Mixed Cards for  
Ten Cents. **STEVENS BROS.,** Northford, Conn.



## Commission Merchants.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCE.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

BRYANT & COOK,

Commission Merchants,

AND DEALERS IN

GRAIN, FLOUR, ETC.

No. 8 Davis St., near Market, San Francisco.

CHARLES NAUMAN.

FRANK NAUMAN.

C. & F. NAUMAN & CO.,

Wholesale Commission Merchants

— AND DEALERS IN —

GRAIN, POTATOES, FRUIT, BUTTER, POULTRY, EGGS, GAME, ETC.

227 & 229 Washington St., San Francisco.

Consignments Solicited.

R. J. TRUMBULL & CO.,

SUCCESSORS TO

R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

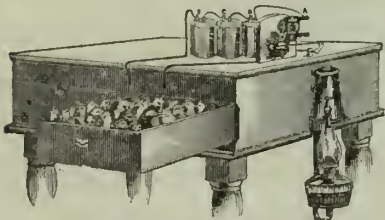
Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

\* "Guide to the Vegetable and Flower Garden" will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL & CO.,

419 and 421 Sansome Street, S. F.

## MONEY in CHICKENS



If You Want to Make Money

By raising any number of Chickens at any season of the year without setting hens, procure an

ECLIPSE INCUBATOR

(E. A. SAMUEL'S Patent).

In both public and private trials on this coast as elsewhere, the "ECLIPSE" has proved itself a perfect and successful Egg Hatcher. It may be examined and its merits proven to customers before they make purchases. Write for particulars and circulars to

G. G. WICKSON, 349 Market Street, S. F.

Agent for the Pacific Coast.

The Boss Pruner.

Patented Jan. 8, 1878.

ENTIRELY NEW!

Works on a cog principle. Smallest size cuts one inch, and largest size two inches in diameter. Has been thoroughly tested, and given perfect satisfaction. Sold by

GEORGE LARKIN,

Newcastle, Placer County, Cal.

F. A. ROBBINS.

MANUFACTURER OF

Canners and Soap Makers' Presses and Dies

JEWELERS' TOOLS.

ELECTRICAL and MODEL MACHINERY.

No. 7 First St., San Francisco.

## TREES

A large assortment of FRUIT, SHADE, ORNAMENTAL TREES and SHRUBS, ROSES, GREENHOUSE PLANTS, etc.; GREY RASPBERRY, SNYDER BLACKBERRY, APPLE SEEDLINGS. New Fall Catalogue free. Established 1852. BAIRD & TUTTLE, Agents, Bloomington Nursery, Illinois.

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 120 Sutter St., S. F.



## Celebrated Detrick "E W" 22x36 Grain Bag.

CALCUTTA, DUNDEE and PACIFIC JUTE HAND-SEWED BAGS always on hand. OUR No. 1, No. 2 and No. 3 SECOND-HAND GRAIN BAGS selected and graded with care.

**TWINES.** 3, 4 and 5-ply for Grain Bags, 6 and 8-ply for Potato Gunnies, 3-ply EXTRA FINE for Flour Bags, made expressly for our trade and QUALITY GUARANTEED.

FLOUR BAGS Printed to Order WITHOUT EXTRA CHARGE. POTATO GUNNIES, Wool, Bean, Ore and Salt and Seamless Cotton Bags.

## Tents, Awnings and Hydraulic Hose.

ORDERS PROMPTLY FILLED AT LOWEST MARKET RATES.

119, 121 and 123 Clay St., and 118 and 120 Commercial St., San Francisco.

## HOLLY & MAGOON'S CULTIVATOR.

Manufactured by HOLLY & MAGOON, Stony Point, Sonoma County, and E. J. HOLLY Lakeville, Sonoma County, Cal.

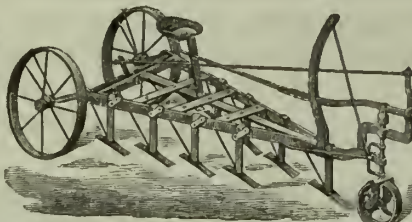
Jones' Patent, May 29th, 1877, and Holly & Jones, Apr. 8, 1879.

This Cultivator is made by practical men, after years of experience, and better meets the wants of California farmers than anything before offered.

Made of the best material (with wood or iron frame), and warranted in every respect.

Prices

REASONABLE.



Our New DOUBLE-BOX WHEEL

is a decided improvement, to which we wish to call the especial attention of those who would secure the best and most durable.

Our STRAIGHT CHISEL CULTIVATORS (patent applied for) are self sharpening and made of the best cast steel, with an improved method of fastening to the standard, approaching perfection itself.

For further information address the Manufacturers, or

M. C. HAWLEY & CO., Agents,

San Francisco and Sacramento, Cal.

In consequence of spurious imitations of

## LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature: thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Cross and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

## American Exchange,

Corner of Sansome and Halleck Streets,

Opposite Wells, Fargo & Co.'s Express.

SAN FRANCISCO

FURNISHED WITH ALL MODERN IMPROVEMENTS.

Board and Room from \$1.25 to \$2 per day; Board, \$6 per week—\$25 per month; Rooms, \$3.50 to \$7 per week.

Free Coach to the House from all Boats and Trains. Street Cars pass the Door.

THOS. BRYAN, Proprietor.



Fig. 1

Fig. 2

PATENT ELASTIC HINGE FILEHOLDER A.T. DEWEY, S.F. CAL.

Single samples will be mailed from this office for 50 cents, postpaid. Wholesale and retail agents wanted.

REDUCTION, July 12th, 1879.

MESSES. DEWEY & Co.—Gentlemen:—Have received my letters patent for the bar roller to-day. I am very much obliged to you for your prompt service, and will recommend you to all who may want your assistance. I remain yours, etc., GEO. MEDISO.

## Pocket Map of California and Nevada.

Compiled from the latest authentic sources, by Chas. Drayton Gibbs, C. E. This map comprises information obtained from the U. S. Coast and Land, Whitney's State Geological, and Railroad Surveys; and from the results of explorations made by R. S. Williamson, U. S. A., Henry Degroot, C. D. Gibbs and others. The scale is 18 miles to 1 inch. It gives the Judicial and U. S. Land Districts. It distinguishes the Townships and their subdivisions; the County Seats; The Military Posts; the Railroads built and proposed, and the limits of some of them; the occurrence of gold, silver, copper, quicksilver, tin, coal and oil. It has a section showing the heights of the principal mountains. The boundaries are clear and unmistakable, and the print good. 1878. Sold by DEWEY & CO. Price, postpaid, \$2; to subscribers of this journal, until further notice, \$1.

## MONEY!!

\$5,000 to \$50,000 Ready to Loan

On Mortgages of first-class Farms in Monterey, Santa Cruz, Santa Clara and San Mateo counties.

Address EXCHANGE & MART, Santa Cruz, Cal.

20 Best Chromo Cards, no 2 alike, 10c, or 25 fancy mixed 10c. name on all. J. B. Ilsted, Nassau, N. Y.

50 Perfumed, Snowflake, Chromo, Motto Cards, name in gold and jet 10c. G. A. SPRING, E. Wallingford, Ct.

Baling  
Fencing  
Telegraph  
Telephone  
Galvanized

# WIRE

## Barbed Fence Wire.

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the Trademark,



A. S. HALLIDIE

Wire Mills.

Office, No. 6 California St.

SAN FRANCISCO.

WIRE ROPE and CORDAGE

Of every kind on hand or Made to Order.

## FARMS FOR SALE.

IN THE FERTILE AND HEALTHFUL

San Pasqual Valley,

San Diego County, Cal.

TITLES PERFECT.

The owner (an architect) having recovered his health by a residence of four years in this Valley, is desirous of returning to the city, and so offers the following farms for sale

At a Great Sacrifice:

The Home Farm of 200 acres is well fenced and subdivided. There is beside 600 yards of movable panels,

50 Acres in Alfalfa,

Yielding five and six crops a year. There is an abundance of water on the place for stock, besides running water for garden, orchard, etc., and a one-sixth interest in the S. P. V. Ditch Co. House 28x36, enclosed in a lot 200x130, barn and stable, 54x35, two sheds 24x14 and 18x14, smoke-house, 20x14, with an adobe cellar under it, and every convenience as regards large tanks, etc., for making bacon. The implements are of the best, nearly all new, and in good order. They consist of two farm wagons, 10-foot header, beader beds, hay rack, mower, gang plow, single do, harrow, 10-foot seeder and cultivator, small do, sulky rake, two sets of strong harness, together with a lot of other tools, hay, grain seed, etc.

Price for the whole, \$4,000; one-half cash, balance on time at 1 per cent.

For Sale Also,

A farm under cultivation of 116 acres, adjoining the above, suitable for grain, corn or alfalfa, with a one-sixth interest in the Ditch Co., and about one and one-quarter miles of fencing, no other improvements. Price, \$1,200; one-third cash, balance on easy terms.

For Sale Also,

A farm of 120 acres, one-quarter mile from the above ranches, mostly damp land, suitable for a nursery, alfalfa, corn, etc. There is a small house, etc., and a ditch running along its upper side. Price, \$900; one-third cash, balance on easy terms.

The neighborhood is exceedingly beautiful and growing. Two schools are in the valley, one within one-quarter mile, and the postoffice within one mile, neighbors with families are all round.

My stock consists of superior brood mares, colts, hogs etc., and they may be taken at a valuation if wanted.

For particulars apply to W. B. STEWART, San Pasqual Valley, San Diego Co., Cal.

## CHEAPER YET!

## Tension Sewing Machines!

A large number of nearly new genuine SINGER, WHEELER & WILSON, HOWE, WOOD, GROVER & BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

NO TENSION MACHINE.

Wilcox & Gibbs' S. M. Co.,

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.

# DO

NOT FAIL to send for our NEW PRICE LIST. More complete than ever. Contains descriptions of every thing required for personal or family use, with over 1000 illustrations. Send nine cents for it. (Stamps will do.) We sell all goods at wholesale prices in quantities to suit the purchaser. The only institution in America who make this their special business. Address, MONTGOMERY WARD & CO., 227 & 229 Wabash Ave., Chicago, Ills.

60 Chromo, perfumed, Snowflake & Lace cards, name on all 10c. Game Authors, 15c. Lyman & Co., Clintonville, Ct.

60 Elegant Perfumed Cards, Chromo, Motto, Lily, Etc., 15c. Gift with each pack. H. M. SMITH, Clintonville, Ct.





Volume XVIII.]

SAN FRANCISCO, SATURDAY, SEPTEMBER 27, 1879.

Number 13.

### California Balloon Bush.

A matter of much interest to botanists and perhaps to growers of interesting shrubs is the rediscovery by Prof. J. G. Lemmon, of Sierra Valley, of the long lost "Balloon bush" of California (*Staphylea Belandera*, Gray.) This curious bush was first found by Prof. Bolander many years ago, but he found it only in bloom and the description in the first volume of the Botany of California is meager for this fact. There has been an eager demand for fruiting specimens of the shrub, and thorough search has been made, but it has eluded the pursuer until a few weeks ago Prof. Lemmon found it after a long day's search up and down the McCloud river near Mt. Shasta. It was in full fruit and Prof. Lemmon has arranged to have the seed collected. The announcement of the rediscovery has excited a storm of inquiries and expressions of gratification from Eastern botanists.

The balloon bush of California is of especial botanical interest because it belongs to a genus (*Staphylea*) which contains but four species beside it, and the geographical distribution of these four species is quite remarkable. One is indigenous to the Eastern States, another in Western Europe, another in Himalaya mountains of India, and the fourth in Japan. Prof. Lemmon gives us some points in description of the California species which indicate that it would be a most interesting shrub for ornamental grounds in this climate. The shrub or tree itself somewhat resembles the ash, having an orbicular leaf, but its leaves are grouped in threes unlike the ash. It grows from four to ten feet high and has a striking appearance. The young branches are of clean straight growth and suggest a fitness for walking canes. But the most interesting part of the shrub is the fruit which has been so long sought for. It is an inflated three-angled balloon from two to three inches long and pendent like a pear. These balloons hang in clusters of three or more. They are of light green color when growing and turn chestnut colored when mature. When mature they remain persistent on the limb through the winter. They contain from three to six large, hard, black seeds which become detached and rattle in their dry case when the wind stirs the branches. Thus the dry fruit may be likened to a rattle box. The flowers are of whitish color, half an inch in diameter and borne upon a pendent raceme.

Such in brief is a very interesting indigenous shrub which may ere long become an interesting object on our lawns through Prof. Lemmon's persistent research and fortunate discovery.

**THIN CREAM.**—A paper published in this city, but which fortunately has but little circulation, has the following "scientific" exposition of the subject of cream:

The cream of cow's milk, as all know, is the scum that rises from the milk when left standing. It has a variable specific gravity, according to its quality, with an average, say, of 1.204, and is found to contain the following constituent elements:

Butter.....	4.5
Caseine or curd.....	3.5
Whey.....	92.0

Total.....100.0

This is a most marvelous combination of nonsense. The specific gravity of cream is from 1.012 to 1.019. Cream contains on an average about 35 parts of fat, and 2½ parts of caseine to the 100 parts of cream; and where the whey comes in cream, the professor of this style of "science" alone can tell. It seems quite fitting that the highly "scientific" essay to which we allude should conclude with a puff of an oil stove, both for "culinary and scientific" purposes.

**UPPER SACRAMENTO FAIR.**—The premium list of the Upper Sacramento Valley fair is received. The fair will be held at Chico, September 30th to October 4th. The awards embrace nearly all lines of production, and are quite liberal. The counties embraced in the society's field are Butte, Lassen, Plumas, Tehama and Colusa—a rich region, and one which should furnish material for a fine fair. The Secretary of the Society is J. H. Williams, of Chico.

### Crescent Seedling Strawberry.

Our engraving on this page shows one of the newer strawberries named the "Crescent Seedling." It is a berry which has secured both praise and censure from Eastern growers who have tried it. Mr. Galusha, Secretary of the Northern Illinois Horticultural Society, describes the Crescent as follows: "Largest fair berries three and a half inches around; brilliant color; best quality for table, and moderately firm where kept in narrow rows; vines the most productive of any known variety; has produced 14,000 quarts per acre on my grounds; blossoms fertilize more completely when every third or fourth row is planted with Wilson, or (which is better) Charles Downing."

Mr. E. P. Roe, of Cornwall-on-the-Hudson,

others are equally extravagant in their censure. Neither are right. The flavor will average as good as the Wilson; and those who are near markets or who have soil on which the Wilson does not thrive, will raise it in large quantities and make money by it. On land where the Great American will not even grow, this berry will yield enormously. It is too soft for long carriage by rail if left till fully ripe, but I brought some on from Virginia and they carried as well as the majority. If picked promptly they carry as well as do most strawberries. Where it can be sold soon after it is picked it will pay well even if sold at low prices."

**STILL A CHANCE FOR CITRUS EXPERTS.**—European exchanges bring the tidings that there is still a chance to corral a prize of 3,000 lire, which the Italian government holds out for the best treatise on the "Structure, Vital Func-



THE CRESCENT SEEDLING STRAWBERRY.

N. Y., from whose fruit the engraving we use was made, gives the Crescent the following impartial treatment in his catalogue for 1879: "I have seen this berry in bearing in many localities during the past season, and I must agree with Peter Henderson that its flavor as a rule is poor enough, especially when it first turns red, or when it ripens in the shade. But I still maintain that the berries that ripen fully in the sun are very good. In productiveness, however, the ease with which it can be grown on any kind of soil, and in all climates, I have not seen its equal. I measured the fruit from one of my beds and it yielded at the rate of 346 bushels per acre. In size they averaged a little larger than the Wilson. They looked handsome in the baskets and brought a good price in New York—more than the Wilsons. In many places in New Jersey they claimed that they were getting more money from them than from any other variety. It is such a strong grower that few weeds can compete with it, and in regions where the Wilson does poorly they can scarcely fail with the Crescent. Some parties have extravagantly praised this berry;

tions, and Diseases of the Genus Citrus." This prize was offered before, but none of the writers struck the *lire*. Their essays were pronounced not of sufficient value to deserve the prize. It seems that the government means to have a thoroughly good treatise, and we hope it will succeed in getting it, for when it does a California edition will be demanded. The competition is open to all nations, but essays written in a foreign language must be accompanied by an Italian translation. Essays must be sent in by May, 1881, addressed to the Minister of Agriculture, Industry, and Commerce, and endorsed on the outside "Concorso al premio per la miglior memoria sul genere Citrus." Each must bear a distinguishing motto, and be accompanied by a sealed envelope similarly marked, containing name and address of author. The decision of the judges will be announced within ten months of the close of the period of competition. Each author will be allowed to retain the copyright on his work.

The Alvarado beet sugarie began sugar-making on Monday last.

### The Hop Outlook.

Hop picking is being carried on with more zeal and interest than for several years, and the filled bales have come to be regarded as a very good sort of property. The yield of this State will be quite small on the aggregate, because of the neglect and plowing up of yards during the era of low prices. There are also reports that some yards in this State which have received fair attention, have yielded about one-third less than was expected earlier in the season. Doubtless we shall have fuller reports as to the yield in this State by next week. In Washington Territory the reports indicate that the hop crop will be unusually heavy this season. Twenty-one and a half cents are now offering and our farmers are jubilant at the prospect of a big profit. Mr. Van Doren, of White river, will raise 25 tons this season. He sold one-half of his crop about two months ago at 12½ cents per pound.

All reports which we receive from abroad seem to indicate a season of high prices. The English hop crop seems hopelessly reduced. A London letter to Emmet Wells says: Reports from the plantations continue to be of a very unsatisfactory character. The continued wet and inclement weather has been seriously felt in nearly all districts. Mold is making sad havoc in places and high winds have seriously affected some gardens. Altogether the crop must be exceptionally short, and it is to be feared the bulk of the hops will be of indifferent quality. Advances from the great hop region of central New York indicate much disappointment in the outcome from the picking. Some of the largest growers report 20% to 30% less than they expected from the early show on the vines. The *Utica Herald* tells of several individual crops which seem to indicate the general character. Two parties who last year got 1,500 pounds to the acre, and estimated their crop at full as much this year, are getting only 1,100 to 1,200 pounds. Another who got 70 boxes from a young yard last season, and judged from appearances that he would get twice that amount this fall, will not get the 70 boxes. Another said that although his vines hopped out well, and were not blasted as they were last year, he is not getting over two-thirds of a crop.

Experts at figures state that the crop of the whole country last year was somewhere in the neighborhood of 130,000 bales. Good judges in the hop districts are now estimating that the crop of 1879 will not exceed 100,000 bales. This will be considerably less than one-half the yield of 1877.

But few hops are now selling in the interior of New York. Sales of the early varieties have been made as high as 37½¢@38¢, but the average prices paid for them run from 30 to 35¢.

**ODESSA WHEAT.**—The *Anaheim Gazette* reprints our remarks on this grain, made recently in answer to an inquiry, and then says:

For some reason or other a disposition is manifested to make a bugbear out of the fact that Odessa wheat makes a slightly darker flour than the people have been accustomed to using. To show the fallacy of entertaining this prejudice, it is only necessary to state that in many parts of Europe this wheat is grown in preference to other whiter varieties, and that in the States of Michigan, Minnesota and Wisconsin, Odessa wheat has supplanted every other variety. We make this statement on the authority of a report of the Department of Agriculture.

That is true, and it is just the reason why it will not pay to grow dark wheat in this State for shipment. The English millers can get all the dark wheat from nearer regions, and at a lower price. White wheat they stand in much need of, import from long distances, and pay high prices for. As we said before, good dark wheat will be in request for local grinding, and if it will pay to grow it for export for the price which such grain from the continent and the Atlantic seaboard of this country commands, then it may be used in that way too. That is the way the question stands at present.

**INDUSTRIAL GROWTH OF CALIFORNIA.**—The address of Hon. J. V. Webster at the State fair, which we print on page 202 of this issue, will be read with interest by every Californian. The points made on the growth of our industrial interests are very gratifying, and the conditions of future prosperity well worthy of thought.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents. —Eds.

### Notes on Southern California.

EDITORS PRESS:—On the first day of September I started on a tour of observation for southern California, in order to form an opinion as to the resources which that part of the State offers to the agriculturists, and what advantages, if any, existed in southern California to facilitate the introduction of sugar manufacturing, from either the sugar cane or the sugar beet. After a dusty ride of 22 hours I reached the city of Los Angeles, the metropolis of southern California, and as I wanted especially to inspect the counties of Los Angeles and part of San Bernardino, I made the city of Los Angeles the basis of my exploring expeditions. Many of the influential and leading men there are fully alive to the fact that the production of sugar, or any other cash-commanding article, from the soil, would be the only thing needed to make that part of the State the most productive and the most desirable one to live in.

The climate of southern California is entirely different from the surroundings of the bay of San Francisco, where a fur-lined duster is the most desirable article to wear during eight months of the year. It is strictly semi-tropical, and although it varies somewhat as one passes from the Pacific ocean eastwards, and according to the different elevations, taken as a whole, it is the most delicious climate I ever met during my extensive roamings through many parts of the world. But as the climate of these counties has been so fully described by men who designate them the "Sanitarium" of the United States, I will not further dwell on it, and only mention that I rode in an open buggy from 10 A.M. till 3 P.M., with the thermometer at 105° Fah. in the shade, and yet felt more comfortable than I possibly could have been in New York with the thermometer at from 70° to 80° Fah. The mosquito, the joint production of climate and soil, especially in newly settled countries, is here conspicuous through its absence, they are confined to the riverbeds, and are very rarely observed in dwellings.

#### The Land and the People.

What struck me as very peculiar during my continuous drives from place to place and from farm to farm, was the class of people I met, even on the smallest farms, with unpretentious little houses on them. I have traveled through most of the Western States ever since 1849, and observed, wherever I turned, the battle with the elements, with the soil, and with nature in general. Deprived of every comfort imaginable, the settler or pioneer agriculturist, if on the prairie, is surrounded by mud, corn and hogs; if on woodland, by stumps; and this hard and continuous fight for a bare existence impresses itself upon the very features of man, woman, or child one meets on the new farms. How different it is in southern California! Nature producing everything which sustains life in such superabundance and almost spontaneously, people devote some of their time from the first day they enter upon their farms to ornamentations of the same, which is the reason that flower gardens, orchards, and even artificial groves of trees are found on nearly every farm, even if the same was but two or three years ago wild land. In comparing the people as a class (whom I met in traveling from farm to farm) with the one I lived amongst in central Illinois, it bears about the same relation which a kid-glove does to a raw goat-skin. I am positive that in no State of the Union which began settling not more than 10 or 12 years ago, is to be found such a large proportion of people who have more than an ordinary education, as are found in those counties I visited in southern California. This state of civilization, so different from the one prevalent in a country settled by people who take up government land, or cheap railroad land, brings needs which are almost unknown to people who subdue wild nature, and which can only be gratified by liberal expenditure of money; and this, undoubtedly, in a measure, accounts for the great scarcity of money. Another and perhaps still greater cause for the scarcity of ready money, is the great and permanent improvements both of private and public nature one meets everywhere. School-houses and churches, which would be ornaments even in the oldest-settled communities of Massachusetts, are met everywhere, and what is most surprising, they are paid for, while the permanent investments on the farms are really marvelous.

#### Various Cultures.

Very few of the orange orchards are in full bearing (which requires from 8 to 10 years), but many will reach that point soon, while the later planted will follow into bearing from year to year. To plant these orange orchards and keep them for many years in cultivation requires no small outlay, while it yields no returns during all this time, and these orchards are therefore permanent investments or accumulated capital. The many and beautiful vineyards are most charming to behold, and though I have visited many vine-growing countries, never have I seen one which in its productiveness can bear any comparison to southern California. Another feature which I never observed before, is the raising of hard cord-wood

in the time of six to eight years. I measured blue-gum or eucalyptus trees which had been planted seven years ago in groves, which were cut into cord-wood, the trunks measuring a foot above the ground, 18 inches in diameter, and were from 60 to 75 feet high. Everything which can be produced in a temperate climate will grow in southern California to perfection, while almost every product of the Tropics will also do well there. While it is almost impossible to name everything of which the farmers can grow with very little exertion, (one, two or three crops every year with absolute certainty), it is very difficult to name anything which he cannot produce. When Pizarro beheld the fertile valleys of Peru for the first time, he knelt down and kissed the soil. What would he have done had he seen southern California, its beauty and riches?

#### Soil and Irrigation.

The soil varies from sand to clay, but the general character is alluvial loam, more or less mixed with sand. The soil, very rich in its chemical constituents, is in a physical condition which enables a capillary attraction of moisture to the surface to a most wonderful extent. The rain-fall during the rainy months of January and February is but very light, the farmer relies for moisture to his growing crops entirely on irrigation, either through canals and ditches from the rivers, or on artesian wells. By boring from 100 to 300 feet deep artesian water can be found with almost absolute certainty, and in most places it will come high above the ground. The town of Westminster alone, has over 400 flowing wells, any one of which will furnish sufficient water to irrigate from 100 to 400 acres of land.

Great improvements have lately been made in irrigation. The system of sub-irrigation, of which you have had descriptions in the PRESS, is as much an improvement as the railroad is on the stage-coach. Sub-irrigation requires only one-quarter the water to produce the same effect, or the same quantity formerly required for one acre will suffice for four. Besides this, it has the great advantage of leaving the surface perfectly dry, preventing packing of the ground which greatly stimulates evaporation, and it prevents the growth of weeds.

Where the water in the artesian wells does not flow above the ground, it comes within a few feet of it, and can easily be obtained through pumping, either by steam or wind. Through the kindness of Mr. Tompkinson I was enabled to observe the whole process, from the firing up of the steam-boiler till a tremendous stream of water was flowing through a 7-inch pipe several feet above the ground, to be directed anywhere where the growing crops needed water. This arrangement furnishes about 2,000 gallons of water per minute, and the stream was flowing at full force in 14 or 15 minutes after the fire was kindled. Such a water supply will entail a cost of about \$3 per day, and will supply all the moisture to grow a crop to perfection on fully 300 acres. With continuous sunshine, the most fertile soil and an independent supply of water for irrigation, the farmer of southern California is absolutely independent of the seasons, and such a thing as a short crop is unknown, unless caused by negligence.

Large tracts of the best of land lie still in their virgin state waiting for the settler to turn it into a perfect garden, with less toil than is ordinarily required to produce on Western land the first scanty crop of corn, while land which is considered too alkaline to produce readily without previous preparation is not touched at all. These alkali lands are not only found in southern California, but all over the State, and if the same process was applied which has been so successful in Utah, these lands would yield the heaviest crops, as they have done for many years in Utah.

In drawing a comparison between southern California and the State of Maine, the figures always stand thus: The largest and safest crop in Maine is always ice, in southern California ice is never formed on water and the coldest winter day is not sufficiently cold to kill the tenderest plants, the thermometer rarely touching 25° Fahr. The hay crop in Maine has averaged for years three-quarters of a ton per acre, one-half of which gets spoiled by rain and dampness while curing; in southern California, the alfalfa crop is as sure as the rising of the sun; with ordinary care eight crops are secured annually, yielding two and one-half tons per acre of the very best of hay. The amount of fruit annually rotting under the trees in southern California is by far greater than all the fruit produced in Maine, while potatoes yield three sure crops annually.

While enumerating all these great advantages, I cannot refrain from drawing attention to the great disadvantage under which the farmer of southern California labors. This is the long distance from market to turn these immense yields of perishable farm produce into ready money, and as the farmer has to share this market with others who are so much nearer to it, he naturally is under a great disadvantage. The most effectual way to overcome this great disadvantage is for the farmer to turn his attention to the production of articles which are not perishable and less bulky in proportion to their market value, for which southern California offers the greatest advantages.

Sugar is undoubtedly the most desirable article to be produced in southern California. The advantages for doing so, from either the sugar cane or the sugar beet, are greater than in any State in the Union. Beets have been grown all through the State for many years; they are of a very superior quality, containing as high as 15%

and 16% of sugar, while the quantity to be raised on a given tract of land is perfectly marvelous. The common beet or mangel wurzel has been exhibited frequently, weighing 250 pounds apiece, and as they are cultivated on almost every farm in southern California, there is no diversity of opinion as to the possibility of supplying them to any extent; but the large sum of money required to establish beet-sugar factories on a sound basis and the constant stock or land-jobbing which so far always has been connected with them, has brought them under a cloud in California.

Sugar cane is cultivated in southern California to a limited extent in a great many places, but almost exclusively by Chiuamen. I have seen it in one-quarter and one-half acre patches, and was informed that one-half acre had netted last year \$180, being sold to natives and Chinamen after most kinds of fruit have disappeared from the market. Most of the sugar cane so produced is known as Mexican cane, probably from the fact that the Mexicans were in the habit of raising the sugar cane long before California became United States territory. But even the cane raised in Louisiana and Mississippi does thrive in southern California. I saw a specimen of Louisiana cane, known as the purple variety. A few joints were brought by Dr. Fulton from Mississippi, and planted in a flower garden by T. R. Powers, of Old Los Nietos. One solitary eye of these joints grew, but this had suckered in one year to such an extent that from 50 to 60 stalks stood in one bunch, showing a most vigorous growth. The specimen which Mr. Powers very kindly permitted us to take, showed, on examination, to have not only retained all its rich sweetness, but also the aroma peculiar to Louisiana cane, which produces, besides the sugar, the New Orleans syrup, a quality which generally commands double the price of the best sugar-house syrup all through the Eastern States.

In comparing the climate of southern California with that of Mississippi and Louisiana, it is so much in favor of the former that it seems surprising this industry has not been entered into before. While the summers are warm enough to grow the sugar cane perfectly, the winters are never as cold as they are in the sugar regions of Louisiana, and the healthfulness of the climate is the perfect opposite of the malarious bottom lands of that State. The sugar cane requires large quantities of moisture during the earlier months of its growth, and here especially it is where southern California has so great an advantage over any other State by its system of artesian wells and irrigation by ditches brought from the rivers. Early frost often destroys the finest prospect of the Louisiana sugar planter, while here no such danger is existing.

No sooner was the attention of leading and influential men in Los Angeles directed to these very important facts than the wish was expressed to organize a movement to give the cultivation of the sugar cane a thorough and fair trial in southern California. It is proposed to import from the Sandwich Islands a cargo of sugar cane for seed, and distribute it amongst the farmers. In planting all of the first year's crop of sugar cane again, sufficient could be produced the second year to keep several small sugar mills supplied, and thus inaugurate an industry which may prove of the greatest importance to southern California and the State in general. Sugar from cane can be produced profitably even on a very modest scale, while what can be done on a large scale after a small beginning is once made, is best illustrated by Peru and the Sandwich Islands, in both of which places the sugar industry has in a few years assumed gigantic proportions.

ERNEST TH. GENNET.

#### Nietos.

EDITORS PRESS:—I much regret to see the page of the RURAL that is offered to correspondents running so slack of late. What has possessed so many to hang up the quill? I have good reason to be few in my endeavors to fill up the correspondent's page. As a general thing, whenever I write some one makes a dive for me, about like a hungry hawk would for a fat pullet; so much so, that I am sometimes fearful to mention anything about our "New Italy." Talk is talk; but climate, lip and paper don't pay for boots and shoes much any more. You talk to merchant, or to benevolent land grabber how you calculate to raise money to meet this or that bill, and he will look at you with smile as bland as a Thomas cat when you pull him off of a Cheshire cheese.

What New Italy is going to do, plus what has been done, amounts to a requirement of more time yet. Some things are already proven, and some things alleged which remain yet to be proven. That this is a wool and a wine region, is proven. As to honey, that is on probation yet. So is wheat. When barley is exported direct from our own seaports, it will pay a little. As to oranges in Los Angeles, here and there are evidences of success, and we can never pick up a paper but we see something about it. But the many and repeated failures on every hand, we seldom see in print. Time and the scale bug will settle the question.

Proper legislation on the irrigation question is the main question with us of Nietos. Let us hope that the coming Legislature will do something beneficial in the matter. On this point the matter rests, whether stanch residences will be erected, or the tenant's rudo shanty remain on these valuable lands.

GEO. KAY MILLER.

Los Nietos, Sept. 13th, 1879.

## THE DAIRY.

### A Cheap Milk House for a Warm Climate.

EDITORS PRESS:—This summer we built a milk-house that we have found to answer splendidly; and as some of your readers may wish some day to do likewise, I have thought you might like to have the particulars for their benefit.

We dug down into the ground three feet, and teamed the earth away; made the dimensions inside measure nine feet eight inches. The adobe bricks, being 14x7x4, made the outside of the house 12 feet square. Having dug down three feet, we boarded up the sides to prevent caving in, except where the door was to come. We then laid 1x12 boards on all sides, taking care that they rested firmly on the ground all around and that they were level on all sides. These boards we painted with crude petroleum to help to preserve them from the effects of moisture, and the object of laying the boards was to keep the adobe brick from touching the damp soil. On these boards we laid sufficient mortar, composed of adobe mud, and enough lime to cause the whole to heat thoroughly. We built walls all around 4 feet high, leaving 2 feet 6 inches for a door on the side whence the prevailing summer wind blows, and here we built out a small porch running out 18 inches; this we did that the door might never be shone on by the sun. Steps lead down three feet from the surface, and the porch is high enough to allow any one to go down the steps without stooping. On two walls, opposite each other, we now put boards sufficient to make 15 inches in width, and then the two remaining walls were built up gradually to a peak—same slant as the rafters of the roof.

The roof we arranged as follows: The milk-house being small we did not require very strong rafters, so we chose 1x6 fencing lumber and made them to project over the walls two feet, giving the roof a half pitch. We decided the distance apart between the rafters by the length of the shakes we had procured for the roof, which we found to be 2 feet 9 inches. Thus it required 5 rafters on each side, leaving 4 spaces. Nailing these 1x6 pieces to the boards, fastened into the brick edgewise, we nailed shakes on the under side of the rafters from one to the other, singly, as close as they would lie next to one another, so that we thus made a cheap ceiling. Over this lot of shakes, on the outer side, we nailed grain sacks cut open down the seams and spread out; they exactly span across, giving an inch or so for nailing to the sides of the rafters. On the rafters came the sheeting, and then the outer shakes. Between the sacking and shakes below and the upper shakes we filled in and rammed down tight all the straw chaff we could get in, to act as a non-conductor of heat, nailing in previously little pieces of board to fill the space between the rafters, and to prevent the straw from falling out below, and also little pieces of strips to fill the spaces between the sheeting and the rafters and shakes.

The roof projected two feet on all sides beyond the walls, to shade them in summer and to keep them dry in winter. We gave the roof a steep pitch, so that if it were ever to become a little defective not much rain would get into the straw used as a stuffing. We put in two ventilators, a wire gauze transom, and a window; the two latter are provided with extra shutters, so that by lowering them during the day all interchange of air stops.

Your readers will see that the reason that we used 1x6 lumber for rafters was to get as much space for the straw between the two sets of shakes, combined with economy of lumber. If the house had been a large one we would have used 1x8, as giving more space and greater strength; but so far, no sun has ever heated the roof so as to affect the lower shakes. The top rows of shakes were nailed on as lightly as expedient, so that next harvest we can take them off if necessary—should the straw shrink and leave any space vacant. The pitch of the roof is such that the straw will slip down if the straw in lower part of the roof should pack closer by age.

Our reason for covering the lower shakes with sacking was to prevent the straw from falling through the cracks between the lower shakes. Tongue and groove lumber would of course be better than shakes and sacking, but we wished to practice economy wherever we could consistently do so. The mortar on the outside, between the bricks, being carefully smoothed over and pointed, and the walls whitewashed, the whole then presented a cool and neat appearance. On the inside we nailed laths from the boarding below to the wall plate, which, by making it 15 inches, projected sufficiently to give a good nailing, and then plastered over after putting in the shelves at convenient height and arranged to suit us. The plaster being made like the mortar, of adobe and lime, required a coat of whitewash, which we extended also to the shakes on the ceiling and the rafter ties up in the peak. The whole is a success, and cheap as regards material. This house was built mostly above ground because we live in an irrigated country; those who live in dry districts can go lower into the ground and have less above ground. Fresh and hard butter, even in the heat of summer, and cold drink of milk at any time, have amply repaid your contributor.

CIRENCESTER.

Tulare Co.



## HORTICULTURE.

### Best Fruits to Cultivate.—No. 3.

EDITORS PRESS:—I am glad to see that "W. C. D." of Napa, is offering improvements on my selection of profitable market fruits; for, in this way, we may get valuable information if the writers will confine themselves to *facts* instead of theories.

"D." very properly objects to cultivating the Newtown apple where it won't grow. Now I will agree to that, and extend the objection to all other apples, or any other fruit; but when he proposes to supplant the "Newtown" as a market apple with a new variety, then I would say go cautiously. Don't plant extensively, even if you are satisfied that the apple will do well on your soil, and if a better apple in your judgment, for it may take the general public a good while to see it as you do; for the Newtown has a world-wide reputation that will be hard to eradicate. So I will fall back on my proposition in article No. 2—"what does your place of market demand?"

Let us take San Francisco for our market, and my location for growing fruit, and see what will pay best. That is the point we are after now, and not what we like best for our own eating—that is another question. My place is located at the edge of the foothills of the Santa Cruz mountains, on the waters of the Soquel river, near the Monterey bay, and in the "fog" region; and we can grow Newton apples and Winter Nelis pears to great perfection all over these hills and mountains. (We can also grow many other fruits, comprising more kinds and varieties, perhaps, than can be grown in any other place in the United States.) By actual experience we find an orchard of Newtown apple trees will produce more marketable fruit in a given number of years, and bring a higher price in market, at less expense, than any other apple yet tried. Now I will "tell you why." The Newtown is a regular and prolific bearer, and the fruit is of uniform and good size, and of excellent keeping quality, so it can be safely and cheaply kept until late in the spring, when apples are at the highest price, and at that time the Newtown is always ahead in market. With regard to quantity and quality, and market value of the Nelis pear, I can say as much, but it won't keep as long as some other very good pears, and requires more care in handling. But when it comes into market in good condition, all other pears take a "back seat." And there is another thing about the Nelis pear of importance in the line of profit, and that is (I mean in this region where we can grow nearly everything that will grow anywhere north of the Tropics), it is a vigorous growing tree; an early, regular and prolific bearer. I have Nelis trees, planted four years ago last spring, that will yield from 40 to 80 pounds of good marketable pears this fall; while several other varieties, of the same age, and with the same care, will not go over 5 to 10 pounds to the tree—and some even less. So much for "facts" about pears on my place. I will tell you what some of my friends, on the top of the mountains, are doing with other kinds of fruit.

Gus. Brown is growing apples, pears, peaches, cherries, grapes and prunes, of different varieties; and nearly all kinds and varieties of fruit that he has tried do well. But he thinks the Fellenberg prune, the most profitable fruit that he can raise; and is going to put out more of that prune than of all other kinds of fruit. He has now 1,400 bearing trees, and is still setting more (or preparing to), and is drying the prunes in preference to selling green; although they are worth 2½ cents per pound in San Jose, his place of market, while the dried ones are worth 14 cents. It takes three pounds of green prunes to make one of dried fruit, on his drier, which is very complete and handy. He calls it the "Cal. drier," and says he has examined several different driers, and thinks that kind preferable to any other.

But I will leave friend Brown now, and look through some other orchards. I will tell you more about Brown's fruit growing at another time, for he is an enterprising individual, and of an observing and inquiring mind, and we can learn a good deal about fruit growing by going through such a man's orchard, with him along to explain and illustrate. Now I will go to friend Tailor's orchard, right on the summit of the Santa Cruz mountains, on the San Jose road from Soquel. Here we will confine ourselves to apples, for the present. He has the finest-looking Newtown apple trees I ever saw, and they are loaded with large, sound apples, of uniform size, and will produce more to the tree than any other apple he has, according to the age of the tree, and will sell for more per box than any other apple that is known in this region. I was at his place two years ago, when his trees had been planted four years, from the spring before; and he told me that they averaged a box to the tree that fall, and have borne regularly every year. He is growing three varieties of prunes, too, that are prolific bearers, and find ready sale at 2½c per lb. green, and 14c dry. They are the Fellenberg, Petite d'Agen, and Hungarian. But he thinks the Fellenberg the most profitable market prune, but not so good a bearer. The "prune" growing business is attracting attention here. M. P. OWEN.  
Soquel.

### Orange Supply Regions.

S. B. Parsons, the well-known New York horticulturist, writes for the *Tribune* some observations on the regions supplying oranges to the great cities of the Atlantic seaboard. We take therefrom certain points which will interest our readers: It is claimed that the Florida orange is superior to any other; I am inclined to think that this is owing to its being picked ripe, for the Florida orange in November is by no means sweet. I have eaten in the West Indies, fresh from the tree and perfectly ripe, oranges which I thought equal to anything I have since eaten in Florida. The Bahia or Navel orange, which I introduced into Florida ten years ago, is being largely planted there as the best variety, and yet probably no better than its vaunted excellence in Brazil. Now, the ripe picking of the Sicily fruit is rendered possible by the more rapid transit of steam vessels. It is notable that the flavor of Sicily and Valencia oranges has much improved within a few years, and the culture in Sicily is said to be largely increasing. My neighbor, who has a large wharf in New York, informs me that one day last week there were landed upon it from one vessel from the Mediterranean 23,000 boxes of oranges and lemons, while another was waiting to land 22,000 more. A steamer consigned to him is one of seventy, belonging to one man, and all engaged in freighting fruit from the Mediterranean.

Here, California is the home of the orange; the land is good and there is no frost [that is, "hardly ever."—EDS. PRESS.] Its capabilities are beyond computation, and with a ship canal across the isthmus or low railroad rates there may be competition. Then enterprise, once awakened to possibilities of other regions, will find on the table lands of the West Indies a rich volcanic soil, absolute freedom from frost, and so short a distance beyond Florida that the fruit can be picked when ripe and brought safely to market. There is now in the West Indies little attention to varieties. Let the Navel orange be introduced there, and the Florida orange may lose its present superiority. All these are possible contingencies, yet in every business there are risks, and no man is wise who sits down and closes his hand for fear the penny in it may fall out. He will have the penny and nothing else all his days. With care and thought, and industry and capital, a man may embark in orange culture and succeed, and there is no land culture which promises better. But let not the hands of any one be paralyzed by disappointment from idle dreaming that 5,000 oranges worth 2 cents each will certainly grow on a tree, and a hundred such trees will go on an acre.

## THE SWINE YARD.

### Pedigrees of California Berkshires.

From an advance sheet of the *Berkshire Bulletin*, the organ of the American Berkshire Association, we take an item from the proceedings of the society, which gives the report of the committee on pedigrees. The action, which is described as follows, is of special application on this coast:

Among the pedigrees left in our hands at the June meeting, were those of certain Berkshires owned or bred in California. Regarding these, we beg to lay before you the following facts:

In October, 1877, application was made for the registry of a part of a lot of 205 pigs, purchased from parties in Kentucky in 1871. The accompanying are samples of these pedigrees. They bear date December 1st, 1871, and are certified, as will be seen, to be true copies of those received from Kentucky at the time of purchase.

The statement in No. 94, that Bob Lee, the sire of this sow, was an imported hog that cost \$1,000 in England, led to the impression that the pedigrees were not reliable, it being well known that Bob Lee was not bred in England, and that he never sold for \$1,000. Correspondence on the subject, with breeders in Kentucky, has failed to remove this impression. As to No. 20, represented to have been sired by Gipsy Boy, and he by Sam Slick, an imported hog, we fail to obtain any confirmation whatever of these statements. We fail, also, in our efforts to secure from the Kentucky breeders any evidence showing how the animals in question were bred. We cannot, therefore, recommend the admission of these pedigrees.

Your committee does not overlook the statement made by parties desiring to have these animals recorded, that 1,000 pigs, tracing to these and others of like breeding, have been sold on the Pacific coast, and that they are as pure and as fine as any which parties in the East are breeding. If this is true, it is to be regretted that their ancestors cannot be properly identified, so as to secure their admission to the "Record."

On motion, the report of the committee was received and adopted.

PROF. HAYDEN and others estimate that from 50,000 to 65,000 square miles of Montana's area are underlaid with coal. Several of the measures are yielding an excellent quality of fuel.

## THE STABLE.

### The Jack and His Progeny.

Now that mules have attained wide usefulness in this State, and their employment is extending, we have thought that the facts about the jackass in general, and his history in this country in particular, would be interesting to many readers of the PRESS. An article on this subject was lately written for the *Farmers' Home Journal*, by C. F. Spencer, of Eminence, Kentucky, and therefrom we take the following points:

The jack must be considered as a distinct animal—not as a horse degenerated. He is neither a stranger nor intruder, nor yet a bastard. His blood is pure, and although his nobility is less illustrious, it is equally good, equally ancient with that of the horse. In considering the qualities of this animal, we must not compare his form, etc, with the beauty and speed of the horse. In this he takes a subordinate position, and for this reason his other valuable qualities are often overlooked. The comparison degrades him, and often makes us forget that he is a jack, and was not intended to possess the qualities which adorn the horse, and which he should not have. He is naturally as humble and docile as the other is proud and uncurbed. He suffers with constancy, and perhaps with courage, chastisement and ill treatment. His desires are moderate both as to quantity and quality of food.

He is susceptible of education, and it may be added that he is rarely sick. He attains his growth at from four to five years old, and lives to the age of 25, if handled prudently and carefully. It appears from various evidences that the jack was domesticated before the horse. In the East he is treated with care and attention, and his appearance is very different. Domesticated as he has been from the remotest antiquity, and valued as he has ever been in Western Asia, it was long before he was introduced into Western Europe. At the present time they are common in France, Spain, Italy and Greece, especially in large cities.

He is the poor man's cart, wheelbarrow, chaise and buggy. He takes the family to church, the wife and daughter to the wedding, and the vegetables to market. The jack and the goat are a kind of gentle providence which makes poverty tolerable to millions in Europe and Asia.

There are, as it is well known, abundant evidences of wild jacks found in various lands, but it seems that these animals are the descendants of the domesticated jack which have escaped from captivity, or they are mules between the wild or domesticated animals. They are much diversified in size, some being no larger than a Newfoundland dog.

In size and general appearance the jack varies according to the country they inhabit, and the treatment they receive. The Spanish kind, for example, is double the size of the ordinary English jack. As a rule the jack is large and slick haired in warm climates, and small and woolly in colder climates. In Spain and the island of Malta the jack, for many years back, possibly for centuries, has been in high repute, not only as an animal of great utility himself, under the saddle and in harness, but especially for the purpose of propagating mules. The mule, as all intelligent readers well know, is a hybrid produced by breeding a jack to a mare of the horse species; but all may not know that the offspring from a jennet bred to a horse differs in many valuable points, and is called a "hinny." They have never been bred in Kentucky much; in fact, in all of my experience of 30 years in raising, buying or selling mules, I never saw a "hinny."

I shall not undertake to show when the jack was first introduced into Spain, but I will say this: that all the best breeds that have been brought into this country have come from Spain or the island of Malta, and unless they had had careful and judicious crosses they would not have proven so serviceable in improving the jack stock of the United States as they have. Soon after the war of the Revolution a demand sprung up from the West India islands for mules to cultivate their sugar, and some jacks were imported into New England, but these were very small, the only object seeming to be to breed a mule. To General George Washington we are indebted for the first valuable importation to the United States of jacks of good size, good blood and fine appearance. In about the year 1787 the king of Spain sent a very large sized jack to General Washington, and probably about the same time General La Fayette also sent the General one from France or the island of Malta—at any rate the one from La Fayette was called the Knight of Malta. These were bred to Washington's mares, and produced very fine and tough mules. Mr. Cusatis says of them, that they were very hardy, and at General Washington's sale brought about \$200 each. They were from 15 to 16 hands high.

From these jacks, and probably from the New England importation, stock of various sizes were scattered through Kentucky, as by this time the cotton raising had increased so much, and the mules seemed to be the very thing to plow the ground.

Coming down to a later period, when the de-

mand for mules increased, and when the demand was for a better and large-sized mule in the South, there were other importations of jacks into the Bluegrass region of Kentucky (Lexington being its center). Between the years of 1835 and 1840, Hon. Henry Clay imported a very fine jack called Warrior. He was full 15½ hands high, well formed, and proved a valuable animal in improving the jack stock.

About the same time Aquilla Young, a mule trader to the South, from Mt. Sterling, Kentucky, purchased at Charleston, South Carolina, a very large imported jack from Spain. Either Dr. Davis, of South Carolina, imported him or became the owner, for Mr. Young purchased of him. The price paid at that time was \$5,000. The jennets in Kentucky then were small, but the best for a radius of 30 miles were mostly bred to this famous jack, although the price for the season was \$100. The demand for good jacks continued, and many very fine ones were raised in Kentucky. Not until a crop of young ones were raised was the improvement in mules shown, for both Mammoth and Warrior were bred to jennets. Many of the young jacks either sired or grand-sired by these attained the height of 16 hands, and the best world and did command from \$500 to \$2,000.

About the time these imported jacks lapsed into degeneracy from age or other causes, other jacks were imported of good size and appearance, so that the rearing of fine jacks and mules still continued up to our civil war. As soon as the war came on, the South was crushed and trodden under foot, and then the rearing of fine jacks ceased, for there was no demand for the better grade of mules; so that to-day there are very few superior jacks left. The best breed of jacks are those originally derived from the dry and hot regions of Asia. Perhaps the best now in Europe is the Spanish, which was obtained through Arabia and Egypt, and has long received the most careful attention in Spain.

During the existence of the dominion of Spain in the southern portion of the American continent, this breed was generally introduced, and may be thence obtained at this time in considerable perfection. Those raised in Peru, where the breeding is attended to, are very good. Nothing is more certain than that, as this species has exceedingly degenerated under long-continued ill-usage, it can be improved to an equal degree by the same attention which is bestowed on the breeding of other domestic animals.

## THE FIELD.

### An Oregon Method of Sacking Grain.

John L. Henderson, of Harrisburg, Oregon, gives the *Willamette Farmer* an account of a method devised by Nat. Hudson, for sacking grain from the separator, which enables one man to do the work of three. This contrivance will work only with those machines, the under side of whose axles stand 18 inches or thereabouts from the ground. He takes 3 blocks 6x6, or 6 blocks 3x3, and nails them together, the length of the block being twice or three times the width of the axle, and the others lengthening to the base so as to give a firm foundation. This pyramid of blocks is put under the axle, near the wheel, and the wheel removed by scraping a little dirt from the front side of the wheel. He then takes a strip of wood about 3 inches wide and 2 inches thick, and the length being about the width of the wheat sack, through which he has a pair of hooks inserted about twelve inches apart, and screws the wood on the machine just under the cast-iron spout. These hooks should be long enough to hold from 15 to 25 sacks, and made of wrought-iron, and turned up about half an inch at the extremities, to keep the sacks from slipping off. A stick, about 18 inches long, placed in the sack, keeps the mouth open. The stick and hooks are screwed on the other side, also, to provide for a change of wind. A large burlap, or piece of canvas, spread on the ground, catches any loose wheat, which is taken up on a scoop and thrown into the machine. "Mr. Hudson or myself can remove 1,000 bushels of wheat in 11 hours. I have removed between 500 and 600 bushels in 6 hours of work, and will guarantee my sewing, as will Mr. Hudson. I don't say this to brag, but to show the farmers how they can save money. It is worth \$3.50 a day to do the work. I get this amount, and my employers save \$2.50 a day, counting board at 50 cents a day." Anyone can use Mr. Hudson's contrivance, as he asks only thanks, and thanks are cheap. To do this work a man must understand how to sew fast and well, and he must be quick and stout.

PRESERVING BOTANICAL SPECIMENS.—According to Stoelz, specimens of plants for herbaria may be made to preserve their original colors permanently, by passing them slowly through a hot solution of half a gramme of salicylic acid in 300 grammes of spirits of wine, shaking off the superfluous moisture, and drying them between folds of blotting paper in the usual manner. As a precautionary measure, it is further advisable to turn the specimen over occasionally for a few days, before finally setting them aside as effectually dried.



Oakland has a population of upwards of 40,000 people. Broadway—the central station—where members will stop, is about 8 miles from S. F. city hall. The principal route is from foot of Market street, by ferry, to Long wharf, about 4 miles;  $1\frac{1}{2}$  miles from Long wharf to Oakland Point; and some 2 miles from the Point, through Oakland, to Broadway station, on Seventh street—time, about 40 minutes. Passengers walking one block east come to Franklin street, on which Odd Fellows' hall is situated, on the corner of Eleventh. Besides this is the Creek route, landing passengers at the foot of Broadway, connecting with street cars running to Eleventh street and beyond to Berkeley. The following is the schedule of

So the time slipped away. We would have liked to hear more speeches from the visiting sisters, but as they had to go home, and the hour was getting late, we were obliged to separate, hoping to have our brothers and sisters with us soon again; and we would say to all good Grangers, do not let the re-union be too far apart, so that we will lose our hold. As our W. M. remarked of the road or passage with hand and foot-hold to reach a summit, if the ledgees are too far apart the hold would be lost and the top could not be reached; so with the farmer, if the Grange interest is lost. He is at the mercy of the middle-man, and it is only through his own exertions and continued battle for justice that his cause will be gained. We must gain, for our cause is right. The elites of people that is in every way the most beneficial to the country—shall they let all other classes govern them for the want of energy and organized system to protect and govern themselves? If so, the fault lies at home, and that is lack of system and courage to push away all intervening obstacles to a fair compensation for their industries. We lack financial intelligence and social advantage. If we act in the Grange as it is our privilege and duty to, we can bring ourselves up to the standard of practical intelligence which is necessary to compete with other callings. I believe the farmers would be es-

**DIRECTIONS:**—Leave the steam-cars at corner of Broadway and 7th streets; take "Brooklyn and Tubb's Hotel" street cars to the Grand Central hotel, corner of 12th and Webster streets.—J. V. Webster, Mrs. Nellie Crouch and Chr. Bagge, Committee.

That party that talks of equal rights of citizenship, was in power in pioneer days, and sanctioned the doctrine on which Monarchy and Aristocracy is founded, by capitalizing one-fourth of the rich land of the State, by confirming the Spanish grants, which was followed by the act of 1853, allowing any quantity of land to be held by virtue of a brush or ribbon fence, ditch, or even a furrow. Then came the Van Ness ordinance, an act to allow a few to riot on property belonging to the whole people of San Francisco, which, if properly managed, would have sufficed to support that city government to the end of time. Next, under another party's misrule, we had unlimited scrip location, and land subsidies to railroad jobbers. These millions of acres of land have been in the market, most of it got for nothing, and held by men who never earned a dollar, whose principal business was speering and gambling. Capitalists could calculate how much each grant or lot would enhance, and how much the rest of each. The enhancement of land at commercial centers is determined by the number of working population, making that center the place where they exchange the products of their labor. The clear profits of the enhancement and rent of land in the business part of San Francisco has exceeded the prevailing rate of interest for the past 10, 20, or 30 years. The value and rents of the land largely exceed the value and rent of those grand buildings on it. One represents capital the owner has created, the other represents a value or capital the whole people have created, which, under the policy of government not making it a principal source of public revenue, has cursed the laboring classes with extortionate rates of interest.

Stockton, Cal. D. A. LEARNED.

D. A. LEARNED.



# AGRICULTURAL NOTES.

## CALIFORNIA.

**BUTE.**  
**WOOL COMING IN.**—Register, Sept. 19: We noticed several bags of wool at the depot, awaiting shipment. This is the first of the fall clip received.

## CONTRA COSTA.

**POTATO FIGURES.**—Antioch Ledger, Sept. 20: The potato crop, especially upon the tule land, has been unusually large but the market price will not pay for digging and sacking. One farmer informs us that he shipped 400 sacks and received a credit of \$20 for the lot from his commission merchant. Everybody went into the business of potato growing and the market has been flooded. The second crop, however, will probably command a higher price and the tule men will receive the benefit.

## FRESNO.

**GRAPES.**—Republican, Sept. 20: There are 117 different varieties of grapes cultivated at the Eisen vineyard, all thriving well, though they have not been irrigated since last February. Last Saturday the grape crusher, which has a capacity of 50 tons per day, was started for the first time this year, the power being furnished by a large turbine wheel. Their fruit this season is abundant and of an excellent quality. It is not their intention to manufacture any raisins, but to turn all their grapes, about 150 acres, into wine and brandy. In addition to their crop they are purchasing all the grapes of fair quality they can procure, paying \$20 per ton therefor.

**ITEMS.**—Wool is beginning to arrive from the foothill section. A canning establishment will be erected on the McNeil ranch near this place at an early day. Plant fig trees in your poultry yard. They afford the best possible shade, and in a few years the fruit will furnish feed for a large number of chickens during the greater part of the year. The 80-acre almond orchard of James McNeil promises an abundant yield. A gang of men are now engaged in picking and hulling them. Judging from the samples sent to this office, the quality is extra fine. Egyptian corn besides being equal if not superior to Indian corn for bread, and one of the best grains grown for any kind of stock or poultry, has been discovered to be very valuable for purposes of distillation, yielding more than the best Indian corn.

## HUMBOLDT.

**PEACHES.**—Eureka Signal, Sept. 12: Mr. A. Romeo, who brings the fruit from Shiveley's Bluff Prairie (El river) orchard, laid a box containing four magnificent peaches on our table this morning. The four weigh 4½ lbs., and the largest measures 12½ inches in circumference. We can't help but sigh for a home in the Bluff Prairie wilderness that can send forth such products.

## LOS ANGELES.

**THE VINTAGE.**—The vintage at San Gabriel has commenced. The grape crop in that vicinity is good. Wine making is fully under way in Anaheim.

**BATS.**—Anaheim Gazette: While a resident of Anaheim was walking in one of the orange groves of Los Angeles the other day, he saw on the limbs of one of the trees what looked like a ripe orange. He plucked it, but found that, instead of an orange, it was nine yellow bats clinging together, heads downward. They were in a semi-dormant state, and the spherical form into which they had crowded themselves, and their color, made them look exactly like a ripe orange to a careless observer. Yellow bats, though scarce, are not unknown in Anaheim.

**STARCH MAKING.**—Santa Ana Herald, Sept. 20: Mr. H. H. Harmon, of Newport (Gospel Swamp), has been manufacturing starch during the present season from potatoes, for laundry and culinary purposes. He understands his business thoroughly. The article of starch manufactured by him is pure. He has shipped a considerable quantity to San Francisco and some to Los Angeles to have it introduced. It is in the local market, and is pronounced by many of our citizens, with whom we are acquainted, as superior to the article imported, and he can furnish it at less cost. No doubt he will have liberal samples on exhibition at our Horticultural fair in Los Angeles next month.

## MERCED.

**EDITORS PRESS.**—I noticed in your last issue your article on "The Large in Farm Machinery," in which you copied an item from the Argus describing my combined harvester. The combination was gotten up and patented last season by W. J. Little, a rancher in San Joaquin county. I obtained my right to build one on my ranch of Mr. Little. It is nothing like the Centennial. It is less expensive, more easily handled and with less men. It is managed just like the common header, only, as a matter of course, takes more power to run it. It threshes the grain without breaking. In that respect I have never seen it equalled by any other threshing, but when it comes to jack rabbits I cannot speak in quite so favorable terms. One day last week the reel threw a large jack rabbit on the draper, but no one happened to see it till something went through the cylinder with a sort of a thud. The largest mass of it that had not parted company was thrown out on the straw carrier, while the heart and other small fragments was carried into the grain department. My cylinder is a 36-inch and travels with force.

Between this way of harvesting and the old

way of heading and stacking there is no comparison. If I were offered the best threshing rig I could select, steamer and all, to head and stack my grain, I would consider it no inducement, for in this way I can put the grain in the sack for much less than it costs to stack, say nothing about the cost of threshing from the stack.—M. D. ATWATER, Merced, Cal.

## PLACER.

**FOOTHILL GRAIN.**—Placer Argus, Sept. 20: Mr. J. W. Hulbert showed us some very fine corn last week, which was raised on his place three miles west of Auburn. It is of the Yellow Dent variety, 12 to 15 ft in height, and the ears are large and full. Good judges say that it is unsurpassed by any that is grown in the valleys. There are five acres of it, all of which is very fine, although the land has never been manured. A liberal supply of water from the Bear River ditch was furnished, that's all. He also informs us that Mr. E. E. Hulbert has last week produced some of the finest wheat to be found in the State. In view of these results, it may well be claimed that taking these foothill lands all through for any agricultural purpose, anything can be raised here that is raised in California.

## SAN BERNARDINO.

**FIGS.**—Riverside Press, Sept. 20: D. H. Burnham states as his experience that if figs are dipped into a boiling mixture of water and bicarbonate of soda, instead of lye from ashes, the result will be a more uniform and lighter colored article of dried fruit.

**RIVERSIDE RAISINS.**—We have seen grapes this week which certainly surpassed our most sanguine expectations. So large and so aromatic and so pure in transparent color, anyone could see at a glance that they would make a splendid raisin. And they are as abundant as they are fine. Some of our most careful cultivators believe that there are now hanging on the vines an average of 30—possibly 40—pounds of grapes to the vine, and this, too, in vineyards not yet mature. This is more than 10 tons to the acre, after striking off a liberal margin for mistakes. Some of our fruit growers have sold their grapes on the vines for one cent a pound. This nets them \$200 per acre without the expense of drying and boxing. The prospect for a market at remunerative prices is better than last year. Two dollars a box is hoped for; while some with a special market looked up beforehand will do better than that. If our raisins were better known and more uniformly put up, we should be pretty sure to do better than the above figures; but growers will be satisfied for the present with that. It now appears probable that a large number of our orange and semi-tropical fruit growers in this settlement will realize a nice little income from their raisins while waiting for other fruits to come to the bearing point. We believe quite a number of our citizens will pocket from \$500 to \$1,000 this winter from this source. Well have they earned it, and glad we are to see them getting it; and those who have neglected to put out vineyards will now mourn their want of faith in raisin culture, and go to buying up vines and cuttings for that purpose next winter.

**FRUIT GROWERS' ASSOCIATION.**—Last Friday afternoon the Trustees of the Riverside Fruit Growers' Association, consisting of Messrs. Holmes, White, D. C. Twogood, Jarvis, Garcelon, J. Hall, Carleton, J. B. Crawford and Brown, met and elected the following officers and took steps to have the Association incorporated: President, G. W. Garcelon; Vice-President, Dr. Jarvis; Secretary, E. G. Brown; Treasurer, E. W. Holmes. At a meeting of the stockholders in the evening, H. A. Westbrook was unanimously elected Inspector for this season. The shares of stock have been placed at the nominal sum of one dollar, and it is hoped a large number of our fruit growers, even if they have no vineyard at present, will avail themselves of the opportunity to join at the next meeting.

## SANTA CLARA.

**GILROY CHEESE NOTES.**—The Advocate says: We notice in the market reports that the Gilroy cheese in boxes is rated as high as Eastern cheese. All other California brands rate at 7 to 9 cents for good to choice. It is probable that the co-operative cheese factory at Old Gilroy will be re-opened. It is thought the growing reputation of Gilroy cheese will create a demand that will prompt the dairymen to work again on the association plan.

**CONFIDENCE IN FRUIT CANNING.**—San Jose Mercury, Sept. 20: The canning factories of San Jose have a wide-spread reputation for their wares established in the Eastern cities, and so continued is the demand for goods that the managers of these enterprises have under serious contemplation the question whether they will put any more of their goods on the California market, as they consider it a more profitable investment to ship exclusively to the East and Europe, to which latter place even the celebrity of Santa Clara county fruits has spread. This county is particularly adapted to the raising of all kinds of fruit on account of the varieties of her climate. The warm belt nurses into growth the more tropical, while the harder fruits thrive in any part of the county. We have never made a point of fruit raising as a speculation, but now that there is such a sure and new market for our product, there is no good reason why this industry should not become one of the leading ones of the county.

## SHASTA.

**READING PROCESSING.**—EDITORS PRESS: Our town is growing quite fast, and as the railroad has ceased to contest the odd section loca-

tions above here, it is pretty conclusive evidence that they do not intend to build farther. It is now rumored that there is to be a change in time by October 1st, making a run from Sacramento to Reading, together with other advantageous changes. Real estate is much firmer.—C., Reading, Cal.

## SONOMA.

**RUSSIAN RIVER HOPS.**—Enterprise, Sept. 18: On Saturday last Messrs. Grant & Taeuffer finished picking and packing their hops, and John Born, who has D. H. Alderson's field leased will get through to-day. The fields yielded about 10 tons each, and on Saturday last an agent was here who offered 30 cents, cash down, for the crops. This is an unusually high price, and is the result of a great scarcity in this year's production. The parties did not take the offer, believing that the market will go higher. Peter Schmidt and Henry Hebron have small fields, and got a good yield.

## STANISLAUS.

**IMPROVING.**—News, Sept. 19: We notice that already the present encouraging prices paid for lands in this section, is inducing some of the large holders to sell to actual settlers. Consequently several large grain fields are in a measure being divided up and sold out to farmers who will beautify and make permanent homes. We believe the trying and critical period in the history of our county has been passed. Under the improved system of cultivation, summer-fallowing and thorough tillage, crops, even during the two last dry seasons, were harvested, and as a consequence, lands have been increased in value, and farmers have been so encouraged that they now begin to realize that this is truly one of the best sections of California. Hence, we are to have not only an increase of farmers, but an increase of homes and of home comforts, bringing with it progress, prosperity and an improved civilization.

## SAN LUIS OBISPO.

**GAME UNCOVERED.**—Tribune, Sept. 20: The fire which raged in the hills to the northwest last week originated in Nan Ness canyon, and is supposed to have been started by prospectors. While the fire was burning an immense amount of wild game was driven out into the open country. In the foothills back of Morro a number of deer and one bear were killed. It is said that any quantity of deer might have been taken.

## SUTTER.

**THRESHERS' DINING CAR.**—Appeal, Sept 19: Hugh Jones, the "boss" thresher of Sutter, has a "palace car," which accompanies his threshing machine. This car is a boarding house, where Mr. Jones' men can obtain their regular meals. Last Friday Mr. Jones invited a few male and female guests to dine, the machine being in operation at P. McCune's ranch, about four miles from Yuba City. The Banner says that at 4 o'clock P. M. the guests took their places at the table. The fare, we were told, was the same as that furnished the men who are employed by him, and was excellent in quality and quantity, and ample justice was done it by the guests. The table was decorated with bouquets furnished and arranged by Mrs. George Ohleyer, who was amongst the guests on the occasion. Hugh has given two or three of these dinners before, and in all of them has fully sustained his reputation as a genial host. If it should be the luck of any of our readers to receive an invitation to any future gathering of this kind, we advise them to be sure and accept, otherwise they will deprive themselves of genuine pleasure.

**WHEAT PURCHASE.**—Banner, Sept. 19: The largest purchase of wheat for the season was made on Saturday last by the Farmers' Union, of Sutter county, being 1,000 tons. On Monday they bought another lot of 300 tons. Prices ranged from \$1.45 to \$1.52½.

## NEVADA.

**TRYING NEW LAND.**—Gazette: Doc. Woods sowed barley last fall on the shore of Pyramid lake; it grew to a head and raised chicken feed without a drop of water. This assures the success of the experiment so far as that piece of land goes, as the first year is much more liable to failures than any subsequent one. There will be a good deal of plowing done in Washoe this fall to sow winter grain. Mrs. Carroll at Deep Wells will try it at the head of Spanish valley. Cox in Warm Springs, and Watson on the lake shore will put in some. What a glorious thing it would be for Reno if it is found that she can invite the small farmer to come with his plow and make a home in one of these magnificent mountain valleys.

**BONE-DUST FOR WHEAT.**—The good results attained by the use of bone-dust on wheat are reported from nearly all wheat-growing regions. Bone-dust is no doubt the very best fertilizer for land that is at all worn. It may be sown by a fertilizer attachment to the seed drill, or it may be sown broadcast after the wheat is in. If the entire results from the fertilizer are not expected in the next crop, the better plan will be to sow the bone-dust broadcast after the wheat. The bone-dust will not all be taken up by the next crop in any case, but will continue to benefit the soil for many years. Too much of it cannot be used under any circumstances. Three or four hundred pounds per acre is the usual application. We are glad to know that bone-dust is now being tried in this State by many growers of different crops, who are applying to Mr. Haas, of 523 Market street, for the small lots for testing, which he sells at the same rate as by the ton.

## News in Brief.

SECRETARY SCHURZ is in the Indian Territory. THERE is a prospect of war between Egypt and Abyssinia.

A MINISTERIAL crisis has occurred in the Argentine Republic.

THE Bank of Montreal is charging 20% discount on British silver.

THE slaves of Cienfuegos, have risen in rebellion against the Spaniards.

ENGINEERS and machinists are leaving England for the United States.

THE reports regarding the famine in Cashmere are still very gloomy.

THE work of connecting the Black and Caspian seas has been commenced.

RICH lead discoveries are reported from Clark and Hot Springs counties, Arkansas.

THE strike of the colliers in Staffordshire has been ended by the masters yielding.

J. WARREN WOODWARD, Justice of the Supreme Court of Pennsylvania, is dead.

EXTENSIVE deposits of almost pure gypsum have been discovered near Seattle, W. T.

THE negroes continue to migrate to Kansas. Cheap rates are offered them on railroads.

SILVER in London, 51½d; consols, 97 11-16; 5% U. S. bonds, 105½; 4s, 104½; 4½, 108½.

SINCE January 1st the arrival of gold at New York, from Europe, amounted to \$27,000,000.

AT LIVERPOOL, wheat is quoted at 9s@9s 9d for average California white, and 9s 9d@10s 3d for club.

THE colored people celebrated the issuance of the Emancipation Proclamation at Chicago on the 22d.

FORTESQUE, an American, has been sentenced at London to ten years' penal servitude for forgery.

THE Argentine Government has refused an American offer of \$6,000,000 for the Tucuman Railway.

NEVADA and Colorado miners have purchased silver workings in the neighborhood of Thunder Bay, Me.

GOLD bars and eagles to the value of £100,000 will be shipped to the United States Saturday from England.

THREE men at Louisville ate toadstools for mushrooms. One died, the others are in a critical condition.

THE clipper ship James Nesmith is nearly loaded and will leave New York for San Francisco Saturday.

H. DEL BONDIO & Co., heavy exporters of grain at New York, have failed. Western firms lose heavily.

EMPEROR WILLIAM received a cool reception from the French-speaking portion of the population at Strasbourg.

SEVERAL New Jersey cities are so heavily in debt that unless relieved by the Legislature they will go into bankruptcy.

A CONGRESS in the interest of America is in session at Brussels. The King of Belgium and President Blanco of Venezuela were present.

"LORD MURPHY," the three-year-old colt that captured the Derby and St. Leger victories, has been purchased by James Keene for \$10,000.

IN SAN FRANCISCO, half dollars are quoted at 99½ buying, 99½ selling; trade dollars, 97 buying, 98 selling; Mexican dollars, 90 buying, 91 selling.

THE French Scientific Association speaks encouragingly of the future of American wines, and says the two great defects are virgin soil and inequality.

THE news of the outbreak at Herat, Afghanistan, is confirmed. The Governor's house was plundered and burned, and the commanding General murdered.

REV. THOMAS GUARD, of San Francisco, has been called to his old post as pastor of the Mount Vernon M. E. church, of Baltimore, and has signified his acceptance.

IN NEW YORK, Government bonds are quoted at 102½ for 4s of 1907; 102½ for 5s of 1881; 105 for 4½s; sterling, \$4.82@4.84; silver bars, 112; silver coin, ½@1 discount.

THE Rancho El Sobrante case is now awaiting the final decision of the Department at Washington. Should the Surveyor-General's opinion be adopted it will give all bona fide claimants the lands occupied by them.

THE grain house of Smith, Howell & Co., Philadelphia, failed on the 22d, with liabilities at \$200,000. The failure is owing to the increase in the price of grain the past few days. I. Jenks Smith, head of the firm, is President of the Commercial Exchange.

A HUNTER from the lakes says the hogs on Buena Vista lake, Keru county, make their living by diving in deep water for clams. The clams are very abundant and fat, but, being fresh, are tasteless, except for the flavor of the black mud in which they lie.

AS AN indication of the extent of salmon fishing business on the Pacific coast, the Vancouver Independent notes the fact that during the catching season \$20,000 per day are paid out to those employed in the various departments of the work. At a fair price, the aggregate sum brought by this season's catch, when sold, will be upward of \$2,000,000.

THE demand in Great Britain and on the continent of Europe for American produce of all kinds appears to be growing more extensive. Overflowing freight cargoes continue to be sent over there, and the number of steamships engaged in the traffic constantly increases. Twelve heavily-loaded steamers left New York on Saturday. The grain shipment then exceeded that of any previous single day, being 50,000 bushels.





### God Speed Thee Well!

Respectfully Dedicated to Mrs. Carrie Cook,  
nee Colton.

[Written for the RURAL PRESS by W. H. T.]

God speed thee well toward the goal,  
(The double purpose of a life.)  
May gracious thoughts thy ways control,  
As daughter, sister, maiden, wife.  
As in the past, may you excel,  
And noble prove—God speed thee well!

God speed thee well, o'er life's strange sea,  
Keep to the course, for true repose.  
Consult the chart, 'twas made for thee,  
Keep in the stream where mercy flows.  
Grace aids, but never will compel,  
Though head winds check—God speed thee well!

God speed thee well, where spicy gales,  
Shall waft thy bark to fabled isles.  
When love light glints thy fairy sails,  
And Cupid charms thee with his wiles.  
When gentle billows 'round thee swell,  
With every grace—God speed thee well!

God speed thee well, when o'er the deep,  
The fresh'ning breeze shall white caps form.  
May angels o'er thee vigil keep,  
To guide thy spirit through the storm.  
When fears arise, mind may not quell,  
In faith, seek peace—God speed thee well!

God speed thee well, when breakers roar,  
And black and swart all nature seems.  
When drifting on a leeward shore,  
'Mid thunder boom and lurid gleams.  
Though all may sound for hope, a knell,  
Safe through the gloom—God speed thee well!

God speed thee well, through storm and calm,  
Life's log well kept, the record clear.  
At anchor, safe from every harm,  
With all to bless, and much to cheer.  
Whatever your lot, where'er you dwell,  
My prayer shall be—God speed thee well!

Martinez, August 27th, 1879.

### "One More Unfortunate."

[Written for RURAL PRESS by MRS. MARIA B. LANDER.]

"One more unfortunate, }  
Weary of breath,  
Rashly importunate  
Gone to her death!"

Love by harsh evidence,  
Thrown from its eminence;  
Even God's providence  
Seeming estranged."

Every day is that sad record "*Another Suicide*" entered upon the pages of newspaper history, and, startling as is the fact, its continual appearance has so accustomed society to the terrible ravages of this mania that that which once sent a thrill of horror through whole communities, now is not more lasting in its effects than that midnight dream, which for a few moments only disturbs the peaceful repose of sleep; and like unto such lost seconds of broken rest are these immortal drops of human life engulfed 'neath the suicidal wave; the passing dream and precious life each leaving but a memory.

In a late suicidal item the last words of a "poor unfortunate" were proof conclusive that "Love by harsh evidence" was "thrown from its eminence." A poor heart-broken wife had by her own hands broken those threads, which a few years before she had so lovingly and trustingly consented might be woven into that marriage web which was to be, from the sacred promises of the hymeneal service, a boon from heaven to brighten the way of her and hers with light so clear and peaceful that home-life would be but a foretaste of heaven.

At the early age of 29 years this "rashly importunate" in death's agony writes to sister and friends:

"I cannot bear it longer. Death is my only relief. He whom I chose with such love and pride has shamefully abused me; even now my clothes are locked and hidden away, and I have not the privilege of dying upon a clean bed. Oh! I have worked so hard; for money, received cruel stinging words, and for love, curses. Dear sister, hard as 'tis to part from you, I will be better off."

Such is the sad testimony of one woman's life, and dare the world to say that these grave charges were left against this husband because of the mere whim of a worldly disappointed woman—not so. Disappointment alone, especially with woman, rarely, if ever, cares to satiate its unsatisfied longings by plunging violently, and by her own hands, into "that bourne from which no traveler returns," but rather "seeks to bear the ills we have, than fly to those we know not of."

This marriage tie, which should be the acme of earthly happiness, unlike all other bonds, is of earth, earthy made, yet receiving, as it were, the seal of heaven, making it irrevocable, except by death; but what a commentary upon the sealed tone of wedlock are those divorce decrees of human law that so lightly and easily sever the chain that was forged and sealed for life; yet may not even this rude severance be better than that death which is almost the only resource of woman? For home-life being a woman's world, when robbed of this what has she left but the scorn and contumely of a critical world, while man, with that unquestionable impunity ever conceded him, may be a perfect nomad in name as well as in home; the round

world being his, and the supremacy of home-right readily granted by the sojourn of a few days. The wife that leaves husband and children to wander, no matter what the cause, is forever under ban, her every footstep taken only at the, to her, expensive protest of her society world; while husband can leave all depending upon him to the tender mercies of that world that owes him a living, and still true to his assumed God-given nature, be master still; what matter if that mastery be asserted by brute-like force, it is not less certain or potent in its effects.

To such down-trodden wives everywhere we, that are in a happier sphere, may preach patience and forbearance with the attendant promises of just reward to the suffering; and that sure punishment awarded the sinning; but to that loving clinging woman who has staked all happiness upon him whom the law has made husband, how little comforting to her the thought that the father of her babes has by this decree of sin not only entailed upon himself deserved punishment, but to those helpless loving ones a fate worse than death. Hence, is it strange that to these weary-worn, poverty-stricken souls, "even God's providence seems estranged!" and they would fain break the "golden bowl," fold the weary hands, rudely stop the almost bursting heart-beats, and, acknowledging, as they do, this seeming estrangement and forgetfulness of their God, longingly say:

"Anywhere, anywhere, out of the world,"

And, with that courageous madness born of despair, seek relief of those fatal poison drops; or, mayhap, the cold, hissing, seething waters, will kindly and forever hide from earth-life that soul made desperately

"Mad from life's history,  
Glad to death's mystery."

Human law, in its weakness, touches not him who coolly and deliberately crushes the soul of her whom he has sworn to love and protect, but, in its strength, cuts off forever him who, in an unguarded moment of passion, dares to take life! Justice, O Justice! how dare you wear those spotless robes of ermine, lest you appease, with your strong arm, the sufferings of that spirit which is lashed to its utmost, or stay, with your magical powers, those cries of mortal agony that come reeking with the life-blood of many of the noblest and purest mothers and sisters of our land.

As yet, O tardy Justice! thou hast not from thy scales weighed to mortal eyes penalties befitting the various and refined crimes of family abuse, nor yet hast thou painted in word-light the shade of murder which oft times the husband and father is years in consummating upon weak but devoted wives and mothers—double murder, we might say, for the continued prickings upon frail bodies reaches, ultimately, the soul's depth, and long ere the mortal nature is torn in shreds the living vital force is chilled and frozen, so that many a poor woman, instead of giving that healthy, happy life-principle, unconsciously as the flower giveth its perfume, becomes almost a stolid, inert statue of duty, moving only by the pressure of those circumstances in life that have relentlessly hedged her in a certain routine. This forced, unnatural life, must, perforce, lead to a stagnation of healthy life-forces, which, in all probability, tends to an utter moral death of this as well as the next generation.

O purblind husbands! if, as Napoleon was once told by a noble matron, good mothers would make a nation long-lived and prosperous, forgive us for saying that this same matronly, far-reaching sight should have lightly tipped a dagger of rebuke to this colossal piece of manhood, by replying that good, thoughtful, unselfish husbands would make good mothers; and say no nay when we affirm that such good mothers and pure fathers would, in time, lessen in number such sensational, unhealthy newspaper items as "*Another Suicide*."

Martinez, Sept. 15th, 1879.

### The Love of Flowers.

Of the many touching tributes paid to flowers there is one associated with the closing hours of Henry Heine, the poet; which appears to be very beautiful. He was dying in Paris. The doctor was paying his usual visit, when Heine pressed his hand and said: "Doctor, you are my friend; I ask a last favor. Tell me the truth—the end is approaching, is it not?"

The doctor was silent.

"Thank you," said Heine, calmly.

"Have you any request to make?" asked the doctor, moved to tears.

"Yes," replied the poet; my wife sleeps—do not disturb her. Take from the table the fragrant flowers she brought this morning; I love flowers so dearly. Thanks—place them upon my breast." He paused as he inhaled their perfume. He closed his eyes, and he murmured: "Flowers, flowers, how beautiful is nature!" These were his last words as his spirit took its flight into eternity.

An old Scottish lady was told that her minister used notes, or read his sermons, but she would not believe it. A neighbor lady said, "Gang up to the gallery and see for yourself!" She did so, and from her new point of view she saw and heard the written sermon. After the luckless preacher had concluded the reading of the last page, the good lady could scarcely contain herself, when he said, "But I will not enlarge." Then the worthy old lady spoke out in open meeting, "Ye canna, ye oanna, for your paper's a given oot."

### Be Yourself!

[Written for the RURAL PRESS by EDWARD BERRICK.]

"If you do not paint me as I am, with all my scars and wrinkles, I will not give you a shilling for your picture," said the hero Cromwell to Lely the portrait painter. The manly veteran cared not to be limned by the pencil of flattery, or colored with the brush of vanity. With whatever furrows the slow-running plows of time and care had scarred his brow, with whatever lines war and work had marred his visage, with these he wished to appear to posterity; careless whether his complexion were of the fashionable shade, or his hair of the orthodox twist.

It seems a simple thing to say that the hero wished to appear the man he was. How many of us wish to be seen just as we really are? How many of us would willingly be stripped of those showy peacock's feathers, with which we fondly trust we have so cleverly bedecked ourselves that even our most intimate friends have no idea what a poor little jackdaw it is which carries so brave a panoply?

If we could only make ourselves happy by the assurance that even jackdaws are useful birds, and have a place in creation that peacocks cannot fill, it would afford a satisfaction in existence that no assumption of finery can furnish.

If the youthful Whop-straw, who so admires rich young Tomnoddy with his fast team and loose associates, could only be got to realize how much more real happiness may lie in his own apparently duller surroundings, nay assuredly must and will lie there if he so determines, we should hear less talk of "forsaking the farm."

It is the very old story that "one fool makes many." Tomnoddy, cursed with a superfluity of cash and a scarcity of brains, is lavish of the former, hoping that he may conceal his deficiency of the latter; having no mind of his own he is vainly hoping to show his manhood by following the fashion of fast life.

Whop-straw, blessed with a sound mind in a sound body (and thus having chances in life a thousand to one ahead of Tomnoddy) is half inclined to whine at his lot, and fancy that to show himself as much a man as Tomnoddy he must run in similar vicious courses. He does not realize how pitiable an object Tomnoddy is, with no ennobling occupation of mind or body, with jaded lust for refining love, with satiety for appetite, without ambition for the future, without satisfaction in the past: surely the countless dollars are hardly an enviable heritage!

Why, then, does Whop-straw seek to mold himself in the dollar mold? Must we all be railroad kings or nobodys? Is there no higher standard than the "guinea stamp?" Has the poor man no longer enjoyment in the "something attempted, something done" that earns his night's repose? Has he no relish for his hard-earned meals, when good digestion waits on appetite?

Why then this perpetual, insatiable folly of aping the rich man? We need again the poet's warning in our ears:

"Is there for honest poverty  
That hangs his head and a' that?  
The coward slave we pass him by,  
We dare be poor for a' that.  
For a' that, and a' that,  
Our toils obscure and a' that,  
The rank is but the guinea stamp,  
The man's the gold for a' that."

Let every youth lay to heart that last line. Man is the gold; not must lie for gold; must steal for gold; must sell himself body and soul for gold. Man is the gold and youth is the time for putting shape to the metal. Don't feel bound to use just the exact pattern every one else uses. We are sure to get enough of the regulation stamp; it is originality keeps the world moving on. Not only resolve to paddle your own canoe, but steer it yourself; make up your mind where you are going to, and determine to get there. Guide your course by the pole star of Truth, avoiding alike the rocks of bigotry and the shoals of infidelity. Know all you can! Act up to your knowledge! Disregard the blustering gusts of opinion.

There was a time when one man held his opinion against all the world. That man was Athanasius. Now the world holds his creed, and declares that he who denies that creed shall, without doubt, perish everlastingly.

By being true to yourself, to the light that is in you, to your better self, it may be your lot to set the world right. There's as much scope for reformers and truth-seekers now as there was then. Anyway, if you don't succeed in setting the Pacific ocean on fire, you will ennoble one individual in the human family, and that's what you are living for. Work for others if you may, but you must first work for yourself to be able to help others by and by.

Make a good start in life! To have done well once is a reason for repeatedly doing well; and "the penalty of untruth is untruth." Finally, don't for one moment suppose that you prove your manhood by indulging in vice; any fool can do that.

The locomotive is useful only when on the right track. Get you on the right track!

"Stick to your aim; the mongrel's hold will slip,  
But only crowsbars loose the bull-dog's grip.  
Small as he looks, the jaw that never yields  
Drags down the bellowing monarch of the fields."

Montreay, Cal.

### Anna Dickinson's New Book.

Miss Dickinson tells of some of the adventures she has had in keeping her lecture engagements. One night she was drawn across a river on a sled by two men—the ice was too thin for horses and a sleigh—in a driving storm. The journey took three hours. She arrived at the institute, "teeth chattering, fingers stiff, feet like wooden clogs, winter cold through and through me." Miss Dickinson has heard that somebody once asked Mr. Beecher whether a man would have gone through that to have kept a lecture engagement, and that he answered, "No; no man would have been such a fool." And was "justified in saying it," says she; "only he should have remembered that the world, in reasonable fashion, demands of a woman that she do twice as much as a man, to prove that she can equal him."

Miss Dickinson is an undaunted traveler, and would climb the steepest mountain for a view. She met a woman on the top of Mount Washington once, who seemed very much disgusted with herself for having made the ascent, exclaiming, "Well, what in the world people do climb all this way up this nasty mountain to get dinner for when they can feed a great deal better down to one of the hotels, beats me!"

Western scenery is Miss Dickinson's delight. Out there she met a man whom she describes as a "horrid little scrub," who was bound on a lengthy tour of the Pacific slope, his wife lecturing, he maudling, and an adopted daughter singing, the whole made to "go" by a gift enterprise. To make herself agreeable, Miss Dickinson said something about the marvelous Montana region. "A beastly country!" he cried; "a beastly country! We did not take \$500 in it." In traveling through this country, if in stages, she rode on the seat with the driver; if by railroad, on the locomotive with the engineer. Her dress for crossing the mountains on horseback consisted of a soft felt hat, loose coat, skirt to the knees, Turkish trousers, woolen stockings and stout shoes. Thus arrayed, she bestrode her horse like a man, notwithstanding the sneers of a lady who joined their party, and in an audible whisper told her companions to "look at that vulgar creature." The "vulgar creature," from her comfortable and secure seat, looked at the long skirts and twisted bodies of the other ladies, and, thinking of the twelve hours' ride over the mountains, said to herself, "Look at those idiots."

Sitting alone on the platform, Miss Dickinson has often had hard work to keep from laughing at the manner of her introduction by pompous chairmen of a lecture committee. One presiding officer in New England, instead of introducing her, offered up a prayer of twenty-seven minutes' duration, in which he interceded with the throne of grace in Miss Dickinson's behalf. A Western chairman with an eye toward Congress spoke of her reputation as a lecturer. "In fact," said he, "wherever the English language is spoken, wherever the American stars and stripes wave, her name is like household words. Listen to her, then, and I know—yes, fellow-citizens, I know you will listen to her, since she always addresses herself to the poor, the maimed, the halt and the blind. You will listen to her since she always addresses herself to the ignorant, the down-trodden and the oppressed of every color, clime and tongue."

Audiences are thus cleverly described by Miss Dickinson:

"Some audiences are stone. You strike again them and rebound—angered by their hardness. Some are sponge—absorb, and absorb, and absorb, and give nothing back, till you feel as though you had enjoyed six hours of the Turkish bath and then been put under an exhausted receiver—and some are like champagne, or vigorous tea, or clear cognac, or aggressive coffee, or whatever it may be that the most quickly and enchantingly stimulates your brain and nerves."

In Chicago she met "that jewel of a girl, Kate Field," and they compared notes. Miss Field is described as "witty, pungent, concise of speech, abrupt of manner, hating shams with a royal hatred; with beautiful brown eyes that penetrate deep while they reveal depths, and firm mouth." There at this time she met Bret Harte on his way East, and she found him "satisfying." He said "rare things in a rich, clear voice," and laughed a "mellow sort of laugh" that was "yet not gay."—N. Y. Herald.

THE FARMER'S LIFE.—There is a quiet about the life of a farmer, and a hope of a serene old age, that no other business or profession can promise. A professional man is doomed sometimes to feel that his powers are waning. He is doomed to see younger and stronger men pass him in the race for life. He looks forward to an old age of intellectual mediocrity. He will be last where once he was first. But the farmer goes, as it were, into partnership with nature—he lives with trees and flowers—he breathes the sweet air of the fields. There is no constant and frightful strain upon his mind. His nights are filled with sleep and rest. He watches his flocks and herds as they feed upon the green and slopes. He hears the pleasant rain fall upon the waving corn, and the trees he planted in youth rustle above him as he plants others for the children yet to come.—Robert Ingersoll.

WIT from a French Bohemian attic: "Jeanne, did you divide your paper of chocolate with your brother?" "Yes, certainly, mamma; I ate the chocolate and gave him the motto—he is so fond of reading, you know."



## Chaff.

QUITE ACCOUNTING FOR IT.—Mrs. Scroggins: "How did yew mamma like that butter I sold her, Miss Lucy?" Miss Lucy: "The butter was not good at all, Mrs. Scroggins; and it was all sorts of different colors." Mrs. Scroggins: "That ain't noffin'. If yew was to see my cows yew'd find them a main soight more speckelder than the butter."

A DANGEROUS RIVAL.—Fashionable wife: "Good heavens, George! you are not going out to dinner like that?" Athletic husband: "Just ain't I, though! Look here, Maria, I'll grant you your neck and shoulders and your pretty face, but I think I beat you in the matter of arms—and if so, why should'n't I show as much of them as you do?"

A CLERGYMAN, preaching a sermon on death, concluded with the following observation: "But even death, my brethren, so well deserved by mankind for their sins, the wisdom of Providence has, in its paternal kindness, put at the end of our existence; for only think what life would be worth if death were at the beginning!"

It is related that Joseph Cook once asked a certain lady to be his wife, and immediately lapsed into a profound study of something. The lady softly said "Yes," and as he didn't respond she repeated the word a little louder. "Stop your noise," roared Joseph, "I've got an argument at my tongue's end that will knock the spots out of John Stuart Mill, and here you're trying to spoil it."

AMONG a party who were visiting the beautiful country estate of a Boston business man recently, was a gentleman considerably interested in ornithology. As they passed through the grounds he accosted a laborer and asked: "Has Mr. B— any macaws on the place now?" Resting from his labors, the son of Erin replied: "McCaws, is it? Begorra, I don't remember any of that name, but there is the two McGinnesses at worrk forninst the barn."

## Encourage the Boys.

The young man who thoroughly understands the nature and manipulation of metals, and the scientific and practical management and application of steam and our great variety of machinery, need not long be without lucrative employment. The scientific and technical education of boys is exciting much attention in Europe, and it will not be long before the eyes of our educators will be opened in this country to the necessity of encouraging the youth who manifest a desire for such pursuits.

A bent for mechanical pursuits usually manifests itself at a very early period in life; the inclination of the six-year-old boy to hammer and pound, to tear open toys and clocks to "see what makes them go," all so annoying to the careful parent, may be taken for indications of latent constructive genius, although now manifested in a very destructive form.

In the youth the mechanical bias becomes still more apparent, manifesting itself in attempts to construct wagons, boats, jig-saws, small engines, etc. With such a boy a mechanical education is no doubtful experiment. Talk to him about it, and he wants to go to a mechanical college at once, where he may learn to be, in deed and in truth, a competent mechanical engineer. Just at this point well-meaning parents, in order to fulfill some preconceived plan, or to do what seems to them prospectively of most good for the son, endeavor to force him into some other line or profession, and thus make a third-rate lawyer, doctor or merchant out of a boy who would have certainly made a first-rate mechanic.

Of course we don't mean that a boy should become a tinker. It is easy to find out the particular liking any boy has for a pursuit, and when it is found give him every opportunity to develop it. A good foundation for such a development consists mainly in an aptitude for mathematics, a good idea of form and construction, a ready insight into mechanical movements, a positive love for machine manipulation, and a tendency to improve every opportunity to witness machinery in motion, coupled with an idea to see into and learn its office and application.

CHOICEST BLOSSOMS.—A wedding took place recently in Paris, between a nobleman and lady, and among the crowd that gathered outside to see the splendid bridal party, was a miserable beggar about twelve years old. Now in Paris every one who has not something to sell is carried off to a police house, if they stop in the streets as this one did, and accordingly an officer was just asking her if she had anything to dispose of, and the poor thing was trembling in every limb for fear of imprisonment, when a sweet little girl, a sister of the bride, happened to overhear the policeman as she passed by, and to save the ragged offender, she quickly placed in her hand a superb bouquet she was carrying, and answering for her said: "Yes, she has these flowers, but she asks too much and I can not buy them. As she turned to go on, an old gentleman, who saw and understood it all stepped forward, and putting a gold piece in the poor child's palm, remarked, "I will give twenty francs for it," and presented the bouquet to the amiable little angel whose goodness had been more fragrant and beautiful than the choicest blossom that ever graced a garden. —*Work and Play.*

## Young Folks' Column.

## The Old Dog's Story.

I was born and reared in a stirring family of thirteen children. I believe thirteen is accounted a lucky number, but for me it was a very *unlucky* one! That thirteenth member never wearied of pulling me about, and my long, solemn nose was ever pointing in all directions. My caudal appendage, of which I was proud, and justly too, took on an extra kink in my puppy days, which I have never been able to get out, and I shall carry that additional quirk to my dying day; sad reminder of the pranks of that odd number of our family circle.

Had not that both useful and ornamental member of my frame been very strongly attached to my body, it and I would have parted company long ago, for I solemnly aver that I have had four of those children pulling it at once, but in opposite directions. A strong pull altogether would have done the work for me, and I should have gone through life with no wagging appendage to show when fortune was smiling upon me, and no drooping of the same member to tell of adversity, with its cold and dearth of bones. I was a very martyr to that family. It was "Skip" here and "Skip" there, until the skip left in me was run out, and I an old dog before my time. They braided my long glossy hair until it stood out all over me like "quills on the fretful porcupine." The pride was thus all taken out of me, and I felt sneaking, like a dog that had stolen a bone; by the way, a thing that I never do!

To be a pet dog in a growing family is simply business; it means to be ready to run at every member's beck, and never to consult one's own ease or convenience. My chief source of comfort was from exercising a bit of wholesome authority now and then over our common foe, the cat! It was such fun to secretly show her my white teeth when she was enjoying a coveted morsel, and appropriate the same to myself; but I was sure to hear "Skip!" pronounced in thunder tones close to my startled ear, and all relish for the stolen morsel was gone.

I am getting old and gray now. My young masters are leaving me more undisturbed, and I hope for a peaceful old age, and a bone to gnaw now and then. Yet I get lonely sometimes, and sit out on moonlight evenings and bark at the moon, to give vent to my pent-up feelings. —*Western Rural.*

THE PIGEON AND THE KITE.—Little John Green of Louisville, Ky., having heard how once upon a time Benjamin Franklin experimented with a kite, resolved to do something in that line himself. His idea was to test the relative strength of his kite and his pet pigeon, with the design of basing some grand invention upon the result. So he took kite and pigeon, and wended his way to the nearest common several days ago. He ran the kite up to the limit of 200 yards of cord, the wind blowing a stiff breeze from the northwest while. Then taking the pigeon from the basket, he tied the bird by the leg to the end of the kite-string which he had held in his hand. The pigeon, feeling half free, flew towards home, which was directly against the wind. The resistance of the kite caused his flight to tend upward, and, in turn, the efforts of his wings caused the kite to sail higher in the air. For a while the bird seemed to have the best of the struggle, making slow progress for at least a square, but in spite of all efforts to take a direct course, flying higher and higher. After the bird had reached an altitude of perhaps 400 feet, the kite being about 100 feet higher still, it was plain that the latter had greatly the advantage. It was flesh, blood and feathers against untiring winds. Unable to continue the strain, the pigeon changed his course to one side, thus slackening the string and causing the kite to fall, sliding from side to side in a helpless sort of way. But, feeling free again, the pigeon once more made a break for home, when, the string being pulled taut, the kite, with a spring, glancing in the sun a thing of life, rose rapidly and gracefully from its former level. Soon bird and kite became mere specks, and at last, vanishing in the southwestern sky, left Johnny to weep over his unexpected loss. Next morning, when the little fellow went to look in his empty cote, there stood the pigeon, nodding its head in pride. It had broken from the kite, a piece of the string hanging to its leg.

A LITTLE HERO.—A brave act makes everyone feel happy; the one who performs it, and those who are witnesses of it. A coal shaft is being sunk just north of Hollis, Ill., and one day lately, a workman by the name of Hartland lighted a slow match leading to a blast, and then signaled to be drawn up. The depth of the shaft was 70 feet. When he had been raised 14 feet he struck the bottom of a board partition, and was thrown back to the bottom. Thomas Crandall, a step-son of Mr. Hartland, was a witness to the accident, and promptly slid down the rope, 70 feet, and tore the match from the fuse in time to prevent an explosion. The act was a brave one, scarcely to be paralleled. The boy's hands were terribly lacerated by the friction of the rope. The stepfather was rescued with a broken rib and other severe bruises.

## GOOD HEALTH.

## Suggestions for the Sick-Room.

In preparing a meal for any one whose appetite is delicate, it should be made to look as tempting as possible. The tray should be covered with the whitest napkin, and the silver, glass, and china should shine with cleanliness. There should not be too great a variety of viands, and but a very small portion of each one. Nothing more quickly disgusts a feeble appetite than a large quantity of food presented at one time.

The patient should never be consulted beforehand as to what he will eat or what he will drink. If he asks for anything, give it to him, with the doctor's permission; otherwise, prepare something he is known to like and offer it without previous comment. One of the chief offices of a good nurse is to think for her patient. His slightest want should be anticipated and gratified before he has had time to express it. Quick observation will enable her to detect the first symptom of worry and excitement and to remove the cause. An invalid should never be teased with the exertion of making a decision. Whether the room is too hot or too cold; whether chicken broth, beef tea, or gruel is best for his luncheon, and all similar matters, are questions which should be decided without appealing to him.

Household troubles should be kept as far as possible from the sick-room. Squabbles of children or servants never should find an echo there.

In the event of some calamity occurring, of which it is absolutely necessary the sufferer should be informed, the ill news should be broken as gently as possible, and every soothing device employed to help him to bear the shock.

Above all, an invalid, or even a person apparently convalescent, should be saved from his friends. One garrulous acquaintance admitted for half an hour will undo the good done by a week of tender nursing. Whoever is the responsible person in charge should know how much her patient can bear; she should keep a careful watch on visitors of whose discretion she is not certain, and the moment she perceives it to be necessary politely but firmly dismiss them.

She must carry out implicitly the doctor's directions, particularly those regarding medicine and diet. Strict obedience to his orders, a faithful, diligent, painstaking following of his instructions will insure to the sufferer the best results from his skill, and bring order, method and regularity into domestic nursing. —*Scribner for September.*

## Work and Worry.

"Studying too hard," "over-worked," are charged with many deaths, but not wisely. Trouble kills. It is a very rare thing for a man to think himself to death, unless connected with something more or less distressing. Study is a bliss to the student—he had rather study than eat; the sound of the dinner bell is always unwelcome. The greatest students in moral philosophy, and divinity, and physics (not physis), have lived long, and worked efficiently to fourscore and beyond. Thought is to the brain what exercise is to the physical constitution; it keeps the channels of life clear, the blood-vessels unobstructed, and the vital fluid courses along them, distributing newness of life and vigor of action to the latest hour of existence, while the want of thought brings stagnation to the circulation, and causes man to drift and sleep in old age—dead as to everything except to eating, and dozing, and hovering over the fire. Men may study ever so hard, and after 50 may study with comfort and advantage for 5, 10 and 15 hours, day after day; and, if the studies are pleasurable, they promote the general well-being of the system, both physical and mental, if only abundant sleep is had, with a regular supply of simple and nourishing food, sitting down to meals in pleasant moods, and allowing a good half-hour before study is resumed. Many of our literary men die prematurely, not from over-study, but from depressing mental states and irregular or excessive eating and drinking.

It is haste, rather than steady, continuous labor of body or mind, which hurries multitudes to their graves scores of years before their time. With all haste there is impatience, solicitude, worry. The fastest trains, the fleetest steamers, the first trotters, everywhere command premiums. To save time, "night boats" are patronized, breakfast is bolted, the morning paper read on the cars, and everything is done under high pressure. But, just as certainly as a bank balance, rapidly drawn upon, melts away before it was expected, so does this reserve of vital stamina disappear—is used up—and the man dies in his prime, at the very moment, often, when he had just got into a position where he could afford to enjoy himself. —*Hall's Journal of Health.*

## DOMESTIC ECONOMY.

SWEET PICKLES.—To nine pounds of fruit add three pounds of sugar, one pint of pure cider vinegar, and spices to suit the taste; I prefer cloves and cinnamon, and shall use four ounces of each for a four-gallon jar of pickles, containing about 30 pounds. Some grind the spices and others break the cinnamon in bits and add it with the cloves, but I dislike to be continually finding sticks in the sauce, and shall sew them firmly into a thin muslin bag, and boil them up with the fruit, allowing them to remain in the jar until emptied. Last year I boiled the vinegar and sugar, and turned it over the berries; poured it off next morning, scalded and returned, and repeated the process again, but as the sauce commenced fermenting and had to be scalded over, I shall, this fall, boil up the berries before turning them into the jar. This mode is a good one for sweet apples, crab apples, pears, or green tomatoes. I steam the apples and pears until soft enough to admit a spike of broom corn; lay carefully in a jar and pour the spiced and sweetened vinegar over them. For crab apples, I prefer whole cloves and broken cinnamon bark, thinking it gives a delightful color to the almost transparent sauce. If sweet apples are pickled, either whole with the stems on, or, if larger, peeled and quartered; a few sliced lemons, with the pips removed, will give them a mild acidity and delightful flavor to the whole.

RICE PUDDING WITH PEACHES.—Put half a teacupful of rice into some cold water with a little salt and cook for 15 minutes—after it begins to boil. If any of the water is left unabsorbed turn it off, and put in enough sweet milk to finish cooking, which it should do in 15 minutes longer. Season to taste with butter and sugar and add a beaten egg. Butter a pudding mold; sprinkle it with bread crumbs and put in a layer of rice, then one of peaches, sliced and slightly sweetened. Continue the alternate layers of rice and peaches until the mold is full, when it is to be baked for half an hour in the oven; turn the pudding on to a dish and serve with soft custard or a sauce of sweetened and flavored cream.

LEMONS AND ORANGES PRESERVED IN SUGAR. Wipe the fruit clean and dry. Cut upon the rind any devices of stars, rings, flowers, etc., being careful not to cut lower than the white pith. Throw them into a saucepan of cold water; put this on the fire, and let them boil till rather soft, then throw them into cold water. When they are cold, drain and wipe them very dry, then put them into boiling syrup, and let them boil there three or four minutes; afterwards empty out the whole together to cool. The next day repeat the boiling in syrup. This may be repeated the third day. When cold they are to be poured into glass jars, syrup and all.

PEACH BAVARIAN CREAM.—Cook a pound of ripe peaches, weighed after they are peeled and sliced, with half a pound of sugar, and rub them through a sieve. Soak half a package of gelatine for an hour in enough cold water to cover it, then stir it into a teacup of rich milk or cream, which should be boiling hot, and when well dissolved add it to the hot marmalade. When pretty cool, and before it becomes firm, beat the peaches smooth, and stir in a pint of whipped cream. Dip a mold into cold water, fill it with the mixture and set it away to grow firm; turn out and serve with a garnish of preserved peaches cut in quarters. —*Prairie Farmer.*

SLICED CUCUMBER PICKLES.—To prepare them take medium-sized green cucumbers, pared and sliced as for the table. To four quarts of slices add one large spoonful of salt, mixing it through them. Let them stand over night, and in the morning rinse and drain through a colander. Boil vinegar with whole, white mustard seed, half a teacupful of seed to two quarts of vinegar, and set it away to cool. Pack the sliced cucumbers in quart cans, and cover with the prepared vinegar. Place a bit of alum on top of the pickles in each can, and seal. Keep in a dark, cool place. Pickles made after this rule retain much of the natural flavor of cucumbers.

COOKING POTATOES.—A lady gives the *Farm and Fireside* the following notes: In cooking sweet potatoes, if I wish to bake them, I always steam or boil in a little water until half done and then put in the oven to finish. A few mornings ago I wanted to bake gems and Irish potatoes for breakfast, but the gems need so hot an oven it would scorch the potatoes before they were done. I tried the experiment of treating them like sweet potatoes—boiling them a little first, so they would only need to be in the oven long enough to brown. The plan worked admirably, and all pronounced them better than if baked without boiling.

EGGS, NEWPORT STYLE.—Take one pint of bread crumbs and soak in one pint of milk. Beat eight eggs very light, and stir with the soaked crumbs, beating five minutes. Have ready a sauce-pan, in which are two tablespoonfuls of butter, thoroughly hot, but not scorching; pour in the mixture, season with pepper and salt, as the mass is opened and stirred with the "scrambling," which should be done quickly with the point of the knife, for three minutes, or until thoroughly hot. Serve on a hot platter, with squares of buttered toast.





DEWEY &amp; CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 202 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line.....25 .80 \$2.00 \$ 5.00  
Half inch (1 square).....\$1.00 \$3.00 7.50 24.00  
One inch.....2.00 5.00 14.00 40.00

Quack Advertising positively declined.

The Scientific Press Patent Agency.

DEWEY &amp; CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

O. H. STRONG

SAN FRANCISCO:

Saturday, Sept. 27, 1879.

## TABLE OF CONTENTS.

**EDITORIALS.**—California Balloon Bush; Crescent Seeding Strawberry; The Hop Outlook, 193. The Week; Fragrant Farming, 200. Improvements on Jersey Farm; Influence of Stones on Cultivated Land; Peculiarities of Altitude; An Improved Pulverizer and Roller, 201.

**ILLUSTRATIONS.**—The Crescent Seeding Strawberry, 193. Medon's Improved Roller and Pulverizer, 201.

**CORRESPONDENCE.**—Notes on Southern California; Nietos, 194.

**QUERIES AND REPLIES.**—That "Preservative Compound from Canada"; Separator; Chevalier Barley, 200.

**ENTOMOLOGICAL.**—Eucalyptus for Phylloxera; Parasites of Scale Insects; Another Locust-eater, 200.

**THE DAIRY.**—A Cheap Milk House for a Warm Climate, 194.

**HORTICULTURE.**—The Best Fruits to Cultivate; Orange Supply Regions, 195.

**THE SWINE YARD.**—Pedigrees of California Berkshire, 195.

**THE STABLE.**—The Jack and His Progeny, 195.

**THE FIELD.**—An Oregon Method of Sacking Grain; Preserving Botanical Specimens, 195.

**PATRONS OF HUSBANDRY.**—About the State Grange Meeting and Oakland; Feast at Eden Grange; Surprise Party to a Veteran Granger; State Grange Place of Meeting, Etc.; Hard Times and High Rates of Interest, 196.

**AGRICULTURAL NOTES** from the various counties of California, Nevada, 197.

**NEWS IN BRIEF** on page 197 and other pages.

**HOME CIRCLE.**—God Speed These Well (poetry); "One More Unfortunate"; The Love of Flowers; Be Yourself; Anna Dickinson's New Book; The Farmer's Life, 193. Chaff; Encourage the Boys; Choicest Blossoms, 199.

**YOUNG FOLKS' COLUMN.**—The Old Dog's Story; The Pigeon and the Kite; A Little Hero, 189.

**GOOD HEALTH.**—Suggestions for the Sick-Room; Work and Worry, 199.

**DOMESTIC ECONOMY.**—Sweet Pickles; Rice Pudding with Peaches; Lemons and Oranges Preserved in Sugar; Peach Bavarian Cream; Sliced Cucumber Pickles; Cooking Potatoes; Eggs, Newport Style, 199.

**MISCELLANEOUS.**—Industrial Growth of California; Colored Pencils, 202. At the San Joaquin Valley District Fair, 204.

## Business Announcements.

Land For Sale, O. C. Ramsey, Capay Valley, Cal.  
Almond Huller, A. O. Rix, Washington, Cal.  
Agent Wanted, W. J. Holland & Co., Chicago, Ill.

## The Week.

The great event of the week in the city and one which has stirred up the State, if we may judge from the unusual numbers of healthy, sun-browned faces which we see upon the city streets, is the arrival of ex-President Grant on his return from a circuit of the world. The reception tendered him began with the clothing of streets and buildings in Fourth of July attire; continued with a marine escort for the incoming steamship which brought him from Japan; and progressed with a street escort of thousands upon thousands of people, of which the accompaniments were music, cannon-thunder and the gleam of electric lights. There have followed parade and serenade and fusillade such as never before were marched and sung and shot in honor of any living or dead hero on the Pacific coast. In these unwonted celebrations men of all lives and opinions and histories have joined hands and voices to welcome home a distinguished citizen of the Republic whom the world has delighted to honor.

While the State has been thus excited by pageant and parade, a movement of greater general import has stolen in upon our producing interests. For the first time for many months the leading cereal has shown buoyant inclinations and the influences abroad, which we have from time to time foreshadowed, are beginning to exercise their full effect upon the value of our crops. The year seems indeed to be the golden one for America after the many leaden ones which have of late succeeded each other. Our Eastern brothers are rejoicing over their large crops, and the growing prices which their grain is commanding, and all the industries of the country seem on the eve of an awakening which will usher in an era of general prosperity throughout our borders.

## Fragrant Farming.

We alluded recently to a promised enterprise in Santa Barbara in the growing of flowers for the purpose of extracting their perfumes for commerce, as is done in different parts of the world. We also hear that a gentleman in Alameda county has begun the culture of fragrant-leaved plants for the purpose of distilling their essential oils, also as a business enterprise. These propositions are certainly a movement toward the diversification of our agriculture in a delightful direction, and we trust they may prove profitable to those who undertake them.

By the way of showing that such enterprises are successful, and a source of revenue to those who conduct them in other parts of the world, we have collected some interesting facts giving the statistics of fragrant crops. It is stated that one great factory at Cannes, in France, uses yearly about 100,000 lbs. of acacia flowers, (*Acacia Farnesiana*), 140,000 lbs. of rose flower leaves, 32,000 lbs. of jasmine blossoms, 20,000 lbs. of tuberose, together with a large quantity of other sweet herbs. Mention should also be made of the rose gardens of Ghazipore. These consist of immense fields in which small rose bushes are planted in rows, and from the rose leaves is obtained attar of roses. Twenty thousand roses are required to yield a rupee weight of oil, and this sells for \$50. In the province of Philippopolis (European Turkey) it was generally found that 28 cwt. of roses produced 1 lb. of attar, but since the disastrous war of 1877-78 the industry has been almost spoiled. Previous to that war the province produced a yearly yield of about 3,600 lbs.

The acreage of land devoted to scent-yielding plants is quite large, as may be learned from the following statement. It is said that there are of roses in Bulgaria 5,000 acres; lavender and peppermints, at Mitcham, 250 acres; violets, at Nice and Mentone, 300 acres; orris-root, Italy, 400 acres; geraniums, Valencia, 250 acres; leinou-grass, Ceylon, 600 acres; citronella and patchouly, Singapore, 270 acres; jasmine, acacia and tuberose, Cannes, 400 acres; orange and lemon, Sicily and Bergamo, 1,500 acres. In Timour and Malaya farms exist of which no accurate account can be given.

Concerning the money yield of the different crops, there are also figures at hand in the last annual report of Dr. R. Schomburgk, director of the Botanic gardens at Adelaide, South Australia. Figures as to the possible out-turn of different crops are often illusive, and we are prone to abstain from this method of generalization which, as indulged by contemporary writers, has often brought disappointment to practical men who have used their computations as a basis for enterprises of various kinds. However, with this reservation, it will be quite safe to instance the results of flower gardening for profit, which Dr. Schomburgk credits to an English authority. The figures will be found large enough to suit the most active agricultural castle-builder:

One acre of jasmine plants (\$0,000) will produce 5,000 pounds of flowers; value, 25 cents per pound, or \$1,250 per acre.

One acre of rose trees (10,000) will produce 2,000 pounds of flowers; value, 19 cents per pound, or \$375 per acre.

One acre of orange trees (100) at 10 years old, 2,000 pounds of flowers; value, 12½ cents per pound, or \$250 per acre.

One acre of violets, 1,600 pounds of flowers; value, 50 cents per pound, or \$800 per acre.

One acre of cassia trees (*Acacia Farnesiana*), 302 at 3 years old, 900 pounds of flowers at 50 cents per pound, or \$450 per acre.

One acre of geranium plants, 16,000 to 40,000 pounds, leaves producing 2,035 ounces of distilled otto at 50 cents per ounce, or \$1,000 per acre.

One acre of lavender (3,547) gives flowers for distillation valued at \$150.

These figures are taken from the estimates of Piesse, one of the greatest manufacturers of perfumes in London, and are based upon his purchases from the growers in the south of France. Of course, to realize any such figures, or, in fact, any figures at all in this State, would require the extraction from the flowers of their essential principles, so that these could be exported. This is a harder task than though we had near at hand perfume manufacturers who would contract for the flowers and take them off the growers' hands as soon as they were gathered. This advantage is enjoyed by the European flower-growers. If we are to succeed in such work as conditions are now, we must combine both growing and manufacturing, which doubles the capital required, also the risk, etc.

It should not be forgotten by those who may be excited by the large figures given per acre in the above estimates, that they must include a cost of work far in advance of any field crop we now grow. There must also be a high style of farming practiced, and money spent for fertilizers in the case of some of the plants specified above, so as to induce the plant to put forth the requisite amount of bloom. These and other considerations—the price of labor and the like—must be well weighed before any large enterprise could be safely undertaken, although the cautious way in which the business is now being undertaken is safe, and we trust may, ere long, become a source of revenue to many of our people.

It is estimated that 1,500,000 gallons of wine will be made in Napa valley this season.

## QUERIES AND REPLIES.

That "Preservative Compound from Canada."

EDITORS PRESS:—I saw a communication in the RURAL PRESS of August 30th, from J. J. Bodkin, of Savannah, inquiring about "Hollgate & Tupper's Chemical Preservative Compound from Canada," and as you failed to find the agents, "Halliday, Keenan & Co., at No. 922 Folsom street," and as not having any of the compound, you could not give any positive answer, I have borrowed a can of it from a friend; not having bought any of it myself. I will send it to you and hope you will have it analyzed and publish the result. The can is just as the agent sold it; it has never been opened. I also send you their circular in this letter. —WILLIAM HADDOX, El Monte, Cal.

EDITORS PRESS:—I send you herewith a small sample of the "Chemical Compound" of which I wrote you before. It seems to be merely sulphur and charcoal. Please tell us its real composition. —J. J. BODKIN, Savannah, Cal.

EDITORS PRESS:—By the favor of Mr. Haddox and Mr. Bodkin, we have been enabled to subject an authentic sample of this great novelty of the age to critical and exhaustive examination in the laboratory of the Agricultural Department. Sad to say, it turns out to be precisely what your correspondent suspected it to be, to wit: a mixture of charcoal-powder and sulphur; the quantity sold for \$1 costing the inventor and manufacturer a large fraction of 1 cent. Making a liberal allowance for the tin can, the package might have cost the sum of 5 cents. Of course, the inventive genius required to conceive and perfect grand ideas like this cannot be estimated in base coin. There is one fault I have to find with it, from the standpoint of the enterprising firm: the fraud would have held out a little longer if they had but had the grace to add to the mixture something that would have made it *burn*—just a pinch of saltpeter, manganese, or something of the sort. As it is, the purchasers must have got disgusted very quickly, and might possibly have caught up with the "agent," and administered to him a suitable acknowledgment of the benefits intended to be conferred.

Of course, there is, as usual, a grain of truth underlying the costly superstructure of fraud. Gas from burning sulphur is a bleaching agent, destroyer of ferments and fungi, and in so far a preservative; and in several forms has been used as such. But the audacity of the imagination goes to great length when it can be induced to believe that somebody in Canada has so far outstripped the performances of our great fruit-preserving establishments as to make unnecessary all their careful operations, and attain more than they ever claimed to be able to do, by an honor's fumigation with a few thinblefuls of a "preservative compound," sold by an itinerant agent to a chosen few. Perhaps the lesson conveyed in the present case may, after all, be worth the 95 cents to those who have been imposed upon, in rendering themselves and others careful about trusting in the advertisers of nostrums with promises of astounding performances. In these days of newspapers, conveying the latest news of every sort, any invention of *real* value is speedily brought to the notice of the reading public; and it is fairly presumable that when live papers like the PRESS have failed even to mention stupendous inventions like the above, it is because the inventors have had special reasons for keeping it quiet. —E. W. HILGARD, University of Cal., Sept. 20th, 1879.

## Separator.

EDITORS PRESS:—I have been informed that the Gold Medal Separator has an attachment that will separate barley and mustard seed from wheat when threshing. Will you please tell me whether I have been correctly informed? —R., Los Angeles.

EDITORS PRESS:—I am on the sand plains of the Stanislaus threshing, and your letter was some time in reaching me. Neither the "Gold Medal" nor any separator has such an attachment. There is a cleaner, made by Wright & Chubb, Stockton, which is attached to and driven by every make of separator. The cost is \$400. Both "Gold Medal" and others have them attached, but they are a separate concern altogether—a huge fanning mill. I do not use them; they take out considerable barley, but not all. Here a farmer can engage a machine with a cleaner, or one without. But to answer the question, the "Gold Medal" has no such attachment. —G. W. T. CARTER.

## Chevalier Barley.

EDITORS PRESS:—What is Chevalier barley? —ISSAC DAKIN, Sequel, Cal.

The Chevalier is a two-rowed barley which takes its name from M. Chevalier, who raised the grain from a single ear which he found in his field and which attracted his attention by its size and weight. He sowed the grain from this ear in his garden and cultivated it carefully until he had enough to sow a small field. The fame of the barley spread rapidly. One of the first Englishmen to introduce it was Lord Leicester, who was a large barley grower. He put in two acres of Chevalier in 1832, and the grain was noticeably better than the ordinary barley upon the rest of his fields. The yield per acre was not much different from the ordinary sort, but it weighed 57 pounds per bushel when the common weighed 52 pounds. Since that time the Chevalier has held its place at the head of brewing barleys, and its superiority is now generally acknowledged. In this State the best Chevalier is produced in the southern part of Alameda county. The grain has been introduced in other parts of the State, but the region named is still relied upon to furnish the best lots for export.

## ENTOMOLOGICAL.

Eucalyptus for Phylloxera.

EDITORS PRESS:—The clipping which I insert below I have just cut from an Eastern paper. It has staggered my faith almost in my own senses. I had phylloxera in my main vineyard. They destroyed half of my vines. I flooded my vineyard. The phylloxera disappeared. My remaining vines became of vigorous health and growth. Even where it had not been entirely covered with water the effect was the same—phylloxera destroyed, and vines invigorated. Could anything be plainer? The water did it, of course. I planted thousands of eucalyptus trees at the time of planting my vineyard. They are growing on three sides of it, but no one ever dreamed that they had any influence on the phylloxera, so I wrote for the RURAL and the magazines to which I'm a contributor, an account of how I destroyed the phylloxera—for destroyed they surely were. Now comes the following which shows, and I believe truly, that I omitted a most important factor in telling how I treated the great vine pest:

"It has been asserted by French writers, that the eucalyptus is a remedy for phylloxera; that eucalyptus trees growing near the grapevines protect the vines from the ravages of this parasite. Experiments have also been made with the essence of the drug upon the diseased vines, by Abbe Rolland, in the manner of inoculation, and with such success, that he has pronounced it, after a trial of two years of its virtues, 'an infallible remedy.' He makes a broad incision through the bark at the neck of the vine, and into this puts a few drops of the essence, or rubs it over the cut surface with a camel's hair brush. The result is, as he says, that in three or four days the parasites are destroyed, but the vine remains uninjured. The incision may be made in any other part of the bark, but the desirable result is most speedily obtained by making it as near the roots as possible. An essence of the genuine plant should, however, be used, there being many counterfeit and adulterated preparations in the market at present."

We want facts. I may have been mistaken in ascribing too much to water in my former articles. Then, as now, I want the truth, the tangible, the real. Leave to theorists the pleasure of controverting for controversy's sake, but the man whose home supply of comforts depends upon his success with his vineyard wants practical observation, and the experience of known facts to guide him. As one of this number, I send you the above, hoping that it may find an early place in the RURAL, and receive the attention from those interested that its importance demands; and responses through the RURAL columns from those who have made observations on the subject. If there be none such, yet, it will be a subject for future study with all of us. —W. A. SANDERS, Kingsburg, Fresno Co.

## Parasites of Scale Insects.

W. H. Ashmead, of Jacksonville, Florida, has been continuing his studies of mites preying upon the orange scale insects, and has succeeded in finding several species at work, which he hopes may reduce the scale insect scourge which threatens the orange industry. Mr. Ashmead publishes his observations in the *Florida Agriculturist*. He enumerates his scale destroyers as follows: *Oribates aspidioti*, a red mite destroying the eggs of the scale insect; *Acarus Gloverii*, a yellow mite also probably eating the eggs. It may be distinguished from the scale insects themselves by the smaller size and by the presence of 8 legs, the scale insects having but 6. *Aphelinus aspidioticola*, a small reddish brown fly, which punctures a hole in the top of the scale and deposits its eggs therein, and when its larva hatches it devours the eggs of the scale insect. Mr. Ashmead believes that these parasites will thrive, and prevent the scale insects from devastating the orange groves, as they did in 1835. It is certainly the teaching of general experience with ruinous insects that they are often reduced by their natural enemies to such an extent that their evil work is restrained and sometimes arrested. It would seem wise to take measures to introduce these foes of the scale insect in places where this pest has full sway. It would be an interesting subject for investigation for some of our local microscopists to discover whether we have already beneficial insects which may be trusted to aid us in fighting the scale.

## Another Locust-eater.

Prof. J. G. Lemmon, of Sierra Valley, continues his investigation of the parasitic enemies of the locusts which have devastated that fair mountain region. He has found a grub which is a hungry locust-egg eater, which he describes in these words: "This egg-eater is the larva of a beetle or fly, and is a fat white worm or grub about half or three-quarters of an inch long when mature, and one-eighth or three-sixteenths of an inch thick at the middle of its body, and tapering to a point each way. Its parent beetle or fly follows after the female locusts and deposits its eggs near those of the latter. When hatched the larva enters the egg-case of the locust, and eating the contents of the eggs as it goes, it pushes the shells aside, and finally the 24 to 32 eggs are all eaten, and it has become so large as to fill the entire cavity of the case. Any one digging into the places where locust eggs have been deposited may see the work of destruction going on, a handful of egg-cases being generally more than half emptied of their eggs, and the fat grubs tumbling into view." Prof. Lemmon has also observed "a curious little ichneumon fly (*Chalcis*) with yellow lenticular enlargements on its hind legs, is seen to attack the locust when at rest, stinging him on the head or along the back, very dextrously dodging the blows aimed at it by the feet of the locust, the latter being as head, like a mule, to kick a fly off the top of its head."

Since Prof. Lemmon wrote the foregoing for the *Truckee Republican*, we have learned from him that the egg-eater is at work even more vigorously than when first discovered, and hope is arising in the valley that this grub, which has the good wishes of the community, will succeed in reducing the locusts so that another year at least partial crops will be gathered. Farmers are advised to make observations for themselves to ascertain what progress the larva is making.

LORD LOFTUS opened the Industrial exhibition at Sydney on the 22d inst.



### Improvements on Jersey Farm.

On Friday of last week, in company with Mr. Dwinelle, lecturer on practical agriculture, and Messrs. Cowell and Colby, students of the College of Agriculture, we visited Jersey Farm at San Bruno, the well-known dairy establishment of R. G. Sneath, Esq., of this city. The visit was for the purpose of acquainting the young men with the system of milk production followed by Mr. Sneath, the methods of which are, in the main, original with the gentleman himself, and wrought out from his own experiences and investigations. The greater part of a day was passed in visiting the different buildings and fields of the ranch, but only a portion of the estate was reached before the time set for returning.

About two years ago we visited Jersey Farm, and gave in the PRESS a general review of its material and methods. Since then the enterprise has grown to almost twice its former size, and this growth has brought a proportionate extension of ways and means to minister to it. Another dairy has been planted on those parts of the property lying 500 feet and upward above tide water, while the original establishment, nearer the county road and railroad, is still in full blast and marked by a host of minor improvements. The upper ranch is complete in itself, having a commodious dwelling-house and outbuildings, and a dairy barn with a cow capacity of 240, which is probably the staunchest, best-arranged structure of its kind in the State. The higher location is visited by the coast winds in full vigor, and the barn has been built to receive them. An item in its construction was digging down to the hard-pan and putting in a double course of redwood plank along the lines needed for the posts. The posts rest squarely on these planks, and they are so placed that there is a 12x12 post at the corner of each 8-foot square throughout the ground floor. The superstructure is stayed and braced so as to reflect the strength in the foundation. The surface of the ground beneath the barn is furnished with conduits, through which all the manure is flushed from all parts of the cow floor to a single point, whence the liquor is taken for the manuring and irrigation of a meadow below the barn. The ground under the floor is also graded toward this point, so that if there should be any leakage it would find the same channel and be at once carried away. The cows stand in four rows, each two rows facing each other through the stanchions. The floor divides itself into eight subdivisions, so that each of the eight milkers has thirty cows on his "string." The interior is roomy, light, airy and comfortable, both for man and beast. The second floor is devoted to the storage of hay and ground feeds, and has large vats for the mixing and soaking of messes which are given at each milking. We consider the barn a model of correct dairy architecture.

One of the new structures on the lower ranch is a feed mill—a two-story building, in which is located a 30-inch iron frame French buhr mill, which has a capacity of 10 tons per day when run at full force. The motive power is furnished by a hurdy gurdy water wheel for winter use, and a home-made windmill of giant proportions, the diameter of the mill being 33 feet. When in full swing it would unseat a cavalcade of Don Quixotes in a twinkling.

As an adjunct to his mammoth steam feed-cooking boiler in the lower barn, Mr. Sneath has put in vats of great capacity, in which the messes of ground corn, ground barley, bran, etc., are soaked before feeding to the cows. In warm weather the feed is soaked 24 hours; in cold weather, 36 hours. It is soaked until just before fermentation sets in actively, the object being to soften the material so as to feed it soft and fit for easy digestion. This has been found a profitable proceeding by many large dairymen.

The many out-door improvements since our last visit pass our space even for enumeration. We must note, however, the large areas brought under grass by the patient grubbers, who are continually at work uprooting the shrubs and other coarse growths. Mr. Sneath has a summer boarding-house, where a large gang of white men are earning good board and 50c per day at this work. He is also now building a large reservoir on the upper ranch, which will hold the water from a large catchment, and thus supply the dairy buildings and fill several ponds below, in which he has carp and catfish. He has achieved a marked success in under-draining two large upland meadows, which are full of springs, and which before drainage were almost marshes in the wet season. Upon these meadows he has now a fine growth of New Zealand rye grass, giving abundant fresh feed even at this season of the year, after having yielded an immense weight of hay by early mowings. This New Zealand rye grass, which Mr. Sneath has several times mentioned in the PRESS, justifies all the confidence he was led to place in it by his early experiments. He has now 600 acres seeded down with it, and 200 acres with orchard grass, the former demonstrating its superiority. He is continually increasing his area of rye grass, having imported 14,000 lbs. for this fall's sowing. Another outdoor improvement which must not be forgotten is the paving of his corrals and lanes with broken rock, which gives the cattle a clean footing even in the heaviest rains, and thus conduces to cleanliness in the milk. Those who have cows plodding along in

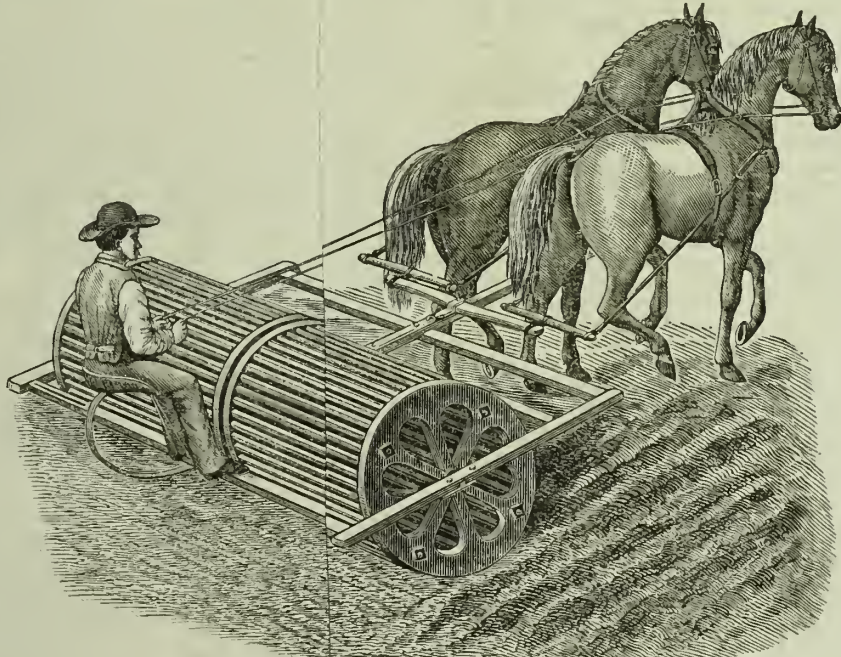
the winter, knee deep in mud and manure, will appreciate the advantage of a hard-bottomed corral and approaches.

A feature of Mr. Sneath's establishment, which will interest our young men, is that he has for managers and superintendents his two sons, Frank and George, one being 19, the other 17 years of age. Each has the responsibility of one of the dairies vested in him, at each enters into the work with a will and zeal which shows plainly that there is in agriculture a place for the young men if the young men can perceive it. We met each of these young men in their jackets and overalls labor-torn, and their hands and faces showing that their superintendence did not consist in giving orders from horseback. They are as thorough farmers as one could find the State over, and their successful management of the 2,700 acres of land and nearly 1,000 head of stock entrusted to them is apparent, for the farms are in fine shape throughout.

Mr. Sneath is now hauling his milk to the city, a distance of 12 miles, with his own wagons and two six-mule teams. His wagon is furnished with decks, so that two or when necessary three, tiers of three-gallon cans are taken at a load. Two trips are made each day, and the milkings are so timed that the morning's milk is delivered around the city time for breakfasts and the evening's milk for supper, thus giving consumers fresher milk than that which comes in by rail in the evening, and has to be held over for morning distribution, and is apt to absorb so much moisture during its foggy nights (!). Mr. Sneath now employs about 100 men in connection with his establishment—on the farm and at the city depot—and his business is increasing constantly.

### Influence of Stones in Cultivated Land.

Although the presence of stones in our agricultural lands is much less frequent than in some other parts of the world, there are some



MEDING'S IMPROVED ROLLER AND PULVERIZER.

places where the influence of their presence will be an interesting subject for investigation. We learn from a European exchange of results of exhaustive experiments on this point which have been carried out by Prof. Wolluy, and may be thus briefly summarized: At a high and constant air-temperature, as during a warmer season of the year, a soil covered with stones is always a little warmer than one free from stones. The variations of temperature in a soil containing stones are greater than in one of similar composition free from stones. During the daily maximum soil-temperature a soil with stones is much warmer, and during the daily minimum much colder, than stoneless soil. All kinds of stones are better conductors of heat than the loose earth. Consequently, in a soil covered or mixed with stones the heat received is conducted into the interior more effectually than in one without stones. On the other hand, however, the cooling is faster in the former than in the latter. At a high temperature of the air a stony soil is somewhat warmer than a stoneless one, and vice versa. With respect to the influence of stones on the amount of water contained in a soil during the hotter part of the year, the experiments showed that a stone-clad soil is damper than one of similar quality free from stones. The presence of stones on the surface, by which evaporation is prevented and the moisture so necessary for vegetation more or less retained, instantly affects the fertility of all kinds of lands which dry quickly, always exercising a most favorable influence where this condition of things obtains. On the other hand, where there is already sufficient moisture, or where there is danger of undue accumulation of water (as on clayey similar lands), the presence of stones is of no advantage or is absolutely prejudicial.

Last Saturday 50,000 bushels of it was shipped from New York for Europe.

### Peculiarities of Altitude.

A correspondent writing recently from Leadville to the Grass Valley Union, speaking of the effects of the great altitude of the place, which is 10,300 feet above the level of the sea, says that all fermented liquors intoxicate more quickly than at lower elevations. The boiling point, owing to the decrease of atmospheric pressure, is much lower than at San Francisco, and the alcohol is sooner vaporized and taken into the circulation, producing intoxication much quicker.

The boiling point of water there is about 190 degrees, instead of 212 degrees, the effect of which in boiling beans, eggs, potatoes, etc., is that it requires a long while to cook them in an open vessel, and it is necessary to keep the pot well covered or the water will vaporize and escape before being raised to the requisite degree for thorough cooking. At this elevation much air is required to fill and satisfy the lungs, and breathing must be quicker in order to properly oxygenize the blood. It is said, too, that after one has been there for some time the coloring matter of the blood becomes darker, being changed from the peroxide to the sesquioxide of iron. With a person suffering under any difficulty or disease of the heart the effect of any long-continued exertion is to cause a dangerous degree of palpitation, and even with persons entirely well the pulse runs extremely high.

There are other and notable facts connected with this altitude. There are few birds seen there—perhaps for the reason that flying is difficult in the light air. The common house-fly, the summer pest of our Eastern housekeepers, is unknown there. There are some of the outdoor blue-bottle variety, but they seem languid and tired.

Another result of the lightness of the air is that, having so little density, it is easily heated by artificial means. The nights are uniformly

### An Improved Pulverizer and Roller.

We illustrate herewith an improved roller and pulverizer, recently patented through the MINING AND SCIENTIFIC PRESS Patent Agency, by George Meding, of this city. The invention is in that class of pulverizers or clod crushers which are rolled over the ground, and by that means break up the lumps and leave the soil in proper condition for sowing seed.

To the frame of the roller is attached a pole for the horses, and in the rear is a seat for the driver, as shown in the engraving. The axle is fixed to the frame and does not revolve.

On the axle is mounted the rollers, which may be made in two parts, with a bar between them for giving center support to the axle. These rollers are formed of four-sided bars, secured in a circle to the edge of the wheels. The bars are so placed that their edges are outward and strike the ground, so as to more effectually cut up the clods or lumps. Rods extend across between the ends of the rollers, inside, for strengthening, and are set up by nuts, so as to keep the crushing bars in position. By unscrewing these rods the wheels may be separated, so that the four-sided bars may be turned and bring new edges outside. When, however, the inside binding rods are screwed up the bars cannot be turned, and their sharp edges are kept in proper position. The pulverizing bars are secured in position in the wheels by square countersunk holes being made in the wheels. As these holes are not made through the wheels the bars cannot move endwise when the binding rods are screwed up, and the shape of the holes in the wheels is such that they cannot rotate.

Rollers made in this manner are much more effective as clod crushers or pulverizers than those of ordinary construction. The sharp edges of the bars cut or break the clods without pressing them into the ground. Such pieces or lumps as pass through the interstices between the bars are rolled over and over again until fine enough to pass out again. When the edges of the bars become dull they can be turned, so that fresh edges are presented. In this way each bar can be turned four times before needing renewal.

Rollers of this kind can be made comparatively light, and be easier on the draft animals than the heavy plank rollers, while at the same time, from their peculiar construction, they are very much more effective than those of ordinary construction. Each pair of wheels for each roller, when there are two, revolves independently on the shaft so as to facilitate turning. The wheels may be made open at the sides as shown, for lightness and facility of construction.

In order to give the roller the best possible effect, and make the edges of the bars last as long as possible, the inventor prefers to make them with concave sides. This produces a thinner, and more cutting and effective edge; and these bars may be rolled as cheaply as any other form by having rolls provided for the purpose. Mr. Meding has had this pulverizer in practical use for some time, and finds it to answer the requirements perfectly. It leaves the ground well pulverized and smooth, ready for seeding.

This roller will work where no other can, except when the soil is too wet. It will crush the clods, even when dry, and in that way enable the farmer to get his summer-fallowed ground pulverized; and when used after sowing, will leave the ground smooth, which will save much on his machinery and horses when harvesting is going on. Its use will enable the hay-rake to rake clean, and no clods will be found in the hay. The roller will not only be valuable on strong clay or adobe land, but even on light soil it will prove efficient, since it is heavy, and by putting more weight on it can be made heavier, if desired. The mark this roller leaves after it is something like the marks of a very fine harrow, which is considered, by some, better than a perfectly smooth surface. The rays of the sun will not come perpendicular on the surface. If necessary to break the crust formed after a rain, by rolling over again crossway the earth will be easily pulverized. If the roller is not wanted on it, a comparatively light harrow will pulverize it by harrowing the same way it is rolled, the harrow coming across the small "combs" and breaking the crust, without working too deep in the ground. Rolled after the field is sowed, these small "combs" will give a kind of protection and lee to the young sprout when it first peeps out on the surface.

The roller can be made of any size or length, if desired. One of them in use is 8 feet long, and the cylinder is 36 inches in diameter, and will weigh over 1,600 pounds. Most of the weight is in the rollers, and nothing else than the driver and the frame is weighing down on the axle, which renders it comparatively light for two horses.

The patent right is for sale, or contracts for making the roller can be obtained by applying to the inventor, George Meding, at Reading, Shasta county, Cal.

ON FILE.—"Women Voting for School Officers," C. L. A.; "The Interest Question," D. A. L.; "Poisoned Water," E. B.; "English Farm School," M. J. O. B.; "Outdoor Schools," L. C.; "Other causes of Hard Times," C. W. M.



## Industrial Growth of California.

The following is the annual address delivered at the late State fair at Sacramento, by Hon. J. V. Webster, of Alameda county:

Mr. President, Ladies and Gentlemen:—The occasion which has induced the presence of so many strangers in this lovely city, at the present time, is one worthy of the best wishes and sincere congratulations of our whole people. That the known and hidden resources of our beloved State may receive new life and further development, to the end that ours, and the generations which are to follow, may enjoy the blessings of intellectual and material increase, you have, for a brief season, left your usual vocations, your loved ones, and home life scenes, to come up here as pilgrims to learn of, and worship at a shrine of love. And with reason, for the blessings of God ever rest upon those who labor to bless themselves. Then here, where else under the sun can industry and enterprise find a wider or more prolific field in which to labor? God has given every land a joy, around which the heartstrings of its people cling like evening sunbeams to the mountain slopes; but here, in this favored State, nature appears to have exhausted her resources in uniting and combining the blissful conditions of all other climes. Whether the stranger's eyes which first beheld and realized the glories of this new El Dorado were those of Cabrella, Drake, or some wild rover of the sea, will most likely never be definitely known. Suffice it to say that the first mark in the line of modern civilization was made by Father Serra, who is recognized by the Catholic Church as the apostle of upper California, and in history as its founder.

The first mission settlement was established at San Diego, in 1769; that of San Francisco, in 1776. The avowed object of their establishment was the education and spiritual conversion of this country's natives, a race practically without history or tradition—mound-builders, without religion or morals even in their most elementary and perverted forms. Nevertheless they were capable of improvement, and the missions prospered to such an extent—other than spiritual—that in the year 1831 wheat, barley, Indian corn and peas were produced in quantities—equal in value to \$86,000. Slow progress was made in the development of the country until the discovery of gold in 1848, which event worked a new era in its history. At the time of the admission of the State into the Union in 1850, knowledge of the extent of our gold fields having gone abroad, the most hardy, intelligent and enterprising people of every clime were pressing toward our shores. Agriculture and stock raising began to assume an impetus and importance hitherto unknown. By proper cultivation here, and, apparently, barren lands were made to yield an hundred-fold of golden grain and other crops. Products grew so prodigious in size, which, to mention beyond the limits of the State, was received as incredulous, or as fabrications of a disordered mind. Thus the name of California grew by degrees into a word of household wonder in all the world. From year to year new sources of wealth have been discovered, and new industries continually developing, until, at the present time, we begin to realize the possibilities of the State in the direction of material increase.

To encourage and promote this development in your, our own day and generation, you have come up here to see and exhibit specimens of your several products, bringing with you stranger plants, fruit and flowers which never knew each other in their native homes, yet prosper here side by side in the same generous soil. With us luxuriantly grow and flourish products of the temperate and torrid zones. The apple and the orange—ignoring climatic differences—entwine their fruits and flowers over the same garden wall; the tropics have conceded their most delicate and delicious products as a part of our legitimate inheritance, while more northern latitudes have yielded with a cold hand their shrubs and their cereals, but to see them grow in greater perfection in our own salubrious climate. The fig, the olive, the pomegranate and the "purple vine" need of them but a cutting properly set in the ground to bless every home in the State with their generous shade and luscious fruits.

And then you also have on exhibition specimen works of your skilled mechanics and inventors, who have assisted in pushing the plodding ways of olden times into oblivion, and instead thereof set up their hundred-handed Briareus to do the work of many men. Paintings which denote a civilization and culture beyond our years adorn the walls of your pavilion. And like trophies of a new inspiration are seen on every hand; substantial products, intricate patterns and delicate souvenirs, which are readily recognized as gems of woman's handiwork. The exhibit at the stock ground is said to be equal, if not superior, to that of any former year, that it is complete in all of its departments and worthy of the highest commendation. No other State in the Union, in so short a time, developed such a degree of perfection in her blooded stock, nor ever took more pride in its merits. Possibly a portion of the stock on exhibition had been stall-fed, pampered and prepared for this and similar occasions, which has, in consequence, received greater attention and consideration than their positive merits deserve, for in actual service such stock usually falls far short of reasonable expectation.

A legitimate and utilitarian stock fair is one made up from the best specimens of the best breeds, well fed and well kept, without pampering. Being normal in condition, and perfect in kind, in the practical use of such stock there will be no disappointment. A fair recognition of this principle by our stock-boards and committee men in the award of premiums will do much to encourage the common farmer and stock raiser to bring forth his best specimens for exhibition.

In years which are past complaints have been made that our agricultural fairs have been run in the interest of jockeys and horse-racing, to the exclusion of a fair recognition of merit where it legitimately belonged. Whatever of truth there may have been in these charges, for like ones in the future, at least, we have every reason to believe there will be no foundation in fact; because the farmers and stock-raisers, whence it is claimed, most of these complaints come, have secured a President of the society and a working majority of its Board of Directors of their own calling and fully in sympathy with them; so, for the present and near future, the actual farmers, horticulturists and stock-growers are, and will be, in a great measure, responsible for the success or the failure of the State fair. In order that it may be encouraged in all its essential departments, generous concessions, equity, perfect good faith and confidence should be inspired by every act of the Board of Directors. Then it will not be long before our people will be fully educated up to the conception that an agricultural fair is a profitable school of object-teaching by comparison, in which everyone may receive its benefits and transmit its blessings. It should be made the occasion for an annual reunion of all the friends and promoters of material increase. With teams, and stock, and household gods about him, let the farmer, for a brief season, leave his daily round of toil, come up here, camp in the tented field, if need be, and by his presence and example contribute to a laudable enterprise in which he has a special interest. By so doing, a generous pride in the promotion of his avocation will be engendered; the love of country and our kind will be strengthened. Such annual associations will encourage the beautifying of our homes, the resuscitation and improvement of our farms. And with reason, for the apparent universal desire of every farmer to scratch in all the land that he can buy or rent, necessarily tends to imperfect work, and consequently results in indifferent crops. The seed crops of the Western and Atlantic States, which enable the farmers to pasture and rest their lands, are, owing to our long dry seasons, impossible of production here, save in favored localities. Consequently, summer-fallow, artificial, or other concentrated stimulants, and the debris of the winter floods utilized, appear to be the only resources left to us by which to impede or prevent ultimate exhaustion of the fairest fields ever inherited by any people.

Large tracts of land held without cultivation, or imperfectly tilled without resuscitation, is against the public interest, and against the interest of humanity. That her strength may be sufficient to nourish the generations which are to follow ours, the refuse of production, at least, should be returned to the land which produced it; and he who continually gleams his fields without restitution is but a public scourge and vandal, whose ultimate inheritance, as well as that of his posterity, will end in dust and bitterness. Man in his pride may boast of his possessions, and count as his own thousands of "God's acres;" but the glory and prosperity and security of that country is greatest wherein the greatest portion of its people have secured homes. To promote this result should be the great aim of every one; for he who most lives, lives most for his country and his kind. Although the annual products of cereals is usually sufficient to supply the demand for bread, it is, nevertheless, very unequally distributed. The wheat crop of the world aggregates an annual average crop of about 1,450,000,000 bushels, or about one bushel for every living human being on the face of the globe. Of this amount the average product of the United States is about 410,000,000 bushels. In consequence of short crops there will be a deficiency in Europe the present year of 160,000,000 bushels. To supply this extraordinary demand Russia will be able to furnish about 50,000,000 bushels; the remainder, or about 110,000,000 bushels, will have to be supplied by the United States. The most recent report of the Department of Agriculture estimates the wheat crop of the United States at 8% below the average yield of last year; while the total acreage is given at 4% greater. California alone, of all the States, is reported as having a crop above the average. Therefore the conclusion is reached that the United States generally will have less wheat for export than the year previous. With an increased demand in Europe, and a diminished surplus in this country, the price of wheat may reasonably be expected to advance. Upon this encouraging prospect we congratulate our Californian farmers, as an indication of good fortune in store for them. The aggregate wheat crop of the State for 1878 was 22,000,000 centals, valued at \$35,000,000, of which was exported 8,069,825 centals, valued at \$14,464,000; barrels of flour exported, 498,725, valued at \$2,612,777; making the aggregate value of wheat and flour exported for the year 1878, \$17,076,943.

The total wool product of California, from the year 1854 up to and including 1878, has been about 450,000,000 pounds, valued at \$30,000,000. The clip of 1878 was 40,862,000 pounds, valued at \$7,000,000.

The wine product of the State last year was about 8,000,000 gallons, valued at \$3,500,000, of which amount was exported 1,764,000 gallons, value at \$770,000, which is about twice the amount exported in 1877, showing conclusively that our wines are growing in favor with our Eastern brethren, but our own people don't like it. Although good and pure, it isn't "tony" enough for them, and in consequence is little used except by our Italian, French and German people. Well, perhaps we will have to glean some consolation from the fact that when the upper portion of our population shall have killed themselves by drinking vile compounds called "imported wines," those of us left will be able, as we shovel dirt on the victims of fashionable thirst, to exclaim:

"Tis too bad to bury people thus,  
California wine is good enough for us."

The clipping of raisins as an industry was hardly known up to 1873, since which time it has developed to such an extent that last year there were cured 76,000 boxes, most of them of excellent quality. There is no valid reason why California raisins should not be equal in quality to those of Malaga and altogether supersede them in the United States, thereby adding millions to our annual wealth. There are about 60,000 acres of vineyards in the State, which, together with the factories and wine cellars, are valued at \$30,000,000, with a State capacity for winemaking sufficient to supply the world's demand.

The total products of the State for the year 78 is estimated in value at.....	\$ 86,100,000
Gold and silver.....	20,000,000
Other products, not including increased value given by labor to manufactured articles.....	10,000,000
Making the aggregate product of the year valued at.....	117,000,000
The total exports for the year are valued at.....	75,261,553
Total exports.....	88,303,137

Excess exports over imports..... \$13,101,584

Whi amount, being a part of our gold export, was placed to our credit, presumably in the cancellation of old debts. Owing to the embarrassed condition of many of our industries, and a general disposition on the part of the people to grow suddenly rich by spasmodic efforts, stability and continuity of purpose is wanting in order to insure the greatest permanent increase and consequent prosperity. With us, so much of a perishable nature is produced, that our local markets are continually glutted with pine articles which will not bear exportation, consequently are worse than lost to the producer. In order to become a truly prosperous people, we must learn to utilize our resources to a better advantage than dumping them in the bay, or allow them to rot in the field, and the want of better market.

Five dollar's worth of any product raised, which will take the place of a like article imported, a dollar saved to our material wealth. We are wasting millions of money annually in the use of imported articles, which could better be raised at home. The growth of wealth and prosperity does not consist in the amount produced, but in the savings of superproduction. With all our wonderful annual yield of gold and grain, our permanent gain reives but little increase; for the reason that our imports are, upon the average, equal to our exports. Before we can hope for any great permanent prosperity, this condition of things must change. We manufacture half a million pounds of sugar annually, and import for our own consumption seventy-eight millions of pounds; when there is no valid reason why we should not produce the whole amount. Whibutter and cheese are almost spontaneous products, we annually import hundreds of thousands of pounds. Bacon and lard are imported in still greater quantities. Wine, which could be made to run in rivers, is exported from France at our expense. Nuts and prunes and raisins of which we should annually export millions in value, are boxed up in Germany, France and Spain, and shipped 20,000 miles in order to supply our little wants. So it is with many other products which could be mentioned.

Encouragement for the future rests in the fact that our wild oats have about all been sown and consequently we, as a people, will soon settle down to legitimate business. Our resources are not yet half developed. The country must be more thickly settled by a hard industrious, frugal people. The river flood must be utilized by turning them on to the re deserts of our inheritance, that they may be made to yield up their treasures. This sub of irrigation is one of the deepest concerns the future welfare of the State. Under an act of the Legislature, approved May 14, 1866 in conjunction with another Act, approved April 2, 1870, all the waters of California now used for the purposes of irrigation are claimed and controlled by individuals and corporations. An act of Congress, approved July 26, 1866, provides that whenever by priority of possession right to the use of waters for mining, agriculture and manufacturing or other purposes, harvested and accrued, and the same are recognized and acknowledged by local customs, laws and decisions of the Courts, the possessors and owners of such vested rights shall be maintained and protected in the same—and the right of way for the construction of ditches and canals, for the purposes aforesaid, is hereby acknowledged and confirmed. Under the sanction and protection of the laws enumerated, many water claims have been filed and large amounts of capital invested in the construction of canals, ditches and ditches. To such an extent, in fact, has this matter run, without direction or control that an absolute monopoly of the waters of

the State will, unless soon checked, be in the possession of individuals and corporations—controlled in a way to seriously retard, if not paralyze, the agricultural development of the State. In order that our lakes and rivers and crystal streams may be fully utilized for the purposes of irrigation, the Legislature should provide for an exhaustive chorographical survey, and, when completed, then with much care and consideration establish and confirm a general system of irrigation for the whole State, to which all subsequent canals, dams and ditches should be made to conform, so that it shall be placed beyond the power of individual or corporate greed to waste or misappropriate the element which is so essential to the life and development of the valleys and great plains of the State.

A system similar to the one above outlined in successful operation would utilize our winter and spring floods, rich with the gleanings of the mountains, which, if judiciously applied by the labor of man to the parched and thirsty lands of our inheritance, greater wonders in agriculture will be developed than were by irrigation in ancient Egypt, Syria or Babylon. Like the valley of the Nile, which for 40 centuries has never ceased to yield her abundance, our great arid plains, their thirst ever quenched by the mountain floods, enriched by the debris held in solution, will go on forever resuscitating and reproducing. With this encouraging prospect before us, stimulated by a laudable desire to make ours the richest and most renowned in the constellation of States, to that end our energies should be directed. In order to secure the greatest development of our resources and general prosperity of our people every legitimate industry and enterprise should be fostered and protected. And let us remember that the experience of all civilized countries fully demonstrates that the basis of a nation's prosperity is its agriculture; that the glory and security of a State may be correctly measured by the number, intelligence and thrift of its producers. Conscious of the necessity for peace and protection in his calling, the farmer is, by nature and interest, conservative; consequently the proper balance wheel in our political and commercial machinery. Owing to the disposition of the ambitious, idle and vicious to drift to the towns and cities, our commercial centers are, in consequence, growing out of all proportion to the country; hence their ratio of crime and pauperism is continually on the increase. The struggle for existence is growing more desperate every year. The contest is becoming closer and more bitter between those who bear the burdens of taxation and those who desire to live and profit by its expenditure. Without a change for the better the time is not far distant when the rate of taxation will exceed the net profits of legitimate enterprise. Disorders will then arise, which will likely end in a stronger government, for the security of life and property is of the first consequence to every one, while the maintenance of "civil and religious liberty" is considered of secondary importance. In order to check or prevent the disorder foreshadowed, the balance of political power must be held in the country, where it should be used to secure the greatest good to the greatest number. This can be done only by increasing its population, and educating them up to the highest conception of citizenship. May we learn and realize that the life of the nation and glory of the State must rest upon a conservative foundation. That they may, we must have an intelligent, industrious, thrifty people. Every child in the State should receive a sufficiency of education to enable it intelligently to perform all the practical duties of life; not of that narrow, hot-house, cramming system so prevalent, which indirectly inculcates the doctrine that respectability consists of indolence, and how to live on somebody else's labor, but of that practical, utilitarian turn, which will enable its possessor to earn an honest living without being ashamed of it. The dignity of labor must be restored by dispensing with the services of a servile race, and by elevating our own people to a higher plane of culture; for the dignity of any class of labor or calling is correctly measured by the standard of intelligence and integrity of those who perform it. If we would have the State prosperous and our people happy, let us realize that industry, frugality and fair dealing must be encouraged, and that crime must be punished, whether committed by the high or low, rich or poor. Let truth, clothed in the mantle of justice, decree that the most powerful, and the poorest peasant in the land are and shall be equal before the law.

We have within our fields, our mines and workshops the basis of a prosperity never excelled. For the love which we bear our common country, and the generation which will follow ours, every energy should be directed towards encouraging and promoting the prosperity of our whole people, so that, when our work is finished, we may review it for the last time, soothed and sustained by the thought that our noble efforts will live after us, and that our children will rejoice over the legacy left them.

**COLORS FOR WRITING UPON GLASS, PORCELAIN, METAL, ETC., AS FOLLOWS:** Black—10 parts of lamp-black, 40 parts white wax, 10 parts tallow. White—40 parts white lead, 20 parts wax, 10 parts tallow. Blue—ten parts Berlin blue, 20 parts wax, 10 parts tallow. Dark blue—15 parts Berlin blue, 5 parts gum arabic, 10 parts tallow. Yellow—10 parts chrome yellow, 20 parts wax, 10 parts tallow.



**BREEDERS' DIRECTORY.**

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS.  
OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

**CATTLE.**

**PETER SAXE & SON**, 520 Bush St. S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

**PAGE BROTHERS**, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

**SHEEP AND GOATS.**

**E. W. WOOLSEY**, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

**L. U. SHIPPEE**, Stockton, Cal. Importer and breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

**POULTRY.**

**WILLIAM NILES**, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magie Poland-China Swine.

**MRS. L. J. WATKINS**, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

**A. O. RIX**, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

**ALBERT BURBANK**, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Ducks, etc. Eggs for hatching. Send for price list.

**SWINE.**

**ALFRED PARKER**, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

**T. C. STARR**, San Bernardino, Cal. Poland-China Swine and Black Cochon Chickens for sale.

**JOHN RIDER**, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

**BEES.**

**JOS. T. ENAS**, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

**Seedsmen.****SEEDS. TREES. SEEDS.**

Continually arriving, NEW AND FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

**B. F. WELLINGTON**,  
Importer and Dealer in Seeds,  
425 Washington Street, - San Francisco



**B. K. BLISS & SONS**,  
Importers, Growers and dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address  
B. K. BLISS & SONS, 34 Barclay Street, N. Y.

**EXOTIC GARDENS.** F. A. MILLER & CO., Mission St., opposite Woodward's Gardens. Send for Catalogue and Price List.

# PIANOS

**LARGEST MUSIC HOUSE**

On the Pacific Coast.

WHOLESALE AND RETAIL.

Lowest Prices and Best Goods.

Write for information concerning any Musical Instrument, and terms of sale. It will be given with pleasure.

ESTABLISHED IN 1860.

**KOHLER & CHASE,**

137 and 139 Post Street, San Francisco.

50 Perfumed, Snowflake, Chromo, Motto Cards, name in gold and jet 10c. G. A. SPRING, E. Wallingford, Ct.

## Nathaniel Curry & Bro.,

113 Sansome Street, San Francisco,



Sole Agents for the

### Sharps Rifle Co., of Bridgeport, Conn.

FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO.  
Also Agents for W. W. GREENER'S Celebrated Wedgefast, Chokebore, Breech-loading DOUBLE GUNS; and all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America. AMMUNITION of all kinds in quantities to suit.

**Educational.**

### HEALD'S BUSINESS COLLEGE,

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

**LADIES' DEPARTMENT.**—Ladies will be admitted for instruction in all the Departments of the College.  
**TELEGRAPHIC DEPARTMENT.**—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.  
For further particulars call at the College, 24 Post street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

W. E. CHAMBERLAIN, JR. THOS. A. ROBINSON



SEND FOR CIRCULAR.

### Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$2,500,000.

In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

**OFFICERS:**

PRESIDENT.....G. W. COLBY.

MANAGER AND CASHIER,

ALBERT MONTELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

### Grangers' Co-operative Business Association, of Sacramento Valley.

Location: K &amp; 10th Sts., Sacramento, Cal

Dealers in GENERAL PRODUCE, RETAIL GROCERIES, and sale of FRUITS. Desire the co-operation and trade of farmers in general. Pay the highest market rates for all produce, and sell for the smallest profit. Our orders are cash on delivery. Goods shipped; marked C. O. D. W. H. HEVENER, Manager.

### A New Forage Plant.

THE GREEN VALLEY GRASS.

The WONDER of the NINETEENTH CENTURY, yields 10 to 14 tons of hay per acre, and from 3,000 to 4,000 bushels of roots, which far exceeds artichokes as feed for hogs.

Grows without Irrigation.

For price list of seed and roots, address

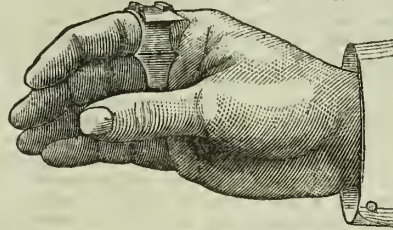
ARTHUR TAYLOR,

Watson, Atchison Co., Mo.

**THE HOME KNITTER!**

Simple, light, durable. New in form and method of operation. Knits stockings in woolen or cotton yarn, without a stitch of sewing; narrows and widens perfectly; no weights; no "setting up" of work. Retail price, \$25. Send for descriptive circulars. Reliable agents wanted. HOME KNITTER CO., Canton, O.

### The California Grape Picker.

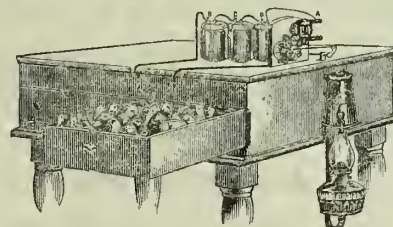
**PATENT APPLIED FOR.**

In offering this article to the Wine and Raisin Growers of California, we call your attention to some of the important advantages over the ordinary knife used heretofore in picking Grapes, and some of the principal reasons why every Vineyardist should use it.

1st.—A man can pick twice or three times as many Grapes with it in a day as he can with a Knife. 2d. It can be used with both hands at the same time. 3rd. Your Knife never gets lost and is always ready for use when needed. 4th. You have the use of your hands to handle basket or tray, and the picker is no incumbrance. 5th. It is made entirely of metal, the knife of cast steel, tempered in oil, and easily sharpened, and not liable to get out of order. 6th. No Grape Grower can afford to be without it, as it combines simplicity, durability, economy, convenience and cheapness.

Price, \$1 each, \$9 per dozen. Agents wanted in every county in the State. For particulars apply to JAS. L. FINK, Box 1267, San Francisco, Gen'l Agt. for U. S. and Europe.

### MONEY in CHICKENS



#### If You Want to Make Money

By raising any number of Chickens at any season of the year without setting hens, procure an

### ECLIPSE INCUBATOR

(E. A. SAMUEL'S Patent).

In both public and private trials on this coast as elsewhere, the "ECLIPSE" has proved itself a perfect and successful Egg Hatcher. It may be examined and its merits proven to customers before they make purchases. Write for particulars and circulars to

G. G. WICKSON, 349 Market Street, S. F.

Agent for the Pacific Coast.

**IMPORTANT INVENTION.**

—FOR THE—

### Grape Growers of California.

From a friend in southern Russia, I came in possession of a process to preserve Grapes in a fresh state for a year and longer. The high importance of this invention I do not need to explain. I am willing to part with it, and ask interested parties to write for particulars.

R. WEINHOLD,

Florist and Nurseryman,

Los Angeles, Box 303.

### MONEY TO LOAN

AT LOWEST RATES

On Country Real Estate and Grain in Warehouse.

McAFEE BROTHERS.

202 Sansome Street, San Francisco.



### LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sleep Dip and Disinfectant. Price, \$2 per gallon. For directions and testimonials, apply to FALKNER, BELL & CO., Sole Agents, 430 California Street, S. F.

## Lands for Sale and to Let.

### FARMS FOR SALE.

IN THE FERTILE AND HEALTHFUL

### San Pasqual Valley,

San Diego County, Cal.

**TITLES PERFECT.**

The owner (an architect) having recovered his health by a residence of four years in this Valley, is desirous of returning to the city, and so offers the following farms for sale

**At a Great Sacrifice:**

The Home Farm of 200 acres is well fenced and subdivided. There is beside 600 yards of movable panels,

**50 Acres in Alfalfa,**

Yielding five and six crops a year. There is an abundance of water on the place for stock, besides running water for garden, orchard, etc., and a one-sixth interest in the S. P. V. Ditch Co. House 25x36, enclosed in a lot 200x180, barn and stable, 54x35, two sheds 24x14 and 18x14, smoke-house, 20x14, with an adobe cellar under it, and every convenience as regards large tanks, etc., for making bacon. The implements are of the best, nearly all new, and in good order. They consist of two farm wagons, 10-foot header, header beds, hay rack, mower, gang plow, single do, harrow, 10-foot seeder and cultivator, small do, sulky rake, two sets of strong harness, together with a lot of other tools, hay, grain seed, etc.

Price for the whole, \$4,000; one-half cash, balance on time at 1 per cent.

**For Sale Also,**

A farm under cultivation of 116 acres, adjoining the above, suitable for grain, corn or alfalfa, with a one-sixth interest in the Ditch Co., and about one and one-quarter miles of fencing, no other improvements. Price, \$1,200; one-third cash, balance on easy terms.

**For Sale Also,**

A farm of 120 acres, one-quarter mile from the above ranches, mostly damp land, suitable for a nursery, alfalfa, corn, etc. There is a small house, etc., and a ditch running along its upper side. Price, \$900; one-third cash, balance on easy terms.

The neighborhood is exceedingly healthful and growing. Two schools are in the valley, one within one-quarter mile, and the postoffice within one mile, neighbors with families are all round.

My stock consists of superior brood mares, colts, hogs, etc., and they may be taken at a valuation if wanted.

For particulars apply to W. B. STEWART,  
San Pasqual Valley, San Diego Co., Cal.

### Farm For Sale.

Yields an Income of \$4,000 a Year.

Price, \$10,500.



My Farm and Poultry Business yield over \$4,000 a year. The place—116 acres—with orchard, vineyard and improvements, has cost me \$15,000. The good will of the business is worth fully \$6,000. I will sell the business and farm for \$10,500, half cash, or exchange for San Francisco property. It is a bargain such as is seldom offered.

M. EYRE, Napa, Cal.

Law Office in San Francisco, No. 636 Clay St., Room 25.  
I am in Napa each Saturday and Sunday; other days in San Francisco.

### FOR SALE.

700 Acres. The Finest Stock and Grain Farm in Northern California.

Price, \$25,000, including Farming implements. The whole under fence. The Stock upon this farm, all thoroughbred and graded, embracing some of the finest in the State, will be sold at private sale. Among the stock is some that has been awarded different premiums at State and County Fairs.

This is one of the finest opportunities for a man of means in the State. For full particulars apply to

D. B. HAYS,

Real Estate Agent, Oroville, Cal.

### C. C. RODGERS,

CALIFORNIA LAND AGENCY,

Office, 276 First St., San Jose, Cal.

GENERAL LAND, REAL ESTATE, U. S. PENSION AND BOUNTY AGENT.

Will buy and sell Land Warrants; Locate and Survey Public Government Land, Pre-emption Homesteads, Soldier's and Sailor's Homesteads, Timber and Wood Lands, Desert Lands, Etc.

### FARMING LAND

For Sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

### ROOMS TO RENT.

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

Engraving done at this office,



## At the San Joaquin Valley District Fair.

Written for the RURAL PRESS by H. E. HALLETT.

A short sojourn at Stockton during the fair just ended disclosed many things of interest which could not escape the attention of the most superficial observer. The San Franciscan is agreeably struck with the live business aspect of this pleasant little manufacturing city, and find no gloomy reminder of dull times in empty rooms and vacant offices placarded "to let." The grain crop in San Joaquin is estimated at 100,000 tons by J. W. Bagges, Esq., one of the leading grain dealers in this vicinity; the warehouses are rapidly filling, mills are running and good prices for farm produce prevailing. All are sanguine of the future and are bending their energies to take advantage of the incoming tide of prosperity. Farmers are said to have been "hedging" this past season, but this is chiefly in the line of extravagant or idle expenditure. Loans can be easily effected at 9% and 10% on good security, and a healthy auriferous jingle times the stride of the prosperous farmer. Hotels, foundries and manufactories have done a good business all summer.

The attendance at the fair was large, about the same as last year, and the display quite similar. There are good prospects now that the Society will build a new pavilion before the next fair, with a lecture room attached and all the conveniences which experience has suggested. The exhibits in the pavilion at present used were on two floors with an art gallery opening off the second floor. The most noticeable exhibits on the first floor were the stoves and ranges of Mr. John Jackson and Messrs. Hogan & Smith; the patent incubator and motherless chicks entered by G. G. Wickson; the Norton single propeller pump, of which more anon. Geo. West, vintner and winemaker made a fine display of 31 varieties of grapes, including eight varieties of raisin grapes and 70 bottles of wines and brandies; Geo. Locke, of Luckeford showed 21 varieties of apples and a good display of vegetables, including New Hampshire seedling and the Red Rose potatoes. Among others were those of Hugh Quinn, of Chinese Camp, Tuolumne county, two of plums and ten of grapes, five varieties of almonds by Ira Ladd, and vegetables (first premium) by Jos. Hale.

The second floor was pre-eminently the ladies' domain, and its tasteful attractiveness was a creditable reflection on the good taste of the exhibitors of San Joaquin county. There were a thousand objects (exclusive of the ladies) to claim the attention. Their department contained a splendid profusion of elegant needlework, crocheting, laces, etc. Any mention of the more familiar things on display would be an endless task, and criticism on others hazardously conjectural. The absence of items in this department in our reportorial note-book betrays a consciousness of too close proximity to the clouds, and a determined resolution that there shall be no wailing and confusion in Babylon. We were disappointed in one thing; it was the beaded air-castle, and we snapped our fingers contemptuously, for ours are uniformly more gorgeous. To descend to the vulgar fifth sense, taste, we must mention a handsome display of preserved, pickled and canned fruits, by Mrs. J. C. Reid; and a superb array of eight kinds sun-dried fruits, and jellies, pickles, preserved and canned fruits, by Mrs. Jos. Hale, unexcelled, we believe, by anything similar in the State. Chalmers Bros.' display of carpets seemed too good to tread under foot. The Stockton Furniture Co.'s \$75 and \$150 sets displayed here were at once a lavish use of good taste and material, and an epitome of economy. Of the neatness and convenience of their kitchen table we will speak a month hence, so let housewives possess their soul in patience. There was a creditable display of local art, by Oxley Miller, J. E. Doak, and others.

Beautiful visions of good health and sound stomachs hovered over the light bread and brown bread, while delicious extravaganzas of cookery took shape in loaves of fruit, sponge, pound and coffee cakes.

The race-track was in excellent condition, and the trotting was even better than last year. It is situated about one mile southeast of the business part of Stockton, and is very suitably arranged, with the exception of shade trees.

There was a slim list of exhibitors of local stock at the fair this year, which is rather a reflection on a county which can show so much of blood and breeding that is meritorious. Messrs. Younger and Carr filled many stalls with stock. Messrs. Bement and Barreto exhibited Ayrshires and Jerseys, and divided the premiums with Messrs. Kinsley, Stowell and Sargent, local exhibitors.

**Of Improved Agricultural Implements**  
Messrs. Matteson & Williams made a display of tools for which they are justly noted throughout the State.

The Grangers' Union made a good display, prominent among which was their four-pointed, steel, barbed fence wire, and an iron wagon made at San Leandro. This is an excellent invention, and is well calculated to bear up very heavy loads, and withstand the warping and checking of our parching summers. The tire, spokes, felloes and hubs of the wheels are entirely of iron, not an inch of wood being used in construction, and they are light, strong, durable and easy running.

Messrs. Nichol & Horton showed a new style of harrow recently introduced from Chicago, where they have been manufactured four years and sold throughout the West. As used in the West it is a combination implement, and performs at one operation the work of plowing, seeding and harrowing; then, by putting jackets on the sections it may be converted into a farm roller; by taking out two of the four sections it may be used to cultivate between two rows of corn at once. The other two sections may be used in another frame in the same way. The name of the tool is the Chicago screw harrow, and takes its name from the manner of working and method of construction. It consists of an oblong iron frame 10 feet in length, a wood cross-bar across the frame with holes bored in the top, and a casting with bearings for the inner end of two axles between the cross-bar and the outer end of the frame; two sections of the harrow run on each axle; each section is two feet in length and three feet in diameter, with strong arms or spokes radiating from the hubs on which it revolves on the axle. Strong, sharp knives riveted to the arms and encircling obliquely to the direction of the axle form a hollow open cylinder and complete the section; the knives are about six inches apart. A seed-sower is mounted in front with an agitator operated by the revolution of the sections; the seat is behind the frame and above. The casting with the bearings on the cross-bar can be shifted back and forth, and held in the position desired by a rod in one of the holes bored in the cross-bar. The sections are placed on the axle so that the thread formed by the oblique direction of the knives shall run opposite to those on the other axle, the sections on one axle being a right screw and those on the other a left screw. When the bearings for the inner ends of the axles are shifted on the cross-bar to a line with the outside bearings, the axles are straight and the machine runs lightly on top of the ground, and may be easily drawn by one horse. When the inside bearings are moved forward on the cross-bar the axles are set at an angle to each other and the sections cut deeper, and the depth is in proportion to the acuteness of the angle. The harrow cuts a width of 3½ feet, and is drawn by six animals. Twenty acres per day can be cultivated, or ten acres harrowed and cross-harrowed. This machine will prove valuable in many situations we believe, as in ground full of lumps and clods, in summer-fallow covered with the turkey weed, coarse stubble, corn fields and peat tule.

C. E. Williams & Co. made a large display of Moore's prepared squirrel poison. The value of this poison is attested by many farmers of San Joaquin, and is further demonstrated in the records of the court-house. The county of San Joaquin offers a bounty of five cents for each squirrel scalp brought in. Three men, during the past season, who have made a business of squirrel poisoning with Moore's preparation, have received \$3,000 bounty for 60,000 squirrel scalps. If the money holds out, death and destruction tread close on the heels of the balance.

## Alaska and Its People.

In a relation of personal observations on Alaska by Archbishop Seghers and his party, the Yukon river is described as a magnificent stream. Taking the Amazon as the first and the Mississippi as the second of American rivers, the Yukon is the third in size. At the point where the Bishop's party reached it, some hundreds of miles from its mouth, the Yukon is three miles in width, and studded with islands as far as the eye can reach. An idea of its volume of water can be gathered from the fact that out in the open sea, six miles from the mouth of the river, the water taken from its stream is still fresh enough to drink. The length of the Yukon is over 3,000 miles, and it is navigable for steamers of considerable size for over 2,500 miles of its course. Further up, where the Yukon receives a large tributary, the Porcupine, the basin formed at the confluence of the two rivers, is 24 miles in width.

The Yukon was reached after a four-days' march due east from Norton's sound, across a country which is one continuous marsh, save only the low hills now and then encountered. Mosquitoes "literally blackened the sky." Grouse were found in abundance, and it was chiefly upon their flesh that the party subsisted.

Navigation on the Yukon is carried on by means of a *bidara*, a sailing vessel consisting of a light frame-work of wood, covered by skins of the hair seal.

The party arrived at Nulato about the end of July. The language is a corruption of some Russian dialect, and consists of only a few hundred words. It is so simple, so undeveloped that the same word, accompanied though by a different gesture of the hand in each instance, is made to do service for the past, present and future tenses of the verb.

The first ice made its appearance in the beginning of September. On the 10th of October the river froze over, or rather blocked up, great cakes and fields of ice drifting down stream with the rapid current, forming a gorge at some narrow point, then heaping up and piling over one another until the river from bank to bank was filled with ridges and diminutive mountain chains of ice. As winter advances the water falls, allowing the ice bridge to hang

suspended until it breaks through its own weight, and comes down with a tremendous crash. Later in winter the Bishop started to visit the Cioquo Indians. Here it may be mentioned that traveling in the interior of Alaska is always at the extreme peril of the venturesome explorer, the Indians who are continually at war, treating all strangers with strict impartiality when once they take to the war path. This journey to the Cioquo was undertaken in dog-sleds, a style of traveling not without its disadvantages, one of which is occasioned by the dogs striking a game trail, and following it up on the full run regardless of the load behind, which is scattered in every direction. The ordinary load of a dog-sled is 500 pounds. The driver usually keeps up with his team by joggling along at a dog trot, but sometimes he treats himself to a ride. A good dog-driver can easily run 70 miles a day, one day with another—a feat to match our Westons and O'Learys. A team is made up of seven or nine dogs, always an uneven number, one taking the lead, the others harnessed in pairs. The dress worn on such expeditions is a deer-skin coat with Capuchin hood to draw over the head, fur cap, deer-skin trousers and boots. The deer-skin, dressed only enough to make it pliable, is worn with the hair outside. While among the Cioquo the travelers put up quite frequently in the *barabara*, or native hut, whose construction may be understood from the following description: On entering the *barabara* the visitor first descends a shallow pit, from the bottom of which a tunnel eight feet long conducts him to the subterranean portion of the dwelling. The hut is circular, and is sunk into the ground about five feet. The portion above the level of the ground is built of mud and is of conical form. Only one opening is provided, and this is in the apex, where it gives escape to the smoke. At night this opening is closely covered with seal-skin, and the tunnel tightly closed, so that all access to the cold, and to the air as well, is cut off. In this manner the *barabara* is made very warm, but exceedingly unwholesome. Where a hut of this description was not met with at nightfall, the travelers dug a square hole in the snow, built a rampart of branches toward the northern side, from which the wind nearly always blows, and sought repose on a couch of boughs thickly laid on the bottom of the hole. Exposed thus to Arctic cold in the open air, tea is the only beverage used by the Northerner. Strong spirits create a greater amount of heat in the system, but the reaction following leaves the traveler more than ever exposed to danger of death from freezing. While among those people, the Bishop also formed the acquaintance of a Medicine Man, who undertook by his incantations to cure a sick child in the house where the Bishop's party were guests. Part of the performance consisted in pounding a gong with a club, and when the Bishop learned that this ceremony was to be continued all night, it need not surprise us that even the proverbial patience of the missionary became exhausted, and that *vi et armis* the Alaskan M. D. was forthwith deprived of his professional paraphernalia.

Returning to Nulato, the party started down the river by sledge, experiencing such a degree of cold that 60° below zero was frequently registered by the spirit thermometer. On the trip the Bishop witnessed a religious ceremony which seemed to mean the worship of fire if it meant anything; and that half-frozen wretches should at length take to the adoration of fire as their salvation from the Polar cold is not very strange. Those Indians are adepts in making earthenware, some of their utensils being of a capacity to hold several gallons, and representing a very considerable advance in the potter's art. They differ from the southern Indians of the Pacific coast in their manner of disposing of their dead, which are buried, not burned, as among the Piutes, Washoes or Diggers. They resemble the whites in having a taste for ornamenting the graves of their departed warriors; but one epitaph found by the Bishop was not calculated to stir very profound depths of woe. It had probably been picked up at some trader's camp and devoted to use as an epitaph, the finder evidently believing it to possess virtues not of this world. Fastened to a pole and placed at the head of a departed warrior, it gave "Beehive Breakfast Bacon" as its recital of the virtues possessed by the deceased. But perhaps the most interesting fact mentioned by the reverend lecturer is the astonishing proficiency in music acquired by those savages. So far advanced are they that their arias can easily be committed to writing by our system of musical notation. Three or four of these songs were rendered word and note by his Grace, who has a fine baritone voice. In one, a warrior's funeral dirge, a mingling of grief with eulogy of martial prowess must have been the meaning of the words, so clearly did the air express those combined feelings. The lecturer also gave specimens of Alaskan dancing, which it appears is done principally by the women, under the eyes of their admiring lords. The dance is highly and superlatively "proper," consisting as it does of a leaning posture in which the dancer stands on one foot while she pounds the floor with the heel of the other, the toe not being moved from the floor. Even the most straight laced could have nothing to say against such "steps."

On the Alutian island the winters are not very severe. The snow falls very deep, about 24 or 25 feet every winter. This depth is of packed snow, through which the people of the villages cut passages from one house to the other. The principal occupation of the inhab-

itants is seal fishing in the employ of the Northwestern Fur Co. Seals abound in enormous numbers. On St. Paul island their estimated number is 11,000,000; on St. Michael island, 5,000,000 or 6,000,000; an enumeration being an easy matter since they are not at all shy.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

**IMPROVED CULTIVATOR, HARROW AND SEED-SOWER.**—James Huggill, Woodbridge, San Joaquin county, Cal. Patent No. 218,975. Dated Aug. 26th, 1879. This invention relates to an improved farming implement, by which the ground is harrowed, cultivated and seeded at one operation, thereby saving a great deal of time and expense for farmers. The construction of this machine is simple and not liable to be easily broken; it consists of two large rollers arranged to operate independently of each other, rotating freely upon an axle which is journaled in a frame; on the outside of these rollers are placed in diagonal lines a series of teeth. Behind these two larger rollers is a small one having teeth arranged so as to keep the teeth on the large rollers free from lumps, and is connected to the larger rollers by means of a set of gears. Near the rear end of the frame is arranged a seed-trough in which the seed is placed and dropped as required, and afterwards covered by means of teeth secured in the rear beam of the frame.

**HORSE-POWER FOR OPERATING PUMPS.**—Henry M. Cox, Linden, San Joaquin county, Cal. No. 218,938. Dated Aug. 26th, 1879. This device consists in the employment of a bevel or crown wheel, which is fixed upon a bed with its teeth uppermost. A central spindle arises from this wheel, and an arm or lever mounted upon this spindle extends across above the gear wheel, having an attachment for the horse at one end, while a pinion at the other is mounted to rotate upon its axis by meshing with the teeth of the large wheel while the lever is carried around by the movement of the horse. A crank-arm upon the pinion is united by a pitman and universal joint with a balance-beam above, and the action of the crank causes it to oscillate so as to operate a pump at the opposite end. This device is simple and easily constructed.

**FIRE-PLACE.**—Francis A. Sage, St. Helena, Cal. Dated Sept. 9th, 1879. No. 219,530. This invention consists in providing a supplemental flue, built beside the main flue, the supplemental flue being connected with the back or arch of the fire-place by a series of openings or slots, which may be closed by dampers. An increased draft for any part of the fire may be maintained by removing the dampers from any of the openings, so that the products of combustion may pass directly to the supplemental flue in case there is not a proper draft through the main flue. On removing or sliding any one of the dampers so as to uncover any one of the openings or slots, a current of air is immediately carried through the fire opposite the location of the opening, and the draft thereby induced assists combustion at that point.

**GANG PLOW.**—Reuben Hart and Milford P. Nicholson, Santa Maria, Cal. Dated Sept. 9th, 1879. No. 219,467. This invention consists in a novel method of mounting the plows upon a frame, and in a means for supporting the frame and plows upon the bearing-wheels, so that they may be raised to entirely clear the ground, or lowered to make any depth of cut desired. The rear and front plows are capable of an independent motion, by means of separate levers, so that either front or rear plows may be elevated or depressed independent of each other. This construction has many advantages over the ordinary sulky or gang plows.

**THOMAS MEEHAN.**—We always look through Thomas Meehan's lists of plants, trees and tree seed with much admiration. His years of experience and acres of ground have put him in possession of many facts and much material. He also has a way of making desirable, but little known, native plants prominent, which is admirable. Nor does this at all restrain him from the choicest importations. If one man in each township in this State would make a selection from Mr. Meehan's list of tree seeds, and use them well, we should soon have a diversification in our growth of forest, shade and ornamental trees, which would be highly desirable.

**PREMIUM HONEY.**—We have examined the honey for which the premium was awarded at the late State fair to the exhibitor, H. K. Cummings of this city. It is of unusual excellence, clear as crystal and of excellent flavor. It was made in the apiary of Mr. Dougherty on Kern Island, and is from a pasturage of mesquite grass.

**BLOOMINGTON NURSERY.**—The catalogue of the well-known Bloomington (Ill.) nurseries, is received. These well established nurseries have enjoyed a large share of the trade from this coast, and their new list shows full resources of plant and tree of nearly every description.



## S. F. MARKET REPORT.

Note.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, September 24th, 1879.

Interest is now fully awake in the Wheat trade, and as the inertia of the bears and the timid ones is overcome, the market is buoyant and prices have notably advanced. Wheat, of course, draws up with it Flour, and with Flour there has come a better feeling in the Provision trade in sympathy with the improvement at the East. The markets are consequently of great interest, and activity will probably follow in all lines of productive interests.

The advance here has a visible occasion in the sharp advance abroad, which may be seen in the following:

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.		
Thursday...	8s	10d@	9s	9d	9s	8d@10s	2d
Friday.....	9s	—@	9s	9d	9s	9d@10s	3d
Saturday....	9s	—@	9s	9d	9s	9d@10s	3d
Monday.....	9s	—@	9s	9d	9s	9d@10s	3d
Tuesday....	9s	4d@10s		3d	10s	3d@10s	6d
Wednesday..	8s	10d@10s		3d	10s	3d@10s	6d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.		
1877.....	12s	9d@12s	11d	13s	—d@13s	3d	
1878.....	10s	—@10s	2d	10s	3d@10s	5d	
1879.....	9s	4d@10s	3d	10s	3d@10s	6d	

## The Foreign Review.

LONDON, September 23.—The *Mark Lane Express* says: Much Grain has been carted and stacked under conditions which render sprouting and loss of condition almost inevitable. In Scotland the agricultural situation is gloomy. The fields are still quite wet in the uplands, and as the season is too far advanced for any hope of sunshine, the chances of Grain maturing properly are reduced to a minimum. Bad as our harvests have been since 1876, it must be admitted the present season's yield will be by far the worst. There has been a material revival in trade in foreign Wheat, and the upward movement anticipated for a fortnight has made a fair start. The advance of 2s per quarter, which has been well maintained during the week, and the prevalence of speculative transactions, afford proof that there are not wanting those who consider the recent improvement but the first step to a materially enhanced range of values. Millers have shown an inclination to add to their stocks, so that healthy activity has pervaded in the Grain trade throughout the United Kingdom. Flour has shared in the advance to the extent of 1s per sack and barrel. Feeding stuffs are held with increased firmness. Arrivals at ports of call the past week have been small. Wheat off the coast met with good inquiry, and prices advanced 18d to 2s; but the limited choice has restricted business. Maize was also in good demand, and prices advanced 18d. There has been very extensive business done in Wheat for shipment at rapidly improving prices, and the closing sales indicate an advance of 2s on the week, with a continued strong demand. Barley is steady, with an upward tendency. Sales of English Wheat last week, 13,214 quarters, at 47s 4d per quarter, against 60,456 quarters at 43s 2d per quarter, the same week last year. The imports into the United Kingdom for the week ending September 13th were 1,513,129 cwt of Wheat and 174,115 cwt of Flour.

## Freights and Charters.

The latest reported charters are: British ship *Eekdale*, 1220 tons, Wheat to Liverpool, £2 10s. Ship *Isaac Reed*, 1550 tons, Wheat to Liverpool, £2 6s; Havre, £2 7s.

## Eastern Grain and Provision Markets.

New York, September 22.—The merchandise markets generally are active, prices firm. Flour is 15c higher, on legitimate demands. Wheat is excited, higher, fluctuating widely; opening at 42c higher, falling back 1c 1/2, and recovering at the close. The movement was chiefly speculative. Pork dull, 10c higher. Lard 5c higher, quiet.

Chicago, September 20.—No more exciting week in the Wheat market has been passed since the Keene raid. The prices this time have been pushed up steadily, not by manipulators but by the growing conviction of the inadequacy of our crops to supply the strong demand and deficiency of Europe. The farmers have apparently become convinced that they hold the balance of power, and fix their own prices, for the receipts of all kinds of grains and provisions are very small, when the magnificence of the crop is considered. The principal dealers on 'Change are convinced that strong prices will rule during the Fall and Winter, and the "Bear" side seems at present to have no friends, while \$1.25 per bushel is the figure already set. The sales of October were as follows during the week: Wheat, 93,000; Corn, 34,000; Oats, 24,000; Pork, 83,250; Lard, \$5.72 1/2 @ 20. The closing prices for October were: Wheat, \$1.00 1/2; Corn, 37 1/2 @ 37 1/2; Oats, 25 1/2; Pork, \$5.75 bid; Lard, \$6.10 bid. The closing cash prices were: Wheat, 99 1/2 bid; Corn, 36 1/2 bid; Oats, 25 1/2; Rye, 57 1/2; Barley, 77 1/2; Pork, \$8.75; Lard, \$6.05 bid; sales of cash rye at 52 1/2 @ 57 1/2, closing outside; Barley, 75 @ 77 1/2, closing outside.

Chicago, September 23.—There was a continued upward movement of prices on 'Change to-day, Wheat making a most decided advance, November selling as high as \$1.03 1/2 during the afternoon, and closing strong at a shade less than the best prices. Although prices have advanced daily for two weeks, with no retrograde movement of consequence, the result has not been disastrous except in three cases on 'Change until to-day, when several small operators suspended; but the total amount of their liabilities will hardly be \$2,000. Provisions are also strong, with a decidedly buoyant feeling in most markets in Pork and Short Ribs. Farmers appear to be holding back their supplies for better prices.

## Eastern Wool Markets.

Boston, September 20.—The Wool market was very active for Domestic, and prices had a decided upward tendency. Last week's prices were more easily obtained, and in many instances an improvement of 1/2 to 1 1/2 % has been realized. There was some speculative inquiry, particularly for fine Wools, but sales have been almost exclusively for consumption, and stocks are so rapidly passing into the hands of manufacturers that dealers are becoming somewhat alarmed, as these stocks cannot be replaced except at an advance on current rates. The advance in prices does not appear to have checked the demand in the least, and manufacturers are more anxious to obtain supplies now than when prices were 2c to 3c lower. Sales comprise Ohio and Pennsylvania fleeces, X, XX and No. 1, at 37 1/2 @ 42c; Michigan X and No. 1, 35 @ 42c; Wisconsin X and No. 1, 36 1/2 @ 40c; New York and New Hampshire fleeces, 31 @ 30c; Combing and Delaine fleeces, 35 @ 45c; unwashed Combing, 30 @ 38c; unwashed and unmerchantable fleeces, 20 @ 32c; Eastern and Valley Oregon, 24 @ 33c; Territory, 23 @ 32c; Georgia, 34 @ 37c; Missouri, 30 @ 30c; Texas, 24 @ 25c; Kentucky, 30 @ 31c; scoured, 40 @ 67c; tub washed, 27 @ 45c; Super and X pulled, 37 @ 43c. California Wool is in good demand. The sales of the week comprise 455,000 pounds of Spring at 22 @ 35c, including some very choice Northern at 32 @ 35c. In Fall

California the sales were 20,500 of old at 13 1/2 @ 19c. The total sales of domestic for the week were 2,313,900 lbs against 1,200,300 lbs for the corresponding week of last year.

## Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon to-day as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Sept. 3.	WEEK. Sept. 10.	WEEK. Sept. 17.	WEEK. Sept. 24.
Flour, quartersacks..	4,558	50,473	28,834	22,769
Wheat, centals.....	203,109	512,161	233,525	423,453
Barley, centals.....	25,900	66,076	57,360	58,529
Beans, sacks.....	699	1,953	2,591	3,909
Corn, centals.....	277	2,178	2,608	9,855
Oats, centals.....	1,342	7,421	7,089	7,737
Potatoes, sacks.....	7,592	20,050	11,324	9,222
Onions, sacks.....	724	2,520	1,696	2,012
Wool, bales.....	25	2,210	3,230	2,770
Hops, bales.....	75	383	406	350
Hay, bales.....	891	1,898	1,570	1,681

BAGS—The demand has slackened off to a small figure, and dealers think the country well supplied. Prices are unchanged. One dealer believes the combination did not sell more than 200,000 of all the Bags they cornered, and consequently will have a good amount to carry over. The only thing to save loss from this necessity will be the fact that the Bags which were "rung up" were bought low.

BARLEY—Feed Barley has improved a little, and the market is steady. We note sales: 200 sks Bay Feed at 80c, and 2,100 sks Coast do at 70c 3/4 ctd.

BEANS—Butter, Pea, Pink, White and Lima Beans have all shaded down still lower, and large quantities are now held in this city. The harvest in the southern coast counties is bringing in greater quantities, and an outlet is needed.

CORN—Large Yellow is still the favorite, and advances a trifle. White and Small Round recede. We note sales: 170 sks Small Round Yellow at 96 1/2c, and 83 do Large do at 92 1/2c.

DAIRY PRODUCE—The favorite brands of Fresh Roll Butter now sometimes reach 32 1/2c, and the average of strictly good lots falls between 25 @ 27 1/2c. Cheese is reported as a little firmer, without change in price so far.

EGGS—There is no change in rates.

FEED—Choice Wheat Hay has done 50c better than last week, and \$10.50 per ton is sometimes reached. Oil Cake Meal is now priced at \$34 per ton.

FRUIT—Our price-lists both of Fresh and Dried Fruits will be found to have materially changed. The prices are now on the new crop of Dried Fruits and Raisins. Grapes are a little lower than last week. Mountain Peaches are arriving in good order and bringing full prices.

FRESH MEAT—Our list shows a fractional decline in Beef, the late advance having been lost by the increased amounts offered. Live Hogs are still unchanged, but the activity in packers' movements may bring about an improvement.

HOPS—Hops are now generally held above the nominal market, which is from 25 @ 30c for new California Hops. Sales are few. Of the New York market for the week ending September 12th, Emmet Wells says:

A lively export demand for old Hops continues, the shipments this week amounting to a little over 1,700 bales. The total receipts into New York since the 1st of the month reach 5,200 bales, only about 750 bales of which were of the new growth, the balance being 1877's and 78's, chiefly the former. A few small lots of new have been sent to London with a view of testing that market, but the quality of those sent is nothing like as good as our middle and later pickings will show. No price is yet established in London for our new Hops. Here in New York the price ranges from 28 @ 36c, according to grade and quality. Our new crop is estimated at from 60% to 70% of that of last year. Sixty-six per cent. would give us about 100,000 bales; or, say a yield equaling two-thirds that of last year. The market closes strong.

LIVE STOCK—We note sales as follows: 600 Hogs at 3 1/2c; 2,300 Sheep at \$1.90; 400 Lambs, \$1.80; 100 Ewes at \$1.65; 250 Hogs at \$3.20 @ ctd; 1,300 Hogs at 3 @ 3 1/2c @ lb; 400 Cattle, fine beef, \$27.50 @ head; 120 Calves, large, \$11 1/2 @ head; 4,500 Stock Sheep at \$1.10 each in the country. Stock coming out of the mountains this year are reported in poor condition. Some bands are fair, but most are poor.

OATS—Prices are unchanged. We note a sale of Coast Feed Oats at \$1.25.

ONIONS—Prices are unchanged. There are but few Red Onions in the market, and few seem to be called for at present.

POTATOES—Early Rose are about 10c @ sack lower than last week. Sweet potatoes are strong at \$1 1/2 @ ctd.

PROVISIONS—Provisions are active, and our quotations for California Hams and Bacon are advanced. Packers are getting short of hogs.

POULTRY AND GAME—Tame Ducks are higher. Game ducks of all kinds are abundant and lower. Geese are also reduced. Domestic Poultry generally is unchanged.

VEGETABLES—String Beans, Green Peas, Green Corn and Marrowfat Squash have all improved during the week. Other Vegetables are plenty and unchanged.

WHEAT—The demand is strong, and sales at advanced rates. We note sales: 500 tons good Shipping at \$1.83; 5,000 sks good Shipping, \$1.85; 150 tons fair do, \$1.82 1/2; 350 sks do, on the wharf, \$1.80; 480 cts Coast, in the cars, \$1.77 1/2 @ ctd, and 100 tons, private. Since these sales higher rates have been paid, even up to \$1.90 for choice Wheat, and holders have fixed their mark still higher.

WOOL—Eastern Oregon Wool is in small supply, and rates have advanced. Other sorts are as yet unchanged. We have reported about 200,000 lbs of various grades at the prices given in our list.

## BAGS AND BAGGING.

## JOBBER PRICES.]

WEDNESDAY M., September 24, 1879.

Eng Standard Wheat..	@ 11	Elghths.....	31 @ 4
California Manufacture.	@ 11	Hessian, 60 inch.....	@ 14
Hand Sewed, 22x36..	@ 11	45 inch.....	9 @ 10
24x36.....	@ 13	40 inch.....	8 @ 9
22x40.....	@ 12	Wool Sacks.....	81 @ 5
24x40.....	@ 12	Hand Sewed, 34 lb. 44 @ 45	
Machine Sd, 22x36..	@ 11	4 lb do.....	47 @ 52
Flour Sacks, halves..	8 @ 10	Machine Sewed.....	45 @
Quarters.....	5 @ 6	Standard Gunnies.....	13 @ 14
		Bean Bags.....	7 @ 7 1/2

## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., September 24, 1879.

BEANS & PEAS.		Pecans.....	12 1/2 @ 14
Mayo, ctd.....	95 @ 105	Peanuts.....	6 @ 8
Butter, ctd.....	1 50 @ 1 75	Filberts.....	15 @ 16
Castor.....	3 00 @ 3 50	ONIONS.	
Pea.....	1 50 @ 1 90	Alviso.....	@
Red.....	95 @ 110	Union City, ctd.....	@
Pink.....	85 @ 100	San Leandro.....	@
Sml White.....	1 35 @ 1 50	Stockton.....	@
Lima.....	3 75 @ 4 00	Sacramento River.....	@
Field Peas.....	1 25 @ 1 50	Salt Lake.....	@

BROOM CORN.		POTATOES.	
Southern.....	2 @ 2 1/2	Red.....	@
Northern.....	3 @ 4	White, ctd.....	@ 40
California.....	4 @ 4 1/2	New Onions.....	40 @ 50
DAIRY PRODUCE, ETC.		Red, sk.....	@ 40
BUTTER.		White, ctd.....	@ 40

Cal. Fresh Roll, lb	22 1/2 @ 27 1/2	Cal. Bacon, Hvy, lb	9 1/2 @ 10 1/2
Fancy Brands.....	30 @ 32 1/2	Medium.....	9 1/2 @ 10 1/2
Pickle Roll.....	20 @ 22 1/2	Light.....	10 1/2 @ 11 1/2
Firkin, new.....	18 @ 21	Lard.....	8 @ 9
Western.....	12 1/2 @ 15	Cal. Smoked Beef	8 @ 9
New York.....	@	Shoulders, Cover'd	6 1/2 @ 7

Cheese, Cal., old, lb	6 @ 8	Hams, Cal.....	9 1/2 @ 10 1/2
do, new.....	7 @ 10	Dupee's.....	13 @ 14
N. Y. State.....	@	None Such.....	13 @ 14
EGGS.		Boyd's.....	13 @ 13 1/2
Cal. fresh, doz.....	27 1/2 @ 32 1/2	Whitaker.....	12 1/2 @ 13 1/2
Ducks.....	@ 25	Royal.....	13 1/2 @ 14
Eastern Eggs.....	27 1/2 @ 30	Reliable.....	13 1/2 @ 14
Pickled here.....	@ 25	O.K. (Louisville)	13 1/2 @ 14
Utah.....	@ 27 1/2	SEEDS.	

FEED.		Alfalfa.....	10 @ 12
Brn, ton.....	14 00 @ 15 00	do, Chile.....	5 @ 8
Corn Meal.....	20 00 @ 21 00	Canary.....	4 1/2 @ 5
do, Oregon.....	6 50 @ 7 50	Clover, Red.....	16 @ 18
Middling.....	17 00 @ 18 00	White.....	50 @ 55
Oil Cake Meal.....	34 00 @	Cotton.....	6 @ 10
Straw, bale.....	40 @ 50	Flaxseed.....	2 1/2 @ 3
FLOUR.		Hemp.....	8 @ 10

Extra, City Mills.....	5 62 1/2 @ 5 75	Italian Rye Grass	35 @
do, Contry Mills.....	5 00 @ 5 50	Perennial.....	35 @
do, Oregon.....	4 75 @ 5 25	Millet.....	10 @ 12
do, Walla Walla.....	4 75 @ 5 50	do, White.....	10 @ 12
Superfine.....	5 54 @ 6 00	Brown.....	14 @
Extra Superfine.....	5 25 @ 5 50	Rape.....	3 @ 8

FRESH MEAT.		Ky Blue Grass.....	25 @ 30
Beef, 1st qual, lb	5 @ 5 1/2	2d quality.....	20 @ 25
Second.....	3 1/2 @ 4	Sweet V Grass.....	1 00 @
Third.....	3 @ 3 1/2	Orchard.....	20 @ 25
Mutton.....	2 1/2 @ 3 1/2	Red Top.....	15 @ 18
Pork, dressed.....	4 @ 5	Hungarian.....	8 @ 10
Pork, undressed.....	3 @ 3 1/2	Law.....	30 @ 50
Dressed.....	4 1/2 @ 5	Mesquit.....	20 @ 25
Veal.....	4 @ 5	Timothy.....	7 @ 10
Milk Calves.....	6 1/2 @ 6 1/2	TALLOW.	
do choice.....	6 1/2 @ 7 1/2	Crude, lb.....	5 @ 5 1/2

GRAIN, ETC.		Refined.....	7 1/2 @ 8
Barley, feed, ctd.....	65 @ 60	WOLLS, ETC.	
Brewing, new.....	75 @ 80	FALL.	
do, old.....	95 @ 102 1/2	San Joaquin and S. Coast.	
Chevalier.....	50 @ 75	Bury.....	13 @ 15
Buckwheat.....	40 @ 60	Free (dusty).....	13 @ 15
Corn, White.....	80 @ 82 1/2	Free (choice).....	15 @ 17
Yellow.....	90 @ 92 1/2	Northern.....	

Corn, White.....	80 @ 82 1/2	Free.....	16 @ 18
Small Round.....	95 @ 97 1/2	Bury.....	13 @ 15
do, Oregon.....	100 @ 110	Oregon, Eastern.....	16 @ 22
Middling.....	100 @ 110	do, Valley.....	25 @ 25
do, Oregon.....	100 @ 110		
Rye.....	75 @ 85		
Wheat, No. 1.....	87 1/2 @ 90		
do, No. 2.....	80 @ 85		
do, No. 3.....	140 @ 150		
Choice Milling.....	@ 92 1/2		

HIDES.			
Hides, dry.....	14 @ 14 1/2		
Wet salted.....	7 @ 9		

HONEY, ETC.			
Beeswax, lb.....	20 @ 25		
Honey in comb.....	10 @ 12 1/2		
do, No. 2.....	7 @ 9 1/2		
Dark.....	5 @ 6		
Extracted.....	8 @ 10		

HOPS.			
Oregon.....	@		
California, new.....	25 @ 30		
Wash. Ter.....	@		
Old Hops.....	@		

NUTS—Jobbing.			
Walnuts, Cal.....	8 @ 9		
do, Chile.....	6 1/2 @ 8		
Almonds, hshl.....	7 @ 8		
Soft shl.....	17 @ 19		
Brazil.....	12 1/2 @ 13		

## Premium Berkshires.

John Rider, of Sacramento city, received the following premiums at the State fair, held at Sacramento city, September, 1879, on thoroughbred Berkshire swine.

Commodore, 1525, best boar two years old and over, \$30. Piute, best boar six months and under one year, \$15. Peerless Kathleen 4318, best breeding sow, \$30. Rosa Bell, best sow six months and under one year, \$15. Rob Roy and Daisy, best pair of pigs under 10 months, \$30. Sweepstakes—Commodore 1525, best boar of any age or breed, \$50. Princess of Wooddale 3768, best sow of any age or breed, \$50. Commodore, Princess of Wooddale, Peerless Kathleen and 8 of her pigs, best family of any breed, \$50.

THE PACIFIC RURAL PRESS.—Published weekly by Dewey & Co., 202 Sansome St., San Francisco, is a valuable paper. Its specialty is rural affairs, in which nearly all of us are interested as farmers or owners of smaller tracts of land down to the size of a suburban or city lot. All who desire to make improvements, of whatsoever nature, whether building, fencing, underdraining, planting, tilling, or a thousand other matters pertaining to the welfare of the home and family, will find the investment of \$3.50 paying big interest in returns. Its circulation



## Agricultural Articles.

## The Famous "Enterprise."

PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babbitted boxes.

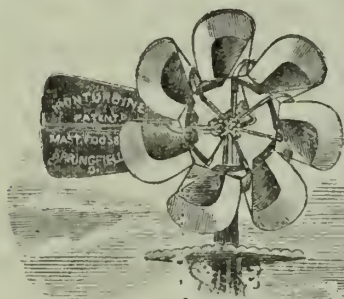
Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

**HORTON & KENNEDY,**

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale,

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

## Iron Turbine Wind Engine



## AND BUCKEYE FORCE PUMP.

This machine made of iron, wheel, vanes, etc., made of No. 24 sheet iron, bound and braced with best quality of wrought bar iron, gives more power than any other wheel of same diameter. No wood to swell, shrink, rattle or be destroyed by the wind. The most durable and the best Windmill ever invented. For particulars, price lists, etc., address

D. E. GOLDSMITH, State Agent,  
410 Sansome street, San Francisco.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

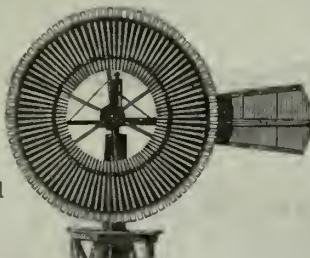
**MATTESON & WILLIAMSON,**  
STOCKTON, CAL.

**\$50.**

The New  
**Worthington**

Windmill

Manufactured  
by



W. D. PARSON,

1364 San Pablo Avenue, Oakland, Cal.

Also, maker of the "Colorado Wind Engine," Wind Grist Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern of Deep Well and Artesian Lift Pump Cylinders. Circulars free.

## Anderson's Springs,

LAKE COUNTY, CAL.

Nineteen miles from Calistoga, five miles from Middletown, and ten miles from the Great Geysers; between which and Anderson's Springs there is a good stage road.

## HOT SULPHUR WATER

For Rheumatism, Paralysis, etc.; Cold Sulphur for Dyspepsia, Diseases of the Stomach and Bowels. Scenery unsurpassed. Climate mild and equable. Consumptives generally improve in health, and asthmatics are invariably relieved.

## TROUT FISHING ON THE GROUNDS.

Deer Hunting in the Immediate Vicinity.

Accommodations and Cookery good. Board from \$10 to \$12 by the week.

**ANDERSON & PATRIQUIN, Prop's.**

## Dunham, Carrigan &amp; Co.,

Nos. 107, 109 & 111 Front Street, S. F.  
**Lathe Without Saw Attachments.**



This lathe has been made especially to meet a want felt by many for a really good and substantially made Foot-Lathe at a reasonable price, and we think that it is by far the best Lathe ever placed on the market at the price asked. The bed, head, and tail stocks are of iron, the spindles of steel. The bearing of the head stock is conical, so that the wear can be easily taken up.

Price of Lathe without Saw Attachments.....\$45. Price of Lathe with SCROLL Saw Attachment.....\$55  
Price of Lathe with both Scroll and Circular Saws, \$70.

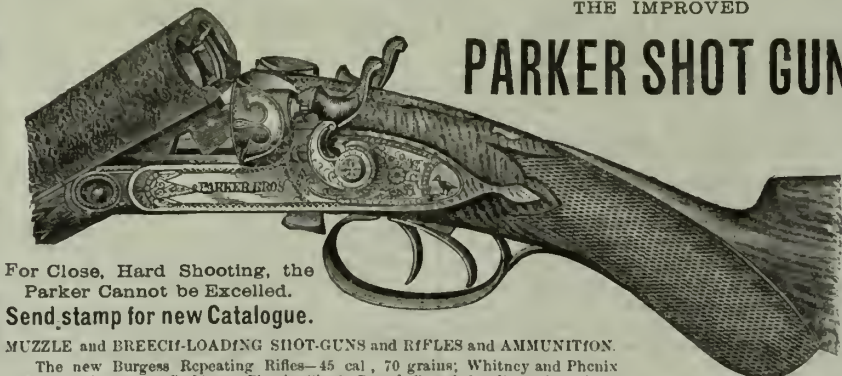
## Trump Drill Chuck.



Chuck for drills  $\frac{1}{2}$  and under,  
Price.....\$1.50  
Chuck for drills  $\frac{3}{4}$  and under,  
Price.....\$2.25  
They are made on solid steel plug, centered and readily fitted to Lathe or Drill Press.  
**SEND FOR CIRCULAR.**

THE IMPROVED

## PARKER SHOT GUN.



For Close, Hard Shooting, the  
Parker Cannot be Excelled.  
Send stamp for new Catalogue.

MUZZLE and BREACH-LOADING SHOT-GUNS and RIFLES and AMMUNITION.

The new Burgess Repeating Rifles—45 cal., 70 grains; Whitney and Phenix Rifles, Muskets and Carbines; Phenix Single-Barrel Breach-Loading Shot Gun; Allen Rifles, 22, 32, 38 and 44 caliber, rim fire, very cheap; Lovell & Sons Revolvers, the best and the cheapest.

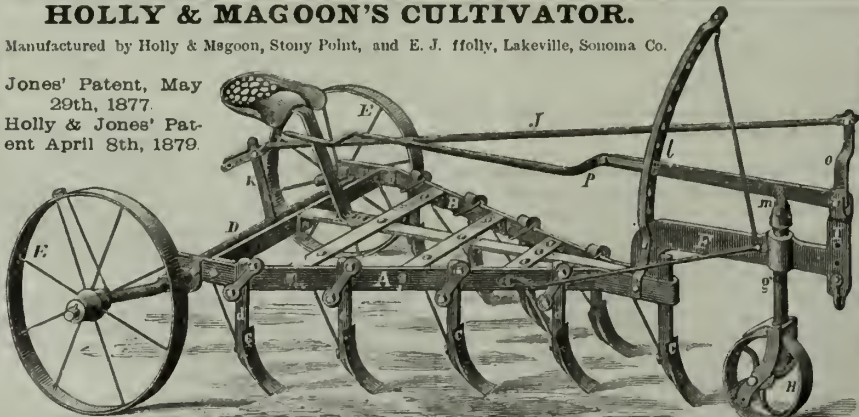
**E. T. ALLEN, Agent for Pacific Coast,**

NO. 515 MARKET STREET, - - - - - SAN FRANCISCO, CAL.

## HOLLY &amp; MAGOON'S CULTIVATOR.

Manufactured by Holly & Magoon, Stony Point, and E. J. Holly, Lakeville, Sonoma Co.

Jones' Patent, May  
29th, 1877.  
Holly & Jones' Patent  
April 8th, 1879.



For further particulars address the Manufacturers, or M. C. HAWLEY & CO., Agents, San Francisco and Sacramento, Cal.

AMERICAN  
MACHINE AND MODEL WORKS.

Experimental and Fine Special Machinery, Planing, Gear Cutting, Patterns, Models for Inventors, etc. Printing Press and General Machine Repairing. Punches, Dies, Taps, Reamers, etc., made and repaired.

**I. A. HEALD, Proprietor.**

514 Commercial Street, above Sansome, San Francisco.

## The Boss Pruner.

Patented Jan. 8, 1878.

**ENTIRELY NEW!**

Works on a cog principle. Smallest size cuts one inch, and largest size two inches in diameter. Has been thoroughly tested, and given perfect satisfaction. Sold by

**GEORGE LARKIN,**

Newcastle, Placer County, Cal.

## Stock Notices.



## SPANISH MERINO SHEEP.

Choice stock of thoroughbred Bucks and Ewes, guaranteed free from disease. Purchasers are invited to examine. About 10 minutes' walk from the Railroad terminus, adjoining State University.

**E. W. WOOLSEY,**  
Berkeley, Alameda County, Cal.

## BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

**JOHN RIDER,**

18th and A Streets, Sacramento City, Cal.

## ANGORAS AT THE FAIRS.

The undersigned would announce to those interested in ANGORA GOATS, and the public generally, that he will have a lot of

## Choice Angora Bucks

On Exhibition at the State and District Fairs

This fall, namely: At the State Fair at Sacramento, the Golden Gate Fair at Oakland, the Nevada State Fair at Reno, and the Oregon State Fair at Salem.

These Bucks will be sold at fair rates.

**JOHN S. HARRIS,**

Hollister, San Benito Co., Cal.

JOHN ROGERS & SONS,  
GENERAL STOCK AND SALE YARD,

Corner Market and 9th Sts., San Francisco,

HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN. Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

## HERRMANN'S HATS

ARE THE BEST!



Try one and you will Wear no other.

Spring and Summer Styles,

— AT —

336 Kearny St., bet. Bush and Pine,

— AND —

910 Market St., above Stockton.

Send for Illustrated Spring Style Catalogue.

## SEND FOR THE

**\$1.50**

## Homoeopathic Medicine Case.

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address **BOERCKE & TAFEL,**  
Homoeopathic Pharmacy, San Francisco.

## A Card to Grangers and Farmers.

**HAY, GRAIN, HORSES and CATTLE**

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nos. 11 and 13 Bluxome St., San Francisco.

## AGENTS, READ THIS

We will pay Agents a salary of \$100 per month and expenses, or allow a large commission, to sell our new and wonderful inventions. We mean what we say. Same as before. Address **SHERMAN & CO.,** Marshall, Mich.

50 Perfumed, gilt-edge & chromo Cards, in elegant case, name in gold, 10c. **ATLANTIC CARD CO.,** E. Wallingford, Ct.



THE SINGING CLASS SEASON.

Just out. **THE TEMPLE.** (\$9.00 per dozen), a splendid new Singing School, Convention and Choir Book; by Dr. W. O. PERKINS. As a Choir Book, equal to any of the largest ones. As a Singing School Book, better than the cheaper and smaller ones, since it has much more music; that is, 130 pages of new Songs and Glees, and 150 pages of the best *Metrical Tunes* and *Anthems*. Specimen copies mailed, post-free, for \$1.00.

Remember also **THE VOICE OF WORSHIP** (\$9.00 per dozen), recently advertised; **JOHNSON'S NEW METHOD FOR SINGING CLASSES**, an excellent book, (\$6.00 per dozen) and **L. O. Emerson's ONWARD**, (\$7.50 per dozen). Send for Specimens, Catalogues or Circulars.

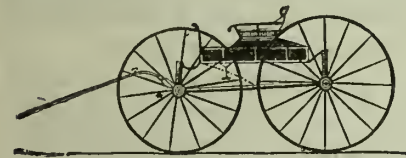
Just out. **STUDENTS' LIFE IN SONG.** (\$1.50) with introduction by CHARLES DUDLEY WARNER; 115 of the loliest of College Songs. A capital book for social singing.

Just out. **THE VOICE AS A MUSICAL INSTRUMENT**, by C. H. S. DAVIS, M. D., (37 cts.) An invaluable treatise on the construction and management of the Vocal Organs. With plates.

Just out. The last number of **THE MUSICAL RECORD**. Send 6 cts for one number, \$2.00 for the year. "Wouldn't he without it for five times the price."

**OLIVER DITSON & CO., BOSTON.**  
C. H. Ditson & Co., 843 Broadway, N. Y.

H. J. HASKELL,



MANUFACTURER OF  
**CARRIAGES,  
BUGGIES,**

— AND —  
**SPRING WAGONS,**  
At the Lowest Rates.

Corner of Alameda and White Streets,  
**SAN JOSE, CAL.**

**THE WILSON ADJUSTABLE CHAIR,**  
With 30 Changes of Position.  
Patented in the United States and Foreign Countries.  
**BEST CHAIR IN THE WORLD.**

Parlor, Combining  
LIBRARY, Beauty,  
Invalid Chair, Lightness,  
Rocker, Strength,  
BED or Simplicity  
LOUNGE, and  
READING POSITION, Comfort.

Same Chair in Cane Seating, very desirable for summer. Manufactured of the best of wrought iron and rivets. Castors made purposely for the Chair. Everything to an exact science. **IT WILL LAST A LIFE-TIME.** Has been awarded Medals, Prizes and Diplomas for its superiority and merit wherever it has been exhibited. Orders by mail promptly attended to. Goods shipped to any address, C. O. D. Send for Illustrated Circular. Address the **WILSON ADJUSTABLE CHAIR MFG CO.,** 535 Washington St., Boston

J. P. JONES. J. THOMPSON.  
**JONES & THOMPSON.**  
Wholesale and Retail Dealers in

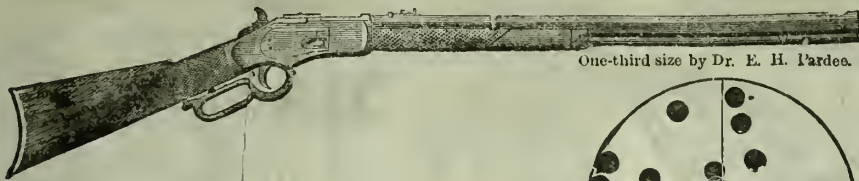
**Hay, Grain and Feed.**  
Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,  
**1535 Mission St., San Francisco.**

M. COOKE. R. J. COOKE  
**PIONEER BOX FACTORY,**  
Corner of Front and M Streets, Sacramento.  
ALL KINDS OF  
Fruit and Packing Boxes Made to Order,  
AND IN SHOOKS.  
Communications Promptly Attended to.  
**COOKE & SONS, Successors to COOK & GREGORY.**

Winchester Repeating Rifle,

MODEL 1873.



The Strength of All its Parts,  
The Simplicity of its Construction,  
The Rapidity of its Fire,  
The Power and Accuracy of its Discharge,  
The Impossibility of Accident in Loading,  
Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. I. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder.

**JOHN SKINKER, No. 115 Pine Street, San Francisco**

SOLE AGENT FOR THE PACIFIC COAST.

— OFFICE OF THE —

**BLACK POINT PACKING AND SLAUGHTER HOUSE.**

**MERRY, FAULL & CO., Proprietors.**

**TO OWNERS OF LIVE STOCK!**

We are prepared to receive on Consignment, **CATTLE, SHEEP and HOGS**, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

**SQUARE DEAL and FULL MARKET PRICES**

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices.

Please address our

Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.

*In consequence of spurious imitations of*  
**LEA AND PERRINS' SAUCE,**  
*which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature:*

*thus,*  
*Lea & Perrins*

*which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.*

Ask for **LEA & PERRINS' Sauce**, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of **GROSS & CO., San Francisco.**

**MISSION ROCK DOCK AND GRAIN WAREHOUSES.**  
**SAN FRANCISCO, CAL.**

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

GRAIN consigned to us by water insured in open policy at Special Rates. Wheat shipped by railroads via Stockton, care of the **CALIFORNIA STEAM NAVIGATION CO.** will be received by them at Stockton and delivered at Mission Rock Warehouse at same rate of freight as to Oakland Wharf. Freight paid, Fire Insurance and Loans effected and proceeds forwarded free of commission. Money advanced at bottom rates, interest payable at end of loan. Fire Insurance 1% per annum. Short Rates of Storage—First month, 30 cents per ton, or 40 cents per ton if delivered. Each month thereafter 20 cents per ton. Weighing in, free. Weighing out, 10 cents per ton.

**CHAS. H. SINCLAIR, Superintendent,**  
Or to the California Dry Dock Co., Office, No. 318 California Street. San Francisco.

**WELLS, RICHARDSON & CO'S PERFECTED BUTTER COLOR**

Gives Butter the gilt-edge color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say **IT IS PERFECT.** Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. **WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.**

60 Elegant Perfumed Cards, Chromo, Motto, Lily, Etc., 15c. Gift with each pack. H. M. SMITH, Clintonville, Ct. 60 Chromo, perfumed, Snowflake & Lace cards, name on all 10c. Game Authors, 15c. Lyman & Co., Clintonville, Ct.



**Pyrethrum Cinerariae Folium—A California Production.**

**THE MOST WONDERFUL DISCOVERY OF THE NINETEENTH CENTURY.**

This wonderful Insect Powder will exterminate Flies, Weevils, Caterpillars, Mosquitoes, Midges, Crickets, Cockroaches, Spiders, Tarantulas, Scorpions, Ants, Hawk-bugs, Phylloxera, Plant Lice, Moths, Beetles, Grasshoppers, Locusts, Bed-bugs, Fleas, and every species of Insects. Remember that none is genuine unless my Trade-Mark is attached to every package.

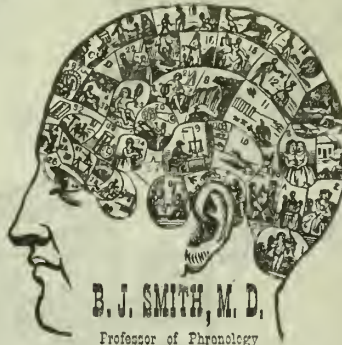
\$100 WILL BE PAID IF IT FAILS TO KILL ANY INSECT.

Endorsed by Prof. E. W. Hilgard, of the University of California, and by Prof. C. V. Riley, Chief Entomological Commissioner at Washington, D. C., and pronounced superior to any imported article, and perfectly harmless to man and beast.

G. N. MILCO,

Patentee and Sole Manufacturer, Stockton, Cal.

**CHARLES LANGLEY & CO., Wholesale Druggists, Sole Agents, S. F.**



**B. J. SMITH, M. D.**  
Professor of Phrenology

**MENTAL HYGIENE.**

Proprietor of the Hygienic Medical and Phrenological Institute, 633 California Street, above Kearny.

This Institute has of late been entirely refitted, and is now far more beautiful and conveniently arranged for the reception of patients and boarders than ever before, and by combining medical hygiene with the various Water Cure treatments and the most powerful Electrized Horseshoe Magnet in the world, claims to cure speedily and permanently all forms of acute or chronic nervous derangements, Brain, Spinal and Heart diseases, St. Vitus Dance, Palsy, Epilepsy and all Rheumatic, Liver and Kidney troubles. The institution has for the past 20 years made a specialty of treating all forms of weaknesses and diseases peculiar to males and females. By the use of hygienic remedies and electro-motography the worst forms of impotency and seminal weakness in males, and sterility in females are speedily and permanently overcome. Hygienic board, with or without rooms. Terms moderate. Electro-thermal, Russo-Turkish and Medicated Baths given daily. Mrs. Dr. Smith as Matron has charge of the female bathing department.

Dr. SMITH has practiced Phrenology the past 30 years, and during the last 20 years has been constantly using the science connected with Physiognomy, in examining or diagnosing disease in this city, and claims to have made discoveries in the SCIENCE of Phrenology that enables him, by an examination of the head, even blindfolded, to determine the disease to which the person is constitutionally subject, or whether the disease at the time afflicting the person, is the result of accident or hereditary weakness; whether Consumption, Dyspepsia, Rheumatism, Arteritis, Neuritis, Neuralgia, Leucorrhoea, or Seminal. Especially does the form of the head indicate the strength of the uterine, genital or reproductive system. The head is also an index of the natural strength of the lungs, heart, stomach, liver, kidneys, spleen, back or vertebra, and it determines the power of the system in warding off and overcoming disease of all kinds.

Ladies or gentlemen, desirous of obtaining a thorough and correct Phrenological examinations with Fowler and Wells' charts, will meet with a respectful reception at his consulting rooms. Parties can depend upon a reliable delineation of the character of their intimate male or female friends, by presenting a clearly defined photograph.

Phrenological or Physiognomical examinations without charts, \$1.50; with charts, from \$2 to \$3.

**INVITATION TO INVALIDS**

And all persons who are in any way out of health, who desire to know the nature and causes of their disease, may avail themselves of an examination through phrenology in regard to health free of charge, between the hours of 9 A. M. and 8 P. M. Sundays from 9 A. M. to 12 M.

**PLEASANT SUMMER READING.**

**THE NEW PENELOPE**

— AND —

**Stories of California Life.**

By **MRS. F. F. VICTOR.**

The best delineations of Western character and incident ever produced on this coast. Agents wanted for this popular work. Easy sales and large commissions. Address

**MRS. F. F. VICTOR,**  
721 Market St., S. F., Bancroft's Building, top floor.  
**PRICE, \$2 00.**

**Agricultural Books.**

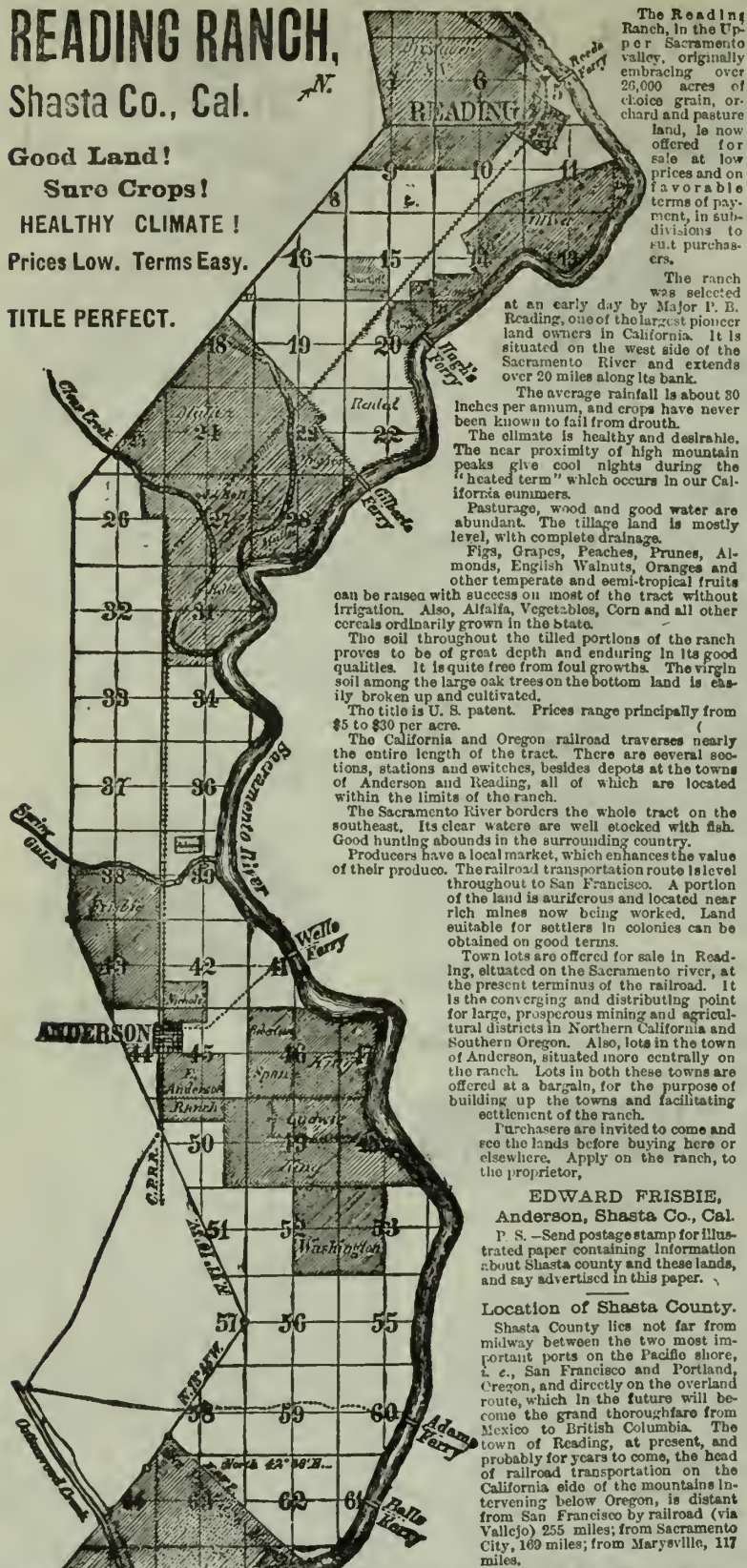
Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.

**YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents.** **STEVENS BROS., Northford, Conn.**



**READING RANCH,**

Shasta Co., Cal.

**Good Land!****Sure Crops!****HEALTHY CLIMATE!****Prices Low. Terms Easy.****TITLE PERFECT.****LAND FOR SALE OR RENT IN SUB-DIVISIONS.****Commission Merchants.****DAVIS & SUTTON,**

No. 75 Warren Street, New York.

**Commission Merchants in Cal. Produce**

REFERENCE—Traders' National Bank, N. Y.; Ellinger &amp; Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk &amp; Co., San Francisco, Cal.

**BRYANT & COOK,****Commission Merchants,**

AND DEALERS IN

**GRAIN, FLOUR, ETC.**

No. 8 Davis St., near Market, San Francisco.

CHARLES NAUMAN.

FRANK NAUMAN.

**C. & F. NAUMAN & CO.,****Wholesale Commission Merchants**

— AND DEALERS IN —

**GRAIN, POTATOES, FRUIT, BUTTER, POULTRY, EGGS, GAME, ETC.**

227 &amp; 229 Washington St., San Francisco.

Consignments Solicited.

**Acknowledgement and Thanks**

LAKEPORT, Lake Co., Cal., Nov. 2d, 1878.

MESSRS. DEWEY & CO.—Gentlemen:—I hereby acknowledge receipt of patent, for which please accept my sincere thanks. When I have any further business in this line I shall certainly employ you. With kind regards, I am,

Yours very truly,  
CHAS. SLATTERBERG.

## Baling Fencing Telegraph Telephone Galvanized WIRE

**Barbed Fence Wire.**

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

**A. S. HALLIDIE**

Wire Mills.

Office, No. 6 California St.

SAN FRANCISCO.

**WIRE ROPE and CORDAGE**

Of every kind on hand or Made to Order.

**The New Beekeepers' Text Book.**

By N. H. and H. A. KINO. The latest work on the Apian, embodying accounts of all the newest methods and appliances. Fully illustrated. Sent by mail, postpaid, for \$1. DEWEY & CO., 202 Sansome Street, S. F.



SOLE PROPRIETORS AND MANUFACTURERS

**Celebrated Detrick "E W" 22x36 Grain Bag.**

CALCUTTA, DUNDEE and PACIFIC JUTE HAND-SEWED BAGS always on hand. OUR No. 1, No. 2 and No. 3 SECOND-HAND GRAIN BAGS selected and graded with care.

**TWINES.** 3, 4 and 5-ply for Grain Bags, 6 and 8-ply for Potato Gunnies, 8-ply EXTRA FINE for Flour Bags, made expressly for our trade and QUALITY GUARANTEED.

FLOUR BAGS Pinned to Order WITHOUT EXTRA CHARGE. POTATO GUNNIES, Wool, Bean, Ore and Salt and Seamless Cotton Bags.

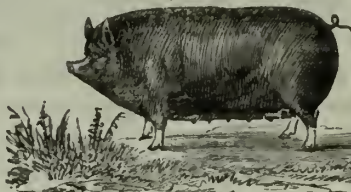
**Tents, Awnings and Hydraulic Hose.**

ORDERS PROMPTLY FILLED AT LOWEST MARKET RATES.

119, 121 and 123 Clay St., and 118 and 120 Commercial St., San Francisco.

**A BARGAIN IN BERKSHIRES.**

The undersigned offers for sale for the next 30 days a limited number of Pure Bred Berkshires, sired from 18 months. These pigs are all bred by myself from stock imported from some of the most noted breeders in the United States, and include several Boars fit for service, and a few choice Sows in farrow, to imported Boars. These pigs are not culls, but the choice pigs of their respective litters.



PRICE LOW FOR CASH.

A perfect and complete pedigree, and a written guarantee they are as represented sent with each animal sold. Correspondence solicited. Among purchasers of my stock are the following gentlemen well known as men of careful discrimination: Dr. G. A. SHURTLEFF, Superintendent State Insane Asylum; GRANT I. TAGGART, Oakland; J. D. SMITH, Prof. Livermore College; LELAND STANFORD, by R. H. COVEY, Col. PATER SAXE, San Francisco; L. U. SHIFFER, President S. J. V. Ag. Society; W. MESSICK, Sacramento; W. C. HOPKINS, P. M., Sacramento. For further particulars address

**ALFRED PARKER,**

Bellota, San Joaquin Co., Cal.

**American Exchange,**

Corner of Sansome and Halleck Streets,

Opposite Wells, Fargo &amp; Co.'s Express.

SAN FRANCISCO

**FURNISHED WITH ALL MODERN IMPROVEMENTS.**

Board and Room from \$1.25 to \$2 per day; Board, \$6 per week—\$25 per month; Rooms, \$3.50 to \$7 per week.

Free Coach to the House from all Boats and Trains. Street Cars pass the Door.

**THOS. BRYAN, Proprietor.****CHEAPER YET!****Tension Sewing Machines!**

A large number of nearly new genuine SINGER, WHEELER & WILSON, HOWE, WOOD, WILSON, GROVER & BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

**NO TENSION MACHINE.****Wilcox & Gibbs' S. M. Co.,**

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.

**DO**

NOT FAIL to send for our NEW PRICE LIST. More complete than ever. Contains descriptions of every thing required for personal or family use, with over 1000 illustrations. Send nine cents for it. (Stamps will do.) We sell all goods at wholesale prices in quantities to suit the purchaser. The only institution in America who make this their special business. Address, MONTGOMERY WARD & CO., 227 & 229 Wabash Ave., Chicago, Ills.

**MONEY!!****\$5,000 to \$50,000 Ready to Loan**

On Mortgages of first-class Farms in Monterey, Santa Cruz, Santa Clara and San Mateo counties.

Address **EXCHANGE & MART,**

Santa Cruz, Cal.

**STEAM ENGINE.**

For sale, a second hand engine in perfect order, mounted on good wagon. Suitable for a shingle mill or a portable saw mill, or for mining purposes. It is the LARGEST PORTABLE ENGINE IN THE STATE, too large for threshing. Will be sold very cheap, with reasonable time for payment if properly secured. Call and see it at

**RICE'S ENGINE WORKS.**  
56 Bluxome Street.  
Near C. P. & S. P. R. R. Offices.

**WELL AUGER.** Ours is guaranteed to be the cheapest and best in the world. Also nothing can beat our SAWING MACHINE. It saws off a 2-foot log in 2 minutes. Pictorial books free. W. GILES, Chicago, Ill.

P. SAXE, 520 Bush street, General Agent for Pacific Coast

**R. J. TRUMBULL & CO.,**

SUCCESSORS TO

**R. J. TRUMBULL,**

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS and BULBS, FRUITS and ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

"\*Guide to the Vegetable and Flower Garden will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

**R. J. TRUMBULL & CO.,**

419 and 421 Sansome Street, S. F.

**ST. DAVID'S.****A FIRST-CLASS LODGING HOUSE.**

CONTAINS 113 ROOMS.

715 Howard St., near Third, San Francisco.

This House is especially designed as a comfortable home for gentlemen and ladies visiting the city from the interior. N. dark rooms. Gas and running water in each room. The floor are covered with body Brussels carpet, and all of the furniture is made of solid black walnut. Each bed has a spring mattress, with an additional hair top mattress, making them the most luxurious and healthy beds in the world. Ladies wishing to cook for themselves or families, are allowed the free use of a large public kitchen and dining room, with dishes. Servants wash the dishes and keep up a constant fire from 6 A. M. to 7 P. M. Hot and cold baths, a large parlor and reading room, containing a Grand Piano—all free to guests. Price single rooms per night, 50 cts.; per week, from \$2.50 upwards.

**R. HUGHES, Proprietor.**

At Market Street Ferry, take Omnibus line of street cars to corner Third and Howard.

This paper is printed with ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 120 Sutter St., S. F.





Volume XVIII.]

SAN FRANCISCO, SATURDAY, OCTOBER 4, 1879.

Number 14.

### Guernsey Cattle.

It is an item of no little interest in live stock circles that a considerable importation of Guernsey cattle has lately been made to this State, the first importation adequate to the establishment of a herd. There have been occasional cows, perhaps two or three, brought to this State, and there was a bull imported by Mr. Mailliard, but not used by him as he had no Guernsey females. This bull was sent to Los Angeles county, and introduced to common dairy stock. The late importation was made direct from Liverpool, by Henry Pierce, of this city, and the herd is to be established on Yerba Buena ranch, in Santa Clara county. The animals are 10 in number, 1 bull and 9 heifers. They came by sailing vessel, having undergone a 6 months' voyage as well as could be expected.

We are glad that this introduction of Guernseys has been made, because they must be regarded as an accession to our resources of cattle bred especially for dairy purposes, and at the same time they will serve an educational purpose in giving our dairymen a chance to judge of another breed under local conditions. There will naturally arise here, as there have in older dairy regions, comparisons between the Guernsey and their old neighbors, the Jerseys, which have already won wide favor. We expect the Guernsey to take higher ground for general dairy uses, because of their greater size and capacity as milking animals; for the Jerseys, invaluable as they are for family cows, and successful as their cross has been found upon common dairy stock, they lack the ability to transform a large amount of food material into a large amount of milk, which is essential to success in dairying on a large scale.

As points of comparison between the two breeds of Channel Island cattle are now of local pertinence, we introduce some observations made during a visit to the two islands last July by Prof. G. E. Morrow, of Illinois, an able dairy writer. He writes: "The cattle of the two islands are quite distinct. Undoubtedly of the same origin, with many points in common, something has caused distinct types to prevail. The Guernsey will average at least 20% larger, and are rather coarser; have somewhat larger bones, a large head; very often a plainer rump. The color of the Guernsey differs very much—from nearly white to nearly black, but the most common color is a yellowish red, with more or less white. Solid colored cows are the exception. In Jersey, black noses are almost universal. In Guernsey, the flesh-colored nose is equally common, and is rather preferred. The skin of the Guernsey seems to me more yellow than the Jersey. Some Jerseymen admit not only a larger flow, but richer milk in the Guernseys, offsetting this by the claim that the Jersey butter is more solid and firm in warm weather. The Guernseymen claim richer milk and butter, and more color in the latter. One of them said it was useless to show Guernsey butter at English fairs, as it was always pronounced artificially colored. They claim more readiness to fatten, with a special tendency 'to put on fat inside;' larger calves, and much more valuable for veal. Mr. Torode, of Guernsey, the leading cattle buyer, and who has a small but very excellent herd, told me of one cow from whose milk 14 pounds of butter was made per week; but the largest claim he made for his own was 10 pounds a week, a performance which he thought so satisfactory as to give it a reason for refusing to sell at any price."

It will be interesting to note, in the future, how the Guernseys are affected by the unusually fine conditions for cattle growth in this State when they receive good care. There is little reason to doubt that there are Jerseys here superior to those bred upon their native pastures. The Guernsey may be expected to show a similar partiality for California, especially as the ownership of the first herd is a guaranty that the cattle will be generously treated.

In order to promote the direct export of Russian grain to England, 5,000,000 of roubles have been assigned for improving the harbors of Baltic ports.

### Condition of Wheat for Shipment.

The fact that the market pays a certain deference and an increased price for clean wheat over the unclean has been brought to the notice of many growers through their own experience. We think it is a fact that more attention is being paid each year to cleaning wheat, and this must have an effect upon the general average of prices. Several times reports have come from the Liverpool market placing Oregon wheat ahead of Californian, because of the superior cleanliness of the former. It seems, from a recent circular of the Portland Board of Trade, that, "Oregon wheat of the season of 1877-78 was hardly worth as much as California wheat, whereas during the season of 1878-79 Oregon wheat, in consequence of being better cleaned, was worth from five to seven and one-half cents per cental more than California wheat in the Liverpool market."

They have a somewhat summary way of dealing with wheat which this Portland Board of

CALIFORNIA RAISINS IN SPAIN.—It is a matter of no small satisfaction to California raisin-growers that raisins produced in this State have won the highest commendation at Malaga, whence the world has long drawn its finest raisins. We have seen a letter written by W. B. West, of Stockton, to G. P. Rixford, of this city, in which the following occurs: "When I was in Malaga last summer I found that the brokers and merchants were anxious to know about California raisins, and I promised to send a sample to the principal American house—W. C. Bevan & Co. Last spring I requested R. B. Blowers to send me an average box of his raisins, which I forwarded to Mr. Bevan, at Malaga. The raisins arrived in due time, but as the head of the house was absent I did not receive answer until yesterday. He says: The raisins are first-class. They surprise me and the Spaniards. I believe the raisin business will eventually be done in California." This is foreign assurance of what we have all found out for ourselves, that is, that California need ask no favor when seeking judgment on the quality of her best raisins. Now let all raisin growers



THE FOREST ROSE STRAWBERRY.

Trade does not consider quite up to its notions. The circular says that the following rules are in force:

1st. Any wheat shipped to Portland in foul condition will be cleaned at the expense of the sender. All shriveled, smutty, damp, weeviled or musty wheat will be rejected and the sender held responsible for any damages.

2d. Any unsound, torn or badly stained sacks will be replaced with new sacks at the sender's expense for sacks and labor.

Although we fully believe in the advantage of marketing a good article, we can hardly see how the power is vested in the organization to order the above work done without authorization from the grain grower. We supposed that a merchant's prerogative ceased with fixing a low price on the grain which was objectionable. These regulations may apply to members of the board or those under its jurisdiction, and not to the general grower. However this may be, perhaps a hint of practical value can be drawn from the above facts.

FREIGHT SMASHING.—Exhibitors at fairs often have reason to complain that their ornamented and highly varnished work is marred in transit to the fairs, but we doubt whether such "smashing" is practiced in this country as is reported from England, where a threshing machine having fallen from the car, the railway men hitched their horses to it, and hauled it away on its broadside.

make their fruit as good as the best, or as near it as possible, and the future is assured.

VETERINARY.—We are pleased to learn that the proposition of Mr. H. J. Smith, of Philadelphia, to have a veterinary college established at the University of Pennsylvania is meeting with much favor. The State Agricultural Society has approved the project, and is going to work actively in soliciting endowment for the proposed college. It is to be hoped this will be forthcoming. We need in every State in the Union a State institution for veterinary instruction, in order that our farmers may inform themselves accurately concerning the diseases to which their animals are subject. It is not to be expected that every farmer will become a skilled veterinary practitioner, but there are certain plain facts which all should know. If this generation should learn what not to do in treatment of sick animals, it would result in a great saving of animal life and strength. If the reign of the ignorant "cow doctor" can be broken up and the need of true veterinary knowledge and practice recognized, the first step toward a better order of things will be taken. Go ahead, Pennsylvania!

THE French Foreign Office is considering the expediency of creating a French Chamber of Commerce abroad, and giving the most important Consulates the assistance of commercial agents.

### The Forest Rose Strawberry.

This week we have another of the newer strawberries for illustration. As the planting season is at hand the showing of new fruits is timely. We do not undertake to say that all the fruits we show are adapted to local uses; this no one can tell until tests have been made. Our purpose is to show what is new for the assistance of those who are desirous of experimenting.

The engraving of the Forest Rose strawberry which we give on this page is made from fruit grown by E. P. Roe, of Cornwall-on-the-Hudson, New York. The variety originated in Ohio on the farm of J. A. Fettes, and it gained its introduction in part because a well-known pomologist, Dr. J. A. Warder, President of the Ohio State Horticultural Society, after visiting the original plantations of this strawberry, reports to that society as follows:

"This new strawberry promises, indeed, to be a great acquisition to our stock of varieties. For a long time, the Wilson has borne pre-eminence as a market berry—for which purpose it is indeed admirably adapted—but cultivators have desired something even much better in quality. Here we have elegance of form, brilliancy in color, great size and firmness to bear transportation, all combined with table qualities of a higher order than in the Wilson Albany, which it surpasses even in field culture. When the enthusiastic proprietor invited some of his friends to visit the plantation to see the largest strawberry in the world, the expression was received with a few grains of allowance, and was attributed to the warmth of an over-sanguine owner of a very good strawberry; but after a thorough examination of the bearing plants in different situations, the conclusion was reached that the Forest Rose was at least one of the very best strawberries known."

The committee of the American Pomological Society reported upon the Forest Rose as follows: "Plant healthy, vigorous; trusses high; flowers perfect; fruit large, regular, obtuse conic; heavy, bright red; moderately pitted; flesh reddish, solid to the paler center, juicy, sufficiently acid, rich; very good. A very promising variety."

Mr. Roe summarizes his experience with the Forest Rose as follows: "It is very firm, beautiful, and high flavored, and although nothing like so productive as the Crescent, is in all respects a larger and better berry. I am testing it on the heaviest clay, moist loam, and a gravelly knoll, and in each instance it has done well. At the exhibitions I attended it invariably made a handsome appearance and received much praise. From some regions I hear the most favorable opinions concerning it, from others, unfavorable. I am satisfied that it will not prove profitable under rough field culture. Indeed, there are few good berries that will. It will endure long carriage among the best."

SHORT-HORN CONVENTION.—We are informed, by letter from S. F. Lockridge, Secretary, that the 7th convention of the American Association of Breeders of Short Horns, which was called for the 30th of October last, at Nashville, Tenn., and postponed on account of yellow fever, will be held in the city of Chicago, Ill., beginning Wednesday, October 29th, 1879. This change is made necessary by the continuance of the fearful scourge in the South, and the Directors deemed it best to select a point which would be the most central, and easiest of access to the greater number of breeders. The election of officers, and other important matters, postponed with the last meeting, will come before the convention. There will also be a list of papers presented on important topics, and a general discussion of matters affecting the Short-Horn interests. Any California breeder who may be going East this fall should plan to attend this meeting.

THE free delivery postal system goes into effect at Sacramento on October 2d, with 5 carriers, 2 of whom will be mounted.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents. — EDS

### The See-Saws of Agriculture.

EDITORS PRESS:—Large flocks of sheep are leaving the high Sierras for the stubble fields of the plains, and to furnish the fall crop of wool. The sheep must have had good pasture in the mountains, as they all look well. Those who have no pasturage on the plains will remain in the mountains until the storms compel them to seek a milder climate. Sheep-raising seems to be improving, while hog-raising is far below a paying business. Parties from the southern counties inform me that two cents is the common price; 3 and 3½ cents is the price in this county.

We made a trip to Dry creek a week ago, and found the oaks to be full of acorns. Two years ago the trees were almost barren. This season seems to make up for the past failure.

The thrasher is now a necessity amongst the foothills. So far as wheat and barley are concerned we shall soon be self-sustaining. Many of the farmers on Dry creek and the adjacent plains are now shipping grain from Oak Dale by the cars, which was formerly marketed in and around Sonora and Columbia. Millers prefer the wheat raised in the foothills to that of the plains, being more plump and free from chaff.

We must report that the season so far, among orchardists and farmers, has been a prosperous one. No great fortunes may be made, but the comforts of home life have been secured, and a margin on the credit side of the ledger remains for future operations. But we have one care of a contrary nature to make note of; and it is a living sermon against inflation by Mortgage & Co. The statement was made to-day by one of the parties, that there were few solvent farmers in a certain valley. Two large teams and a carry-all camped over Sunday in my yard. There were grandmother, sons and daughters, young men and maidens, all bound for Bodie, leaving a fine farm, 100 acres of alfalfa, and more than 300 acres of grain land, stock, etc.; and all lost from an encumbrance, swelled by heavy interest. What an agricultural curse is this. Gambling on borrowed money, with interest too great for a possible redemption. Grasping at a something unattainable, the family altars are broken, the young babe and the white-haired grandmother are made tramps, sleeping on the ground, exposed to sun and storm, while seeking a home in the far El Dorado. The people I speak of are cultivated and respectable, but they have placed their homes at the mercy of the money-lender. It would in reality be a black book and a dark record were the conditions of many of the farmers laid bare.

The difference between a careful calculator, and those who work at loose ends, would become very apparent. A very prudent and respectable farmer, near Oak Dale, Stanislaus county, informed me last evening that he saved \$2,700 over and above all expenses from 320 acres of grain, and hired all the labor performed; the farm being a few miles distant from the home place. With such results from close calculation and good management, there is no necessity for mortgages; and those who have them should and could pay them off, and be in reality, the true, free and independent farmer, a member of God's grand army of producers.

JOHN TAYLOR.

Monnt Pleasant, Sept. 22d, 1879.

### Valuable Salt Works.

EDITORS PRESS:—Twelve miles southeast of New Boston and eight northeast of Belleville, in the center of one of the large, even valleys of Nevada, is a salt lake or marsh of remarkable features, and one of probably great economic value in the future of the country. During the winter it is a shallow lake, but in the summer dries to a level with the earthy surface. Its size is about a mile and a half in width and three miles in length. It is called Rhodes Marsh, after the active man who has taken the principal part in its development, as well as of a number of other important enterprises in the region. Probably no purer salt can be found in any part of the world than is found here. Facilities for its manufacture are very peculiar.

The marsh is underlaid everywhere at the depth of four or five feet by a hardpan of solid salt, up through which, by thousands of small holes—some few large, five or six inches in diameter—rises, during the summer evaporation, the clearest of waters, charged to its utmost capacity with salt in solution. Now, by simply digging pits, like tanners' vats, into the hardpan, and clearing all off smooth, the workmen see the pure brine flowing in of itself to fill the pit nearly full. Evaporation then begins and the salt soon commences to crystallize and fall to the bottom, in form like the cleanest, whitest sand possible. This process goes silently but continually on for weeks, till the pits may be filled two or three feet deep with the very

purest salt known, when men dressed in gum garments go into the pits and shovel out the accumulated deposits for market all fit for use. Yet, if a finer article for the table is needed, a simple salt-mill near the works reduces the material to the best pulverized salt in the world.

We were greatly interested in all we saw when riding with the superintendent, Mr. Wasam, over this marsh, along its winding roads among the many pits; for solid wagon-roads are everywhere easily made by slightly throwing up the quickly drying, salt-hardened earth. The vats appeared of the richest, light yellow color, as the pure salt was seen at the bottom through the clear briny liquid, while the heaps and ridges shoveled out upon the banks were white as snow.

At the Philadelphia Centennial, this salt, taken directly from the vats as nature alone had deposited it, with no artificial improvement whatever, received the first premium as the best in the exhibition. Thousands and millions of tons can here be gathered, and exported to meet the wants of the whole coast. As soon as the Reese River railroad, from Battle Mountain, shall be completed through to near this place, an immense quantity of this best of salt must be yearly gathered and exported for use.

But besides the salt in this marsh, there are also in some parts large deposits of borax, from which hundreds of tons of the best quality have been manufactured. But the expense of freighting the teams long distances has rendered it difficult to compete at present with other places of its production nearer market. Yet with a railroad, all such difficulty will be removed and the borax of this marsh become an important article of trade.

Another fact of great interest is that at a short distance around this marsh the dry, rich, sage-brush surface of the valley has below it, at the depth of only 8, 12 or 15 feet, an abundance of good fresh water, so that by means of simple, home-made windmills, fine farms, from 10 to 50 acres, could easily be cultivated by irrigation in highest perfection, whenever such cultivation shall be needed. Should a salt-lake city here ever spring up, it could easily thus secure its supplies of fresh home provisions. S. V. B.

## THE FIELD.

### Killing Morning Glories.

EDITORS PRESS:—This vine has been a pest to the fruit grower along our rivers since '49. Residents have for years endeavored to find, by various experiments, a way to exterminate it from the land, but as yet they have proved unsuccessful. If anything, it has increased to larger dimensions—deteriorating the soil and causing a loss of many acres. Cultivation increases rather than diminishes its hold. Its nature may be classed with that of the famous Bermuda grass: to increase it needs but the implements of husbandry to scatter it broadcast.

Its roots, though small and well jointed, as well as slender, reach far below the surface. It throws out new rootlets wherever cast. It loves a mellow, sandy soil. The more the land is tickled with any implement the thicker it spreads its web, until they join in one continued mass. Vegetables, as well as small fruits, diminish in quantity and quality. The land becomes "sour," and only fit for swine to graze. To keep the surface at all clean in our orchards, vineyards, hopyards and gardens, the culturist has had to contend with it year in and year out, thus causing extra labor and expense. To keep it under control, various methods have been sought but no remedy has been found. Movable fences have been set up, and hogs put in to eat, root and tear it asunder. The result has been that it gains more vigorous growth with the rich coating of manure thus given it. Back in the days of 1850 growers experimented by devoting days in digging up the soil and gathering every root that the eye could detect; but many pieces were cut and scattered which in due time grew as vigorously as ever. Salt and brine, that came in barrels packed round butterkegs, round the Horn in early days, has been spread over the surface, which killed the vine wherever it came in contact, but did not reach the vital parts under the soil, which in time again put forth new growths. I recently heard of a party on the American river who has purchased two tons of salt for experiment, with which he expects either to kill the land or exterminate the vine. We will wait for results.

Patches are spread over the plains, caused by removing manure from the stables of the city. Chamber lye has been tried, but only having an effect to destroy its present surface growth; but the application acts as an excellent fertilizer.

One of your correspondents recently spoke of taking a knife and splitting each root and applying salt. This may do when a light growth has attained, and not thickly disseminated; but go to work in a patch a quarter of a century in growth, and a life-work seems on hand.

Soils affected with this weed have been left uncultivated and unirrigated, thus endeavoring to dry it out. Even barley has been sown with it to extract its nourishment, but in the heat of summer, after the grain has been cut and laid over the surface, it will creep through the heaps of straw and open its flowers to gaze in the

morning light, and glory at your work. It should have sympathizing friends, should it not, Messrs. Editors?

With my Bermuda grass and morning glory on hand, I think I must exercise the patience of Job to get rid of my *pets*. I shall try smothering on my "glory patch"; I can't say what effect it may have, but perhaps keeping the light and part of the air from it—in the course of a year or more it may be less persistent, and give up. I shall haul straw over its surface a number of feet in depth; and when it receives the rains of winter I shall expect it, in due time, to decay. GEORGE RICH.

Sacramento, Cal.

### The Sugar Cane.

EDITORS PRESS:—The cultivation of this plant, which grows best in a warm climate, and on low swampy soil, was first followed as an agricultural business in Candia; here the first sugar was manufactured and brought into the European market under the name of Candis, from which the modern name of candy is derived. The juice of the sugar cane is a solution of almost pure sugar in water, and when freshly expressed and exposed in a shallow dish to the rays of the sun will form regular, bright and beautiful crystals. The sugar cane contains from 92 to 94 pounds of juice in 100 pounds of cane, although it requires a powerful crusher to extract more than from 60% to 65% of juice from the cane. In every 100 pounds of juice so extracted there are, in good ripe cane, from 15 to 20 pounds of sugar. Where the soil and climate are favorable the sugar cane grows wild, which is especially the case in the tropics, where the rainy season converts almost any piece of flat land into a temporary swamp, hence the idea that the sugar cane is really a tropical plant. The sugar cane was first introduced in America by the Spaniards, on the island of Cuba, and with it negro slavery; from there it went to every other West India island, always going hand in hand with slavery, and as it spread over the central and southern part of the continent of America, slavery followed it like its shadow. Wherever slavery was abolished the production of sugar from the cane almost vanished. The most productive place for cane sugar has been the small island of Cuba.

The exportation of sugar from Cuba has been during the year 1878, 658,867 hogsheads, 243,374 boxes, and 313,447 sacks containing 533,309 tons of 2,240 pounds each, and representing a value of \$53,830,930.60. The machinery, buildings, and railroads through the cane fields on the largest sugar plantation in Cuba are estimated to have a value of \$7,000,000, and employs 4,000 hands. The production of sugar in Cuba has varied from year to year, but very little during the last 10 years. In 1868 it amounted to 710,609 tons.

Although some sugar-manufacturing establishments are of really gigantic proportions, sugar from the cane is produced by the native on the isthmus of Panama in the most primitive way. A couple of round pieces of wood are so arranged with their ends in two flat pieces that they can be turned by hand; the cane is passed between these rollers, the juice collected in an earthen dish, in which it is evaporated over an open fire and set in the shade to cool, when the crystals readily form.

Until the civil war Louisiana has occupied an important and promising position amongst the sugar-producing States, but since then it never has been able to regain its former importance. The swamps of Louisiana, or cane brakes, as they are commonly called, are kept from overflowing by levees, which are both costly and insecure, while these swamps or river bottoms are, after heavy rains, the worst places imaginable to work in, for any human being, even for negroes.

During the last 50 years the sugar beet has become a great rival of the sugar cane as a source of sugar production, yet the consumption of sugar has increased from year to year to such an extent that, although as much sugar is at present made from the beet as from the cane, several countries in which cane growing was but very little known 10 years ago have become prosperous through the growing of sugar cane and the manufacture of sugar therefrom. These countries are Brazil, Peru and the Sandwich Islands; none, perhaps, as much as the latter, and strange to behold, exclusively through American skill and English capital. Some of our enterprising sugar men thought it, perhaps, more patriotic and just as profitable to go to the Sandwich Islands and do the same thing which they might have done just as well, and probably better, in southern California. And while we witness the sad spectacle of the barley rotting in the warehouses because it does not pay cost to ship it, while we see the most fertile fields grow to weeds for want of a marketable and remunerative crop, in southern California, we are informed, through the papers, that the new sugar crop in the Sandwich Islands has been all bespoken already, and was converted into gold long before a grain of it was made, and, so far from an overproduction, during the last five years, every year the sugar crop has been double that of the preceding one. What would the California farmer say if his grain crop was bought and paid for

before it was threshed? He would think the millennium had come.

During my late trip through southern California I passed over many a beautiful broad field, with the richest soil, grown to weeds, because the owners could not make it pay to raise grain, yet, when I came to the next farm and asked for sugar cane, the answer, with one solitary exception, was invariably, "You will have to go and see the Chinamen."

What a strange sight! Here a great, enterprising nation, shipping every dollar of precious metal which they obtain from their mines to foreign countries in payment for sugar; the agricultural department of this great nation analyzing sugar-producing plants, in wash-tubs, such as corn-stalks, sorghum and hunch-grass; sugar cane only in small patches, and exclusively grown by Chinamen; and a few sugar refiners, who have accumulated millions in the business, forming rings either to defraud the Government of its revenue or to monopolize the whole business in order to tyrannize over everyone in the community who deals in the much needed article—sugar!

Every second man one meets in southern California is a land poor, and every third man produces enough fruit, vegetables and grain to feed a hundred, yet, has it mostly rot and go to destruction, while a great portion of the land lays idle. Now has it never occurred to these men that, when hundreds of Chinamen raise a quarter or half an acre of sugar cane in the crudest and most careless way, and yet make it pay, that they might raise one, two or five acres with their wonted care and attention and make it pay ten-fold? Has it not appeared to some of these land-poor men, who have whole sections lay idle, that if they should plant one of these sections once in sugar cane, that for many years they could cut a crop worth almost \$100,000 to the section, and could sell the cane before it was even ready to be cut? For many years there have been but two articles in the world of which the demand was greater than the supply, these were gold and sugar.

The cultivation of sugar cane is almost identical with the cultivation of corn. Every implement which the farmer has for cultivating corn, and these are made in America to perfection, will cultivate sugar cane. How long will it be till these land-poor men will see their advantage; how long till these men will learn the adage that the Lord helps him who tries to help himself; how long till they, by their own exertion, will prove that they live in a country which is blessed with the most beautiful climate and on which nature has showered its choicest gifts in superabundance. ERNEST TH. GENNET.

## POULTRY YARD.

### Answers to Queries.

EDITORS PRESS:—(1) Whose incubator is considered the best for raising chickens, and (2) is an incubator considered profitable taking everything into consideration, and (3) what breed of chickens is considered the best for a large egg-producer and non-setter, and, also, (4) which is the best chicken for laying and the market combined? (5) Where can I get the *Poultry World*?—SCRIBNER, San Jose.

(1) We cannot undertake to decide between rival machines. The best thing to do is to make personal investigation into the claims and deeds of each machine and form judgment therefrom. (2) A good incubator must be profitable. As for rearing the chickens after hatching it is practicable if due attention be given them. Our poultry contributor, Col. Eyre, of Napa, never allows his chicks to run with a hen; they are less liable to be troubled with lice, less subject to disease, and are more cheaply reared by artificial means.

(3) The Brown Leghorn. (4) The Plymouth Rock or the Light Brahma. Cocks of either of these breeds mated with common hens produce fine young, which make good layers and sitters and good market fowls. It is desirable to avoid fowls which have blood of the purely "fancy" breeds, like Hamburgs, Polands, or even Houdans or Spanish.

(5) We believe the *Poultry World* is published at Hartford, Conn. Another good poultry magazine is the *Poultry Bulletin*, a sample copy of which may be had by sending 15 cents to M. Eyre, Napa, Cal.

FOR SETTING HENS.—EDITORS PRESS:—Your correspondent speaks of how to keep hens from setting. I will tell of another plan; tie a strip of red cloth of some description on the tail feather of the would-be setter and it is done, for red will win.—R.

NEW POLYGRAPH.—The latest method for the rapid reproduction of letters, drawings, etc., has been brought out in France, and is made as follows: A plastic mixture, composed of 500 parts (by weight) of white gelatine, 500 parts of glycerine, 50 parts of glucose, 50 parts of white glue, and 350 parts of water, is poured hot into a shallow tin box of suitable size. The ink used for writing or drawing is made by adding to a suitable quantity of water 20 grams of violet aniline and 300 drops of alcohol. The ink is allowed to dry on the paper, which may be of an ordinary quality, and then the written side is laid on the plastic paste and is gently pressed on with the hand. After waiting for a minute the paper is neatly raised, and the writing will be found to have been transferred to the surface of the paste. From this as many as 50 copies can be taken without the aid of the press. What is left of the ink is carefully washed off by means of a warm sponge.



## THE PUBLIC LANDS.

### Investigation of Land Values and Adaptations.

By an Act of Congress, approved March 9th, 1879, a "Public Land Commission" was organized, the duty of which is to report to Congress within one year of that date: *First*, a codification of the present laws relating to the survey and disposition of the public domain; *Second*, a system and standard of classification of public lands, as arable, irrigable, timber, pasturage, swamp, coal, mineral lands, and such other classes as may be deemed proper, having a due regard to humidity of climate, supply of water for irrigation, and other physical characteristics; *Third*, a system of land parcelling, surveys adapted to the economic uses of the several classes of land; and *Fourth*, such recommendations as they may deem wise in relation to the best method of disposing of the public lands of the western portion of the United States to actual settlers.

The Commission met in this city this week at the Surveyor-General's office, all present except Major Thos. Donaldson, of the Smithsonian Institute. The other members are: Gen. J. A. Williamson, Commissioner of the General Land Office at Washington, and Chairman of the Commission; Clarence King, Chief of the Geological Survey; Major T. W. Powell, of the same Survey; Alexander T. Brittan, President of the Land Attorney's Association of Washington.

Nevada, Utah and Colorado, have already been visited by the Commissioners, who after finishing their work in California will go to Oregon, Washington Territory and Arizona.

The Commissioners divided up as follows for making a tour of inspection among California Land Offices: Major Powell, assisted by Captain Dutton, and accompanied by a stenographer will go through the San Joaquin valley as far south as Los Angeles. General Williamson and Mr. Brittan will journey north to Shasta, while Clarence King will inspect the quicksilver and gold mines located in the section of country south of San Jose. Returning, the Commissioners will meet in the Surveyor-General's office on the 4th of October, and report the result of their observations.

Aside from the general questions and those relating to agriculture, timber resources, etc., the following questions propounded by the Commissioners will be of interest to the mining community, and all persons interested are asked to answer them by letter directed to the Public Land Commission, P. O. Box 585, Washington, D. C.:

#### Preliminary Questions.

1. What is your name, residence and occupation?
2. How long have you lived in the county, State or Territory in which you reside?
3. Have you acquired, or sought to acquire, title to any of the public lands of the United States, and, if so, how, or under what laws?
4. What additional means or opportunities have you had to learn the practical workings of the public land laws?
5. From your personal experience, or from your actual knowledge of the experience of others, what has been the time and expense of procuring a public land title? Please state fully as to an uncontested, or to a contested case, as the same may have been within your actual knowledge?
6. Have you observed any defects in the practical operations of the land laws, which in your opinion ought to be remedied? If so, state fully such defects and any suggestions you may have to offer in the way of remedying them.
7. Please state the conformation and physical character of the public land in your county, State or Territory, so far as known to you; and whether agricultural, pastoral, mineral, timber or otherwise?
8. Examine the Act of Congress prescribing the duties of this Commission, etc., and referring to your answer to the last interrogatory, state how, in your opinion, the Government can best ascertain and fix the character of the several classes of land named by you; whether by a general rule, or by geographical divisions, or otherwise?
9. State the system of land parcelling surveys which, in your opinion, would be best adapted to the economic uses of the several classes of land: giving your reasons and your practical acquaintance with the subject of surveys?
10. Please make suggestions as to any better method of disposing of the public lands in the West to actual settlers than is prescribed by the existing land system; and either as a whole or in part?

#### Agriculture.

1. What have you to say about the climate, rainfall, length of seasons, snowfall in the winter, and the supply of water for irrigation?
2. At what season of the year does the rainfall occur, and in what quantity and proportion? Does the greater water supply come at the season when most needed for irrigation?
3. What proportion of your section can be cultivated without irrigation?
4. What proportion can be cultivated with irrigation?

5. What crops are raised in your section by irrigation?

6. How large a quantity of water is required to irrigate 100 acres of wheat in your section?

7. What is the source and supply of water that could be applied to irrigation?

8. Please state any knowledge you may have from observation or experience on the subject of irrigation, and whether the fertility of the soil has been injured thereby, and to what extent; also, at how great altitudes crops can be raised in your section?

9. What proportion of water in irrigating ditches is exhausted, and what proportion is returned to the streams; and is this return voluntary or by regulation; and what restrictions, local or otherwise, are placed on the use or waste of water?

10. How far has the water been taken up, and in what manner, and under what laws, or local customs?

11. What conflicts, if any, have arisen in relation to water rights?

12. What proportion of your lands is adapted to pasturage only?

13. Is it, in your judgment, practicable to establish homesteads on the pasturage lands; and, if so, what quantity of land should be allotted for pastoral purposes to each settler?

14. Is it, in your judgment, advisable for the Government to put these lands in the market for private entry, and if so, should the quantity to each purchaser be limited?

15. What is the average quantity of pasturage land required in your section to raise one head of beef for market? How does your section compare in this respect with other sections you are acquainted with?

16. What number of cattle is required to support an average family?

17. How many cattle to the square mile are there at present in your section?

18. Has the growth of grass increased or diminished?

19. Do cattle raisers fence their ranges or any part thereof? And can cattle be confined with safety in winter, by fences, on the range?

20. Would the quality of herds be improved and a better beef produced by having herds confined to specific ranges?

21. What is the source of supply of stock water in your section?

22. In grazing, how many sheep are equivalent to one beef?

23. Has the growth of grass increased or diminished on lands pastured with sheep?

24. Will sheep and cattle graze on the same lands?

25. What conflicts, if any, exist between sheep and cattle owners, growing out of the joint occupancy of the public lands, or from any other cause?

26. What is the approximate number of sheep and cattle in your county? and in what sized herds are they herded?

27. What other suggestions have you to offer in regard to the disposition of the public lands and their surveys?

28. Is there any trouble in ascertaining the corners of the surveyed public lands in your vicinity?

#### Timber.

1. How much timber land is there in your section, and what is the character of the timber?

2. What kind of timber, if any, is planted in your section, and what is regarded as the best, and what is the time of its growth?

3. How would you dispose of the public timber lands? State whether by sale, by lease, or otherwise. Give details of your plan, and the reasons therefor, stating particularly the price, size of tract, and what limitations, if any, should be imposed upon such disposition.

4. Would you, or not, classify the different kinds of forest lands, whether in manner of disposition, price or size of tracts?

5. When forests are felled in your region, is, or is there not, a second growth of timber? If so, state its character, time of growth, and any like information.

6. What have you to say of the origin of forest fires, their extent, destructiveness, and mode of prevention?

7. What have you to say as to depredations upon the public timber, whether for the cutting of railroad ties, use for mineral, building, agricultural, or other purposes? State the extent of such depredations, unnecessary waste occasioned thereby, and what, if any, legislation is necessary to limit or prevent such depredations.

8. What are the local customs as to the cutting of public timber by individuals or corporations? State particularly as to the ownership of felled timber.

9. Would, or would not, the timber laws be more efficiently executed if their administration and the general custody of the public forests were placed within the jurisdiction of the United States District Land Offices?

**AMERICAN ELEVATORS IN FRANCE.**—It is now proposed to introduce American grain elevators into use in the port of Havre, a committee, composed largely of American residents in France, having been recently formed for this purpose. It is curious that so important a seaport as Havre, where enormous quantities of grain are received annually, should be destitute of the simple and well-known method of handling grain, such as is afforded by the elevator, but this is the fact, the only mode of transfer being the primitive one of carrying on men's backs, and the grain is left in heaps upon the quays, exposed to loss by weather and by theft.

## METEOROLOGICAL.

### Birth of a Storm.

In a lecture delivered by Robert H. Scott, M. A., F. R. S., etc., at the London Institution, he declares that storms are almost without exception foundlings. It has been claimed by Dove that storms are due to the interference of the Polar current, or the east wind, with the equatorial current, or west wind. The east wind being air flowing from the north or south pole toward the equator, and the west wind, the air endeavoring to make its way back to the pole from the equator, both being modified in the direction of their motion by the change of latitude.

This view has been superseded of late years by the modern views of the relation between the wind and the distribution of barometrical pressure. We are still, however, in comparative ignorance of the ultimate causes to which this distribution of pressure, or the rise and fall of the barometer, are due.

Various theories have been propounded to account for storms which are generally more or less cyclonic in their character. Ley, and others, attribute the formation and progress of a storm to the condensation of moisture, ignoring the fact that many of our heaviest rains do not give rise to cyclonic disturbances of serious character, and frequently come in times of nearly absolute calm.

Mr. Meldrum, of the Mauritius, through investigations into the weather over the Indian ocean, is lead to the belief that every cyclone is generated in the intervening space between two oppositely flowing currents of air, of which the easterly moving stream, speaking in general terms, lies on the polar side of the westerly wind. This view, however, was called seriously in question by Messrs. Blanford & Eliot, in their discussion of recent cyclones in the Bay of Bengal, which they have been able to study from very early stages, and in which they fail to see evidence of the pre-existence of two, and only two, determinate currents.

M. Faye, of Paris, in a third theory of the origin of these storms, argues strongly that, as interfering currents in rivers give rise to vortices which extend from the surface downward into the water, so all our water spouts, *trombes*, and even the largest tropical hurricanes, must be all formed in the upper regions of the atmosphere, and extend downward to the earth; the force which gives them their onward motion being supplied by the upper currents.

This theory is not accepted because recent investigation into the motion of cirrus clouds, shows beyond a doubt that the motion of the upper currents of air over a cyclone is outward and not inward. Moreover, very lately there was observed, on the Lake of Geneva, a veritable small waterspout, 40 feet high, and 30 feet in circumference, formed by the meeting of two winds, known locally as the *Föhn* and the *Bise*, on the surface of the lake.

The last theory is that of the late Thomas Belt, who assumed as the first cause the heat of the sun. The heat rays pass through the atmosphere without warming the upper strata, and so Mr. Belt supposed that over a sandy soil a mass of air close to the ground might rise in temperature much higher than the superincumbent layers of the atmosphere, sooner or later the heated lower air would burst up, and the ascending column thus produced would be the nucleus of the nascent cyclone. Accredited instances of whirlwinds over volcanoes like Santorin, and over extensive fires like those of Carolina canebrakes seem to be facts in favor of this theory. From other prominent facts attending the production of a cyclonic disturbance, the origin thereof may be attributable to more than one agency, as all the theories have some facts in their favor. Prof. Scott declares that it is a mistake to assert that all storms are connected with cyclonic disturbances. The force of the wind depends on differences of atmospheric pressure over a given area, and the only reason why storms are generally associated with cyclones is that these systems afford the most serious instances of disturbances of atmospheric equilibrium, and consequently of differences of pressure, which are met with on the globe. At any place where an area of relatively high pressure comes into close proximity to an area of relatively low pressure, a gale will result, and so a storm may be due just as much to the rise of the barometer in one region as to its fall in an adjacent one. Wherever there is a rapid decrease there is a steep gradient, and consequently a strong wind.

Every cyclone is not accompanied by a storm. The cyclone, in its general terms, simply indicates a region of diminished pressure, round and in upon which the air moves in paths. The direction and force of the wind are regulated by the difference of barometrical pressure over a given distance, and not by the actual height of the barometer at the station at which the storm is felt, or by the distance of that station from the point where the barometrical reading for the time being is the lowest.

The principles of wind motion have a most important bearing on the theory of the motion of the air in hurricanes and typhoons. The old popular idea was that the air blew round and round the central calm in circles, so that any sailor caught in one of these storms, if he was sending before the wind, the center would lie

exactly on the starboard beam in the northern hemisphere, and on the port beam in the southern hemisphere. Modern meteorologists, however, declare for a spirally incurving movement as the most probable behavior of the wind; and this suggestion of spiral motion must, of course, modify the simple rule for a ship when scudding, of looking in the wind's eye, and taking eight points on the starboard or port side for the storm center, and indicates the probability that the true position of that spot will be at least two or three points ahead of the bearing given by that rule, so that the ship, if scudding, may be gradually approaching the most dangerous part of the storm.

As yet meteorologists have been unable to produce evidence of the birth of a storm, neither has anyone been fortunate enough to be in at the death of one. Some claim that storms can travel all around the world, until at last they travel off.

They have been traced from the Pacific coast across the Atlantic, but very rarely. This fact, however, favors the condensation theory of storm generation, since it is held that, as the moisture in the air is the food of the storm, so, when that moisture is deficient, the storm dies of starvation. We may, however, point out the dust-whirls at street-corners, which waste and wane without any assistance from vapor condensation. We do not yet know why one depression in the atmosphere fills up, while another becomes deeper. What causes the barometer to rise or fall, is still an unsolved problem.

## THE VINEYARD.

### California Wine Interest.

At the late meeting of the State Vinicultural Society, in this city, the President, Arpad Haraszthy, made an able address, from which we take the following statistics, showing the commercial importance of the California wine interest, and the progress which is being made in the substitution of pure native wine for adulterated importations. Mr. Haraszthy said:

I have to congratulate you upon the very large and wholesome increase of your exports, both of wines and brandies, during the past year, as well as the upward tendency of Eastern prices. The first six months of the present year we have already sent abroad, by sea and rail, 1,125,409 gallons of wine, and 81,345 gallons of brandy. And, from present appearances, it is more than probable that we will, before the year ends, send out of the State 1,500,000 more gallons of wine and 60,000 gallons more brandy.

As to the consumption of wine within our State, it is almost impossible to ascertain its exact amount. It cannot, however, be less than 2,000,000 gallons per annum, and may even reach 3,000,000. One thing is certain—San Francisco and its immediate surroundings now use over 1,000,000 gallons annually. For a better understanding of the growth of this trade, I will cite the following tables, beginning from the year 1875, and taken from my printed statement to the Chamber of Commerce:

#### Wine Exports, by Sea and Rail.

Years.	Sea.	Rail.	Totals, gals.
1875.....	507,800	523,698	1,031,507
1876.....	516,293	508,776	1,115,045
1877.....	896,346	566,446	1,462,792
1878.....	1,233,626	573,533	1,812,150
1879 (6 months).....	776,232	346,130	1,122,412

A detailed examination shows an increased exportation for the first 6 months of 1879 over the same 6 months of 1878, of nearly 300,000 gallons; and further, that the increase for the first half of the year 1879 is equal to the total increase of export of the entire year 1878 over that of 1877.

Our handy exports, by sea and rail, were as follows:

Years.	Sea.	Rail.	Totals, gals.
1875.....	39,924	2,394	42,318
1876.....	36,901	23,692	60,593
1877.....	64,940	74,052	138,992
1878.....	91,324	37,875	129,199
1879 (6 months).....	49,354	31,901	81,345

The wine tables show a constant annual increase from the year 1875, without a single fluctuation. The brandy tables show a less export for 1878 than for 1877, by about 9,000 gallons. This must be accounted for by the higher price of grapes in that year, and therefore a less amount of distillation, and consequently an advanced price for brandy. There has also been a very notable decrease in the importation of French wines into the port of San Francisco between 1874 and 1878. The importation in 1874 was:

In wood.....	750,000 gals.
In glass.....	51,800 gals.
Total.....	801,800 gals.

#### In 1878 the importation was:

In wood.....	370,000 gals.
In glass.....	15,900 gals.
Total.....	385,900 gals.

Showing a decrease of 495,900 gallons into this port in four years' time. To say the least, we must look upon this change as favorable. The importation of French wines into all ports of the United States has greatly decreased, as the

[CONTINUED ON PAGE 218.]



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### Women in the Grange.

This organization, called the Grange, is the only one that appreciates women, or recognizes her ability and grants her equally rights and privileges with man. There may some tell us that women have no influence in the Order, that her presence isn't materially needed there, that her views politically and financially are always with her husband, etc. Now, we cannot agree with them there, that woman has no influence in the Grange. We maintain that if woman does not exert an influence in some things, that they leave them for the sterner sex to investigate. By the way, it is not that her ability isn't sufficient, but woman has her sphere to move in, which is just as important, and in this noble Order there are a great many motives that prompt her to duty. They can even with their presence cheer and encourage their husbands and brothers in the noble work, which should be exercised with a conviction in the right direction to put down injustice and crime and even lend a helping hand to the wronged and oppressed. Our heavenly Father has endowed us with a nature of sociability, and it is cheering to meet where the society of each sex is solicited, and where they can all gather around the table as one great family, which is always so bountifully supplied with all the delicacies of the farm and garden, and not only in the social feature is the presence of our sisters needed, but in the educational feature. Now we all know that there are sisters in the Grange, that if it were not for the timidity that they have, could with the talent God has given them, exert an influence as lasting as time itself; and not only in the Grange hall, but teach and educate their children so they will be fit subjects to fill the honest vocation in life as farmer, and not allow their spirits to be crushed by making them believe, as some would, that there is no way to elevate their inquiring minds while on the farm. Has not God created the tiller of the soil's child with a mind and talent equal with other children? And why not develop that capacity in the right direction, and not let their intellect drift as it were off in the channel of fraud, deceit and ignorance, as we see some have drifted to-day. Ah, the mischief they are doing to the Grange and their own interest, and as charity is another predominating feature of the Grange tell me not that woman isn't needed there. In many ways can she lend a helping hand to those that are afflicted, both in body and mind, and otherwise, even if she is only called upon to contribute her mite. As hope is another feature, can she not hope and wait with our brother that this great reformation for the right will, if persevered in, bring peace and plenty, justice and purity once more as it once was. And when all our blessings that God granted us flowed pure from his beneficent hand, not trammelled with speculation and fraud, injustice and dishonesty, but come pure as it should to-day. We would ask them why hasn't woman a place to fill here as well as elsewhere. Has not God given her to man as a helpmate through life, to cheer and comfort him? Then we deem it essential and right. And now, sisters, let us consider we have a cause to advocate, and let us not bury what talent God has given us, but remember we, too, can work, hope and trust all will be well, and live to show our gifted sisters that if we are the wives of the despised clodhopper, we have a strict regard for honesty and uprightness, and our motto is "live and let live."—Mrs. Hattie A. Garner, in *Journal of Agriculture*.

### Grange Discussions.

Name subjects to be considered and discussed at your next Grange meeting that are of interest to the members, then let every member think over the matter to be discussed, read and talk about this subject and the afternoon or evening will hardly be long enough to hear all that is to be said upon the question under consideration, and it will not only prove to be an interesting meeting, but a profitable one, and the result is that what one member knew at the opening of the Grange, all know at the close, and at least 75% of what has been taught at this meeting would never have been thought of by nine-tenths of the members, had it not been for the announcement of the question at a previous meeting. And in this way we all become educated. Now can attend a Grange meeting of this kind but they learn. We could not prevent it if we tried. And when you become familiar with one subject, you advance step by step in the educational work; let all, both old and young, male and female, take part in the educational work. You may think that you cannot speak, but perhaps you are not as good a judge of this as other members who would be glad to hear your views. If you are tongue-tied in public, then write out your thoughts and read them. All should be willing to contribute their mite to this one fountain of

knowledge, from which we can all draw supplies, that can not otherwise but prove beneficial to every member in attendance.

There is no lack of subjects for discussions. The many questions of interest and value pertaining to farm and house, would occupy a whole year even if you held weekly meetings, the questions of political economy, as much longer. But first of all, consider well the questions that pertain direct to our organization, for we must first of all learn the true object and mission of our organization, and second how to accomplish the object sought. Upon these two propositions rests the entire work, and they should be well understood in every Grange and by every member. Tho' the first as a general rule is well understood in working Granges, and by working members, the second proposition is not so well understood, and here is the great hindrance to success.—*Grange Bulletin*.

### Open Grange Meeting.

On Friday, October 10th, an open Grange meeting will be held by the State Grange in the city of Oakland, for the purpose of discussing the propriety and feasibility of the general Government establishing an experimental farm in California, also the necessity of Congressional action to prevent the destruction of thousands of farms and the navigation of the Sacramento river by the debris coming from hydraulic mining. Invitations have been sent to our Senators in Congress, Messrs. Booth and Farley, and our Congressmen elect, Messrs. Davis, Page, Berry and Pacheco, to attend the meeting and give their views on the subjects presented. A cordial invitation is hereby given to all farmers, Grangers or not, to be present and participate in the proceedings. These are questions that every farmer in the State is directly or indirectly interested in, and they should make it a point to attend so far as possible.

By order of the Executive Committee,  
AMOS ADAMS, Secretary State Grange.

### Points on Land Holding.

EDITORS PRESS:—There are three principal motives for private land ownership, the first named below being the only one government should allow and society tolerate.

1. The holding of land for permanent homes, and for employment for purposes beneficial to the individual and to society.

Under this head, gardeners, farmers and herders should be allowed to hold what land they can cultivate and graze, in the best and most profitable manner; so that there is no wasting of the elements of fertility of the soil.

2. The holding of land to secure the profit of exhausting the fertility, without the expense of replacing it.

The fertility of the soil largely depends on the presence of the rare mineral phosphorus, without which no animal life can exist. This is being rapidly exhausted from the soil by the carrying away of bones and wheat. Capital is securing the profits derived from this exhaustion in a double sense: directly, since three-fourths of the land of the State are farmed or grazed for the benefit of the non-producing class we call capitalists; and indirectly, by increasing the interest on money and corresponding profits of capital in every form. (See Wayland's Political Economy, pp. 326, 327.)

3. The holding of land for speculation; i. e., to gain increase of price or enhanced value, which arises under a natural law of society—that the increase of a peaceable, industrious population increases the price of land.

Under this law, the first-class agricultural lands of San Joaquin county have doubled on the government price of \$1.25 an acre six times in the past 24 years, notwithstanding the continued exhaustion of the soil by cultivation. In Alameda, the enhancement of price has been still greater; while in remote counties, depending on the generosity of railroad corporations, the enhancement has been less, but sufficient all over the State, when added to the profits derived from the exhaustion of the soil by use, to fully justify the extortionate rates of interest that have bloated our capitalists and crushed labor into the dust of idleness and despondency.

Increase of population will continue, and so must enhancement of price of land, till the best irrigable lands of California are worth \$1,200 an acre, and will rent for \$21, with taxes paid and fertility restored, and interest on money reduced to 2%, to correspond with the rent of land, the same as it is in France to-day. (See *Agricultural Report*, 1871, p. 280.) When we compare the profits of unrestricted land-holding with the profits of unrestricted money-lending, in all the civilized countries of the world, and find that the average net profits of one correspond to the average net profits of the other, we must conclude that one is the cause of the other, or that both are to some extent causes and effects, acting and re-acting on one another.

Mill says (Book III., Chap. XXIII., Sec. 5): "The price of lands, mines, and all other fixed sources of income, depends on the rate of interest." I have no doubt, if Mill were here in California, he would add: "The price of land, the prospect of its enhancement by increase of population, and the opportunity to appropriate its natural fertility, afford money

a chance of four times the gains that the lands of England do, and establishes corresponding rates of interest." Our business men act on the motives before presented. Many of the "large farmers" of this State borrow immense sums at high rates of interest in order to hold immense tracts of land. If the theory of your correspondent at Ventura is correctly stated, they must come to bankruptcy. We have been told for 15 years past, by nearly every editor in the State, that the great land grants were about to be divided and sold. Now they say we are sure of it, because we are to have equal taxation, just as if the statute book and assessor of the future were to come from a different source, or to be in any way essentially different from those of the past. Let us see by figures how equal taxation will affect a bona fide farmer and a land-speculating farmer.

Bear in mind the real farmer is one who expects to stick to the business for life, and transmit the homestead to his son. Such a one puts back in his soil as much as he carries away, and the rise in price of his land is of no value to him whatever; since, even if he sold it for the rise, he must pay the same out again for lands of similar location and productiveness.

Real Farmer—Net profit of capital in land and improvement.....	8%
Speculative Farmer—Profit of capital in rent and improvement.....	8%
Average rise in price to be realized on sale or out of exhaustion.....	8%
Total.....	16%

An equal tax on each of 1% would leave one with 7% and the other with 15% profit. That is how equal taxation has divided, and will divide, the land of certain speculative farmers, and how the real farmer who borrows money at 15% and pays speculator's prices finds himself older and out of house and home after a while.

How land for speculation operates on the money market I will illustrate by one of thousands of similar real examples: A shrewd business man had saved a sum of money. The money market offered a safe investment at 18% a year. A piece of land at \$40 an acre offered crops and enhancement. He bought the land, held it some years, collected his rents, and sold for two and a half times cost, realizing on his capital over 25%; and not till it sold for \$100 an acre was any improvement put on the land. There was a \$100 an acre paid to capital for nothing in return to anybody! One hundred dollars an acre for holding the people's land, when the land would have held itself better without help!

Three-fourths of the farming lands of the State, held the same way, is a curse to those whose interests in it was virtually given away, and who gave it value by their presence, labors and necessities! And now comes your Ventura correspondent and coolly proposes, by another legislative jugglery, to reward these government pets, the land monopolists and speculators, by doubling the price of their lands at one stroke, by a usury law. Let us see how it will work, omitting mention of all the great evils that have been so clearly pointed out by all modern political economists. The effect on land speculation I will illustrate by example:

Suppose A has \$10,000 at interest at 12% = \$1,200; B has land that yields the same amount, therefore worth the same. The Legislature reduces interest to 6%; so A's \$10,000 will yield only \$600, while B's land will yield the same as before, \$1,200 a year, therefore it is worth twice as much as A's money or \$20,000. I have been watching for 30 years the stealing of land under color of law, the thing is getting rather monotonous with me, so I say let us have a change, even if it is nothing but a change of thieves. In my opinion if Sect. II., Art. XIII. is properly used, and Sect. II. of Art. XVII. of the Constitution is vigorously enforced, interest on money will fall to 6% on mortgages, without the aid of usury laws or paper money. As these two sections are among the most objectionable of any in the Constitution to capitalists, every friend to honest government should study well their meaning and scope, and insist on their enforcement. By the latter section, not only the private "holding of large tracts of land uncultivated," but also the holding of large tracts of land "unimproved" is declared to be against the public interest. The term "unimproved" very aptly applies to nine-tenths of the cultivated lands of the State, which are truly made no better, but rather worse by cultivation. That I have stated the true meaning of the section, must appear, when by the rules of grammar the conjunction *and* always connects two sentences affirmatively. The word *and* proves there are two sentences in the section, in one of which a class of land is spoken of as "uncultivated," and even if such land was improved by a fence, it would still be against the public interest to be held in "large tracts." In the other sentence a class of land is spoken of as "unimproved," which evidently applies to any large tract, cultivated or not, which is not being made better. These qualifications being inserted evidently, so as not to include large tracts being reclaimed from flood or drought.

D. A. LEARNED.

Stockton, Cal.

ARCHDEACON WRIGHT, of the Anglican church, will shortly retire from his charge, in consequence of a serious difference with the Bishop of Columbia, who is now in England.

WITHIN the city limits of Sonora, the result of a few weeks' work, three men have taken out 900 pounds of gold, worth \$180,000. Other rich pockets are also reported in the vicinity.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### ALAMEDA.

THE NARROW-GAUGE ROUTE.—EDS. PRESS: A very pleasant excursion route is from Alameda to the Santa Cruz mountains, over the South Pacific railroad, a distance of 67 miles. From Alameda point the road leads over many miles of rich, level land but little above tide water, and destined in time to support a denser population than peopled the marshes around ancient Rome. Here beautiful villas will rise to enrich the landscape, never, we hope, to be despoiled by the Goths and Vandals of a barbarous nation, or crumble, to be finally exhumed by the mousing antiquarians of a strange civilization. Whirling over this tract we entered on the firmer lands of Santa Clara valley. Pleasant farm homes, approached by long shaded avenues, followed each other in rapid succession, pictures of quiet independence, with a background of mountain views, crisp and browned in the summer sun. Santa Clara, the realized dreamland of amateur florists and tree worshippers, was next reached, and we spun a happy three miles to aristocratic San Jose, where we were reinforced by another carload of pleasure seekers. The Union Gatling Band had enlivened the way with ringing strains of music, and with a delicious outburst of the Pinafore frenzy, we steamed against time over the road to Los Gatos, a happy little town in smiling possession of a charming valley. Here we followed a rapid down grade into a wooded canyon, starting with scanty oaks and changing to madrona, laurel, and finally a sprinkling of redwood. A stream wound along by the side of the track in a glorious tangle of thickets, the despair of prim gardeners and the pride of the canyon. Quiet pools, slyly suggesting trout, shabby huts and preposterous diggers, wretchedly frugal Chinaman, wood flumes, and a decayed flume of the old San Jose water works, old mountain trails and rugged rocks, a short tunnel, with numerous suspicious percussion-like echoes (?), were some of the things we saw in this shifting excursive kadeidoscope. Wright's station is a handful of houses jammed in between aggressive mountain heights. A shaded stream runs through, and wildness reigns on all sides. Mine host spread an ample repast, and sinister appetites made war on the hapless viands. Tables in the neighboring grove were spread with lunches from town, and peaches and water-melons fulfilled their destiny. Fun and frolic ruled the hour, music resumed, and dancing commenced. The big tunnel near by was visited; it is 6,200 feet long, and with the 1,600 feet to be completed. An interval of 25 miles of the richest scenery will bring one to Santa Cruz, the Mecca of fashionable pilgrims. The road will be completed by January 1st, and cannot fail of the immense popularity it deserves.—H. E. HALLETT.

#### AMADOR

SHEEP.—Amador Times, Sept. 27: J. P. Martin returned from the mountains on Tuesday night. He reports that sheep have done better this year than he has ever known them to do before. The range has not been overstocked and consequently there has been plenty of feed. Some bands are beginning to come down into the valleys and those that we have seen fully correspond with Mr. Martin's statement.

THRESHING.—W. W. Carlisle's threshing machine finished its work for the season on Saturday. The threshing crew that have been working with this machine, this season, claim the championship for rapidity of moving and setting, and for the amount threshed. The total amount of grain threshed, separated and cleaned in 63½ days is 65,532 bushels, being an average of 1,032 bushels per day.

#### FRESNO.

RAISIN MAKING.—Republican, Sept. 27: It was our pleasure a few days since to examine the raisins now being prepared for market by Miss M. F. Austin, of the Central colony. Never have we seen anything in the shape of raisins more perfect in size and flavor, and they are being packed in elegant shape. Miss Austin has 25 acres of vineyard, 20 acres in bearing this third year from cuttings, from which she has already made 6,000 pounds of raisins, and will make 2,000 pounds more before winter. The Muscat of Alexandria and Muscatel de Gorda Blanco are the varieties used. The grapes are very large, the bunches compact, and it is generally conceded by all viniculturists who have examined them that the grapes contain not less than 10% more saccharine matter than the same varieties raised in any other section of the State. The process of curing the raisins is by placing small platforms, made of half-inch sugar pine, two feet wide by three feet long, at convenient distances throughout the vineyard, each platform holding about 15 pounds. The grapes are carefully picked and laid upon the platforms, without handling or putting into boxes, and without rubbing off the fine dust or bloom which covers the grape and adds greatly to the value of the raisin. After they are sufficiently dry they are placed in layers with heavy wrapping paper between them, in boxes holding about 100 pounds each, and allowed to go through the sweating process, requiring from two to four weeks, after which they are packed in small boxes, 5, 10 and 20 pound, and are put under a heavy pressure to make them into a compact mass that will retain the moisture and aroma of the per-



fect raisin. Miss Austin uses 1,000 platforms this season. Her vines yield an average of 10 pounds each of grapes, the first season of bearing. They have not been irrigated since June, but are thrifty and healthy. Her grape product this season will pay all expenses of the vineyard, pay for the platforms, boxes, etc., which can be used successive seasons, and possibly a small margin above. She is very justly proud of her success, and enthusiastic over the future prospects of the raisin industry in this county.

**GRAIN.**—*Expositor*, Sept. 24: The farmers throughout the country are busily engaged in preparing their lands for seeding, as they think it hardly possible that another unfavorable winter should prevail. All the land that has been heretofore cultivated will be seeded, and about 40,000 acres of new land will be cultivated.

#### KERN.

**WORK.**—*Californian*, Sept. 25: One needs to go out of town to see the work of preparation for another planting season. New ground is being cleared on all sides, and the smoke of burning brush and stumps may be seen in every direction. The Jewett and Anderson ranch is being cleared of the brush and timber along Old River, and beyond the Chinese are clearing rented ground. The coming winter, if rainy, as expected, will be the most active ever known in the county.

#### LOS ANGELES.

**SAN FERNANDO WHEAT GROWING.**—*Express*, Sept. 26: The farmers of San Fernando valley are arranging to put in a larger crop than ever the coming season. They feel quite encouraged, and some who have been badly involved by successive seasons of failure are coming out all right, with bright hopes for the future. Deming, Palmer & Co., millers of Los Angeles, have purchased 11,000 sacks of wheat from Messrs. Hubbard, Wright, Porter and Becket, farmers of San Fernando, at 1½ cents per pound, delivered at the San Fernando depot. The price is sufficient to allow the producers a fair margin over cost.

**BURNING PETROLEUM.**—General George Stoneman is using crude petroleum for fuel to operate the engine at his wine-making establishment at San Gabriel, and he finds it an excellent substitute for wood and coal. The oil is stored in a tank suitably elevated, and located at a safe distance from the fire. From this tank the petroleum is conducted in an inch pipe to the fire-box, into which it is injected by a jet of steam. The blaze is continuous, and furnishes a bright light and intense heat. The apparatus, when in operation, resembles an exaggerated gas-burner, charged at full force. General Stoneman thinks that the use of petroleum for this purpose will effect something of an economy in running expenses, and it certainly obviates a great deal of work, as it requires very little attention and makes no refuse. The petroleum, unfortunately, is held at a much higher price than it should be, considering the fact that it is produced in our own county. If the price should be reduced, so as to make its use an object, we predict that this new kind of fuel will come into general demand. Petroleum is already used for firing purposes in the refinery at Ventura, in the works of the Los Angeles Company, in Sespe district, and at Newhall.

**FOOTHILL FRUIT.**—Orange Cor. Anaheim *Gazette*: During a recent visit to Aliso canyon, I made a discovery which convinced me that the foothills of our mountain ranges can be utilized otherwise than in furnishing food for cattle and sheep, or as ranges for "the little busy bee." Mr. Frame has a ranch in the hills facing the canyon on the east side, upon which he has set out about two acres of Muscat grapes and a few deciduous fruits, embracing apples, pears, peaches, plums, etc., and I have never seen so thrifty vines and trees or so large a growth for their age. He informed me that they had never suffered in the least for want of water, and an examination of the soil showed abundant moisture but a few inches from the surface. The soil seemed to be a mixture of clay and loam. In the mountains and foothills is a great amount of government land that has heretofore been considered nearly worthless, which, if set out in vines and fruits, would afford delightful and healthful employment, and yield a rich recompense to the husbandman.

**THE ORANGE CROP.**—Anaheim *Gazette*, Sept. 27: It is now certain that the orange crop this year will be a small one throughout the county. But to make amends, it is probable that the fruit will be large. A small crop and good fruit is far better than a large crop and inferior fruit. The latter condition of things prevailed last year.

#### MENDOCINO.

**MENDOCINO COUNTY FAIR.**—We learn from our exchanges that the first annual exhibition of the Mendocino County Agricultural Association, held at Willitsville, Little Lake valley, was a success. The attendance was good, and the exhibits creditable. The display in the pavilion exceeded expectation. Of stock, in the horse line there was a full showing, of every kind and style. In cattle and sheep the display was meager. There was, however, a fine flock of Angoras, and choice porcine specimens, on exhibition. The officers took good care to prevent untoward occurrences, and the week passed without accident or disturbance. Persons present, who are qualified to speak, pronounce it the best initiatory fair they ever visited; and the directors receive much praise for inaugurating and pushing to a successful termination this first agricultural fair in the mountains of the Coast range. We are obliged to defer till next week the publication of premiums awarded.

**THE HOP CROP.**—Ukiah *Press*: The hop yield of Round valley is not as large as that of last year. Some plowed up their fields and others did not cultivate as carefully this year as last. Somewhere from 23,000 to 25,000 pounds were baled at the reservation hop-house this fall.

**MERCED.**

**NOTES.**—**EDITORS PRESS**: Wheat sowing has actively commenced around here. Mr. Attwood, on the (railroad-rented) land close to town, has had three 8-horse or mule teams harrowing in the seed wheat for the past week. Also, Mr. Carroll and others are at work, in anticipation of early and heavy rains. Road-making has made considerable progress, about six miles, between here and Dickenson's Ferry. Several bridges have been built and the road graded. On the so-called West Side, the road through Miller & Lux's has been bought for \$3,000, giving a good road to Gilroy by Pacheco Pass. It opens a good country for settlers, in rich agricultural land; also a wide artesian belt, with canal-irrigating water on some of it. Lots of wild geese are flying round, indicating early rains. An immense area of summer-fallow done. The next few weeks will be busily occupied wheat sowing.—M. J. O'BYRNE, Merced City.

#### MODOC.

**WOOL.**—Cedarville Cor. *Independent*: Sheep shearing has commenced in the lower part of the valley, and, from what I can hear, the wool crop this season is quite a success.

#### NAPA.

**TREE GROWTH.**—Napa *Register*, Sept. 27: Land in Napa, as in other valleys, may require a rest, or at least some attention to the theory of rotation of crops, but the assertion by some croakers that it is "worn out" is somewhat premature, when we consider that it can still produce cherry trees that make a growth of eight feet in one season from the bud, and plum trees upwards of ten feet, as is the case at the Magnolia Farm nurseries.

#### SACRAMENTO.

**GRAPE PRICES.**—Folsom *Telegraph*, Sept. 27: Wine grapes are much in demand, and are bringing a higher price than last year. A company in Sacramento is using from 20 to 30 tons daily in manufacturing brandy. Sixteen dollars per ton is being paid for grapes by this company. This is in excess of what was paid last year. It would seem that grape growers in Europe have latterly had a partial failure, and should this continue through successive seasons, wine grapes will be in great demand and grape culture will receive a new impetus.

#### SAN BERNARDINO.

**ITEMS.**—*Press*, Sept. 27: The crop of soft-shelled almonds proves the largest ever raised in this section. Most of our people will be surprised to know that our Mission grapes are not the real Mission at all, but a different variety introduced a good many years ago by somebody from somewhere. The true "Mission" can be seen at San Diego, and is a larger grape than ours. This we learn from one of our oldest citizens.

**RAISINS.**—At the last meeting of the R. F. G. A.—that means the Riverside Fruit Growers' Association—that body decided upon the form and style of the raisin boxes, style of label, form of stencil plate and style of marking. Whole, half and quarter boxes are to be of the same superficial size, differing in depth. The ends of whole boxes are to be marked thus:

<div style="text-align: center;"> RIVERSIDE FRUIT GROWERS' ASSOCIATION RAISINS. </div>
--

First grade quality are to be marked "London Layers," second grade quality, simply "Layers." Each maker is to have a number, which is to be stamped on his boxes. This will give the maker of a superior raisin a chance to obtain the benefit of it. Buyers can call for Riverside raisins No. 1, or No. 20, as the case may be. Last year we mentioned Mr. Henderson's vineyard as a fine evidence of what could be done in two years in that direction. The item was extensively copied, and we therefore continue the story, not because his is more prolific than many others in the settlement. Twenty months from planting, his two-acre patch yielded 140 boxes of cured raisins, 20 pounds each. This year he calculates that he will have certainly 400 boxes, and possibly 500. We have looked the vines over, and should think his estimate moderate. The grapes are very fine—indeed, many of them are simply immense.

#### SANTA CLARA.

**THE ECLIPSE INCUBATOR.**—San Jose *Mercury*, Sept. 29: The success of the Eclipse incubator, which, with its daily increasing brood of chickens attracted so much attention at our fair last week, entitles it to special mention in our columns. Four weeks ago the manufacturers sent one of their machines to this city and placed it in charge of Dr. J. D. Scott, who has made unsuccessful attempts with other machines. Fifty eggs were put into it each day for the next six days, and on Sunday last these began to hatch. The machine was then moved to the pavilion where it has since hatched out a large brood each day. Dr. Scott says that the machine

governs itself perfectly, requiring no watching, and that the chicks are as strong as any he ever saw and are growing nicely. If a reliable self-regulating incubator is to be had, it is quite an item to the poultry interests, and that the Eclipse is all this seems proven. One running at Milpitas hatched 98% of the fertile eggs.

**FALL IN ACORNS.**—Gilroy *Advocate*, Sept. 27: The acorn crop is heavier than usual this year. One tree, at Bell's Station, overburdened, suddenly fell with terrific force, a few days ago, causing joyful commotion among the hogs of that vicinity.

#### SONOMA.

**GAME AND FISH.**—Levi Davis, of Forestville, in Petaluma *Argus*: My old dog, "Prince," has killed in the last 15 months: Deer, 30; coons, 26; foxes, 7; wild cats, 9; catamounts, 2; skunks, 37. Three of us went out yesterday morning and got two fine deer. Then we have plenty of carp fish, which are simply grand. I am very sorry that I cannot exhibit some at your fair this season. I have them from three feet down to three inches long, and plenty of them. They have done splendidly this year, and I do not know how many I have raised, as the water has not been drawn off yet.

**GRAPE ITEMS.**—*Index*, Sept. 25: We are credibly informed that the grape crop of Sonoma valley will be but little over half a crop. On Tuesday last, B. F. Campbell packed 60 boxes of Muscat and Tokay grapes, for shipment to Australia.

#### TEHAMA.

**THRESHERS' FIGURES.**—Paskenta, Cor. Red Bluff *Cause*: The number of sacks of wheat and barley threshed by the machine of Harris & Wolcott in 48 days, amounts to 41,500; being an average of nearly 900 sacks per day. Such an average, in the warm weather we have had during the threshing season, speaks well for the energy and endurance of the boys. This machine finished threshing on Saturday last. Mr. Harris says that, during many days, the thermometer was up to 130° in the sun, and that few of the workmen quitted work on account of the excessive heat during the season. The quantity of straw run through the machine this year is much greater than that of last year, for the same number of sacks of wheat.

**WOOL.**—Many of the farmers who have sheep in this part of the county have commenced shearing. The north wind of last week stopped the shearing for a few days; but they have resumed their work this morning. The wool-growers say that the wool is not so good this year as it was last.

#### TULARE.

**FIGURES ON WOOL AND ALFALFA.**—Cor. Delta: I shall first show what has been done, and what is possible here on 40 acres of land planted to alfalfa and utilized with sheep. The result of actual experience here proves that the second year after planting, each acre thereafter will annually support, in a fine healthy condition, 15 head of sheep and their lambs until marketable, allowing the flock to roam at will over the clover; and that the increase from a flock of ewes so kept will average 90%, the lambs, at the age of 3 months, netting, at lowest estimate, 75 cents each. Wool from the 15 head, clipping twice per year, will amount to 12 pounds each; cost of shearing, 6 cents each, or 90 cents per acre; sacking, 50 cents; and hiring help, particularly during lambing season, 25 cents per acre. On this estimate, the account annually, per acre, will be as follows: Fifteen sheep, 12 pounds of wool each, 180 pounds at 12½ cents, \$22.50; increase, 13 lambs at 75 cents each, \$9.45—total credit, \$32.25. Shearing, 15 head at 6 cents each, 90 cents; sacking 180 pounds of wool, 50 cents; hired help, 25 cents; irrigating 1 acre, \$1—total debtor \$2.65; leaving a credit balance of \$29.60 per acre. Counting the interest on capital invested at 1% per month, and we have an income equaling the interest on a little less than \$250 per acre, or on \$10,000 for 40 acres of land; or an annual income of \$1,184 per each 40 acres. Again, alfalfa is perennial, and once planted, thereafter requires no further care or cultivation. Cost of planting, \$3 per acre; fencing, 3-board fence, \$20; 15 sheep, at \$1.25 each, makes a total of \$18.75; all told, exclusive of the cost or value of the land, the original capital invested equals, per acre, about \$41.75, which, deducted from \$250, the capital per acre as above, on which we found the yearly income, would be the interest at 1%, and we have left over \$200 per acre, as value of the land, placing the use of money invested in realty at said handsome rate of 1% per month.

**HANFORD ITEMS.**—Delta, Sept. 26: We noticed a good deal of young wheat on different ranches, in all stages of growth—some heading out, some green, and some ripening. In a good many places there is an enormous crop of sunflowers; in others, sheep have been, and are, making havoc with weeds of all sorts. Beans do not seem to promise very well; neither do Irish potatoes. We saw one field of fine pumpkins very conveniently near the highway! The ground is very damp at night, and shrubs and trees show new growth at the ends of the branches; from all which we conclude that moisture is rising in the ground—and we hope for a rainy winter. The fall clip of wool is being brought to the station, and grain still comes in small quantities. Alfalfa seed has been receiving a good deal of attention, though five or six cents per pound gives much less profit than last year's prices.

#### News in Brief.

**RINDERPEST** is spreading in Russian Poland. GERMANY has sent a scientific mission to Africa.

A VICTORY has been achieved by the Bolivians at Coloma.

INDIAN troubles are again reported from Boise Basin, Idaho.

THE German quarrel with Japan is said to be getting more serious.

SCOTCH, English and Swedish farmers are emigrating to America.

IMPORTS of specie at New York last week aggregate \$8,557,542.

THE hop crop in England this season is the smallest since 1860.

ALL quarantine restrictions against New Orleans have been removed.

THE United States Supreme Court meets in Washington, October 13th.

CAROL is still in a state of anarchy, and the gates of the city are closed.

PORTLAND, Or., is to have a free postal delivery, commencing October 1st.

CARS are being run in New York now on schedule time by compressed air.

THE British troops continue to advance on Cabul, accompanied by the Ameer.

THE Mercantile Mutual Marine Insurance Co. of N. Y. has closed up its business.

SILVER in London, 51½; consols, 97 15-16; 5% U. S. bonds, 106½; 4s, 105½; 1½s, 109½.

THE election of Sir Francis Wyatt Truscott as Lord Mayor of London is announced.

GERMANY will probably participate in the proposed International Money Conference.

GOLD and silver coin is hereafter to be paid out freely for all Government obligations.

DISTURBANCES are imminent at Tipperary, Ireland, in connection with the land troubles.

THE Russian expedition against the Tekke Turcomans is in urgent need of reinforcements.

THE Philadelphia mint coined in September: silver dollars, \$1,808,050; minor coins, \$14,737.

THERE is a scarcity in the Treasury at Washington of gold in denominations of less than \$20.

It is reported that 28 prospectors have been massacred by the Indians in southeastern Utah.

SPECIE in the Imperial Bank of Germany decreased during the past week 4,806,000 marks.

THE claim of the right to use the military roads in Bulgaria has been conceded to the Turks.

A GENERAL strike of all the trades in the United States and British North America is on foot.

A TWO days' fight took place in Texas recently between Indians and hunters, seven of the latter being killed.

AT Liverpool wheat is quoted at 9s 10d@10s 6d for average California white, and 10s 9d@11s 2d for club.

UNLESS there is some change soon, it is feared that the cotton industry in France will come to a standstill.

LEGITIMIST banquets were given at several places in France in honor of Count de Chambord's birthday.

THE excess of exports over imports for the year ending Aug. 31st, 1879, amounted to \$289,709,341.

THE walking match at New York ended last Saturday night, Rowell winning the belt—making 530 miles.

PINE tree cones, which contain the seed, are being exported in large quantities to Europe from British Columbia.

THE Public Stock Exchange of Todd, Williams & Co., at Philadelphia, suspended payment Sept. 30th. Liabilities, \$250,000.

A DISPATCH from Paris announces that the shareholders of the Frankfurt and Hamburg railway have confirmed the cession of that road to the State.

IN San Francisco, half dollars are quoted at 99½ buying, 99½ selling; trade dollars, 97 buying, 98 selling; Mexican dollars, 90 buying, 90½ selling.

AT Louisville, Ky., Sept. 30th, in the three-quarter mile dash, for two-year-olds, Mendelsohn won, Aurora's Baby second. Time 1:16½. The mile dash, all ages, Buckner won, Buckshot second. Time 1:44½.

**BONE MEAL.**—We hear from every direction, that our lands are rapidly becoming exhausted, and unless something is done soon, serious results will ensue. From the best authority, we learn that bone meal not only increases the yield of crops, but enriches the soil for future years. Farmers have now an opportunity to experiment on a small scale, and if they find it a success, of which we have no doubt, they can soon enlarge their applications. One farmer should not wait for his neighbor to begin, and to see the result of his experiment, but each one should try for himself, and compare his result with that of his neighbors. We are positively informed that the company now manufacturing the above article, unless encouraged more than they have been heretofore, may abandon the enterprise; and if such should take place, it would be a calamity to be regretted by the whole State, for it may take years before another such enterprise be started. Our products of wine and wheat are in great demand abroad, and this demand is yearly increasing, consequently, unless something be done to enable our lands to yield as formerly, our material for export may be seriously reduced. As the season is about to commence, we urge our farmers and horticulturists, for their own good, to give the material a trial.





## The Egg.

[Written for the RURAL PRESS, by HOPE HAYWOOD.]

Beautiful cell,  
With freshened gleam,  
And pearly bloom  
On thy oval shell—  
What dost thou tell?  
What if the egg-cup will not hold  
Aught but its own, its unwrought gold?  
It yet may be—  
The germ of a life-hope,  
Full and free;  
A life that shall fill,  
A world full of nestlings,—  
At its pure, sweet will,  
When its own unfolded growth in time,  
Shall have run its course to an end divine;  
Shall shelter them there with folded wings,  
And its sweetest song be the one it sings,  
To the brooded love of its daily care,  
That it shelters and loves, though the world is fair.  
Say, what would we have thee be—  
But an egg—to all eternity—  
What would we have the egg shell hold,  
But its own full heart, and its own true gold.

El Cajon.

## Chair-Covers.

Chair-covers, like crumb-cloths, serve two ends—preserve the freshness of new furniture, or conceal the shabbiness of old. In either case they form an important feature of the apartment, and therefore merit a careful selection. For lightness and delicacy, preference is given, in washing fabrics, to tiny-flowered patterns on white and pale gray grounds, or hollands and linsens corded with scarlet and blue twill. These, however, soil too rapidly for general use, and it is more advisable to choose foliage designs or sprays on dark green, red and blue grounds. The two latter are the most perfectly ingrained. Green, as a rule, turns yellow after the first wash.

For easy or wicker chairs, it is usual to make a loose cover or slip, which passes completely over the chair; but smaller ones require merely a covering for the stuffed seat. There are three kinds of loose covers—a sort of chair-shaped bag, an improved substitute for the dusting sheet; the more closely fitting cover, fastened at the back or sides; and a similar one which drops right over and is adjusted by tape strings, the latter being almost exclusively reserved for cane and wicker chairs. The best materials for these include cretonne, chintz, poplin, linen, drill, holland, crumb-cloth, crash, etc. Occasionally covers are more or less elaborately adorned with embroidery, either bands, medallions, bouquets, etc., or, in plain line and holland, ornamented with perpendicular strips of the material, vandyked at the edges, and slashed at intervals down the center, to thread in and out a bright-colored ribbon. Lining is essential, both for strength and set, except with a particularly stout material; the backings usually employed are unbleached calico and what is known to upholsterers as longcloth lining.

In venturing upon a loose cover, select, for the first trial, the most straight-backed chair in the house, then measure separately for the back, sides, seat and front, calculating, according to the width of the stuff, how many yards are required. Here shrewd reckoning serves for the experience which guesses the quantity almost at a glance, and the correct, even though unpractised, worker can attain not only a good but a close fit. The next thing is to take the pattern. Many workers merely tear off the right length, with turnings of the several portions of the chair, and shape and pin them on the article itself. Some, for less trouble, do this on the wrong side of the fabric, and others, on account of the pattern on the right, turning the pins.

Such a plan, though expedient, is scarcely feasible for the novice, who will find it safer to take care that the pattern runs in the same direction and the sides match as closely as possible. Inattention to this may ruin an entire cover. Tack the various portions together and try them on the chair, now, with perfect safety, on the wrong side. At the junction of arms and back, gores make a vast improvement; their size and position admit of no rule, as they vary in every chair; judgment alone can guide the worker. When the cover fits satisfactorily, stitch the seams strongly, and overcast each with white cotton. Leave open, as preferred, either the central back seam from top to ground, or the right side seam from the seat, the latter being the least conspicuous place. In either case, the mode of finishing is the same.

On the under edge run a two-inch strip to match, turn it over and fell down on the stitches; this then projects one inch, and forms a foundation for the button-holes. Finish the overlapping edge, make a false hem, and sew buttons on the wrong side of it, taking care not to let the stitches through. By such a plan the button slips into the button-hole first as a hook into an eyelet hole. In a circular chair the sweep causes the outer back to set like a balloon. Rectify the fulness by taking in side and central plaits till the material lies smoothly. The

curved outline, however, makes it rather difficult to manage this without a stretched and rather poor appearance at the lower edge; hence it is far more satisfactory to add a flounce, which will take up eight or 10 inches of the height of the chair, and is to be calculated for in the first measurement.

Cut off strips of the right depth, widthwise from the stuff, allowing one-third of the exact size extra for fullness. Join up the selvage seams, and gather the frill and set it into the chair-cover by a narrow cording. The flounce should be rather scanty at the back and sides, especially when marked by a decided pattern; plain colors always admit most fullness. When the cover is ready for slipping over, great is the beginner's disappointment that the fit is not at once perfect. Hollow places "ride up," as upholsterers say, and suggest the real method for wickerwork and cane chairs, of keeping covers in place, sewing tape strings at every necessary spot, and tying down underneath through the cane, etc. This accomplishes the desired result.

Sofa covers, though of larger proportions, follow the foregoing rules.

**LITTLE THINGS.**—Mrs. Harbert, in the *Inter-Ocean*, gives the girls the following little lecture: A word of caution to our girls as to care for "little things" is perhaps wholly unnecessary when such testimony from those whom we must love to please is overwhelming upon this point. The girl who educates herself to uniformly kind speaking to "brother" as well as to her "admirers" will never be left musing at home while everybody else is "having a good time." Though her dress may be less ruffled than her mates, her temper may be smoother; if her neighbor is a more sprightly conversationalist, she can strive to charm by the obliging distribution of her store of knowledge when sought. Should her companion be an artistic singer, she may please by willing service in this art, rather than in a showy display of an inferior talent. Comparatively few people are good judges of music, and a willingness to amuse and please a company will often win favor when greater talent will be overlooked in those less obliging. The politeness of the Frenchman who offered a disappointed lady the last seat at a favorite opera, which he had procured before her arrival, was true kindness, though courtesy forbade its acceptance. Unselfishness, which gives to another the favorite seat, or the most desirable accommodation, often furnishes a key to character which unlocks the door to many an enjoyable and profitable friendship. Remembering, as we must, how much of life's happiness is made up of these "little things," and how often life's "angels" appear to us in disguise, the only wonder is that we do not oftener excel as prophets, and, with the wisdom of a seer, penetrate the veil of the future, which conceals the circumstances of life for good fortune or ill, to discover the hair that suspends the sword by a more careful thought for the significant "little things."

**KEEPING ON THE FARM.**—The census tables suggest serious thoughts to every true patriot. In the older States the cities are growing rapidly, while the country population is diminishing. The young men leave the farms and crowd the stores of the city. Many farms are deserted, and houses are going to decay, while in the cities thousands of young men are vainly seeking for employment. One reason for the desertion of the country is that young men grow weary of a monotonous life. Farm-houses have few papers and fewer books; no public libraries are within reach, and there are no lectures or concerts. It is all work and no play, and the young men long for more variety in life. A farmer of superior intelligence and refinement, who has kept all his boys at home, tells how he has done it. "My eldest is near 21, and the other boys in the neighborhood younger than he have left their parents. Mine have stuck to me when I most needed their services, and I attribute this result to the fact that I have tried to make their home pleasant. I have furnished them with attractive and useful reading, and when night comes, and the day's work is ended, instead of running with other boys to the railroad station and adjoining towns, they gather around the great lamp, and become interested in their books and papers."

**TEMPERANCE WORK PERPETUAL.**—In one respect temperance work is like housework. Women are sometimes heard to wish that they could get this dusting and darning and dish-washing done up once for all; as a man builds a barn, clears a wood-lot, or digs a well, and is through with it. It is tedious to keep pegging away at the same hum-drum task to-day, to-morrow, and the year round, as long as one lives—always doing it but never getting it done. But that is what temperance people must make up their minds to do. There is no discharge in this war. We may whip in many a skirmish and carry many an intrenchment; we may burn the enemy's supply trains and break up his camps; but so long as human nature is human nature, so long as men love self-indulgence, we shall have to keep a running fight with this foe. To call this task a "reform" is misleading. It will not be like the crusade against slavery. That evil has been wiped out. When intemperance is wiped out we may expect to hear the trumpets blowing for the millennium.—*Good Company*.

**HAYING AT NINETY-TWO.**—Elizabeth Leibesberger, aged ninety-two, resides in Richmond township, this county, and is in all probability one of the richest maiden ladies in the county. She owns several beautiful farms in Richmond township, where she has lived nearly all her life. Her brother is also a large land-owner. Miss Leibesberger is remarkably well preserved. She was never married, and has lived ninety-two years in single blessedness, without being dragged down by the cares of married life, domestic troubles and other vexations and tribulations. She has silvery gray hair, is neat and trim in appearance, and considering her great age is quite active and alert. A few days ago her farm-hands commenced haying. To their great surprise, the aged lady and land-owner made her appearance in the field, rake in hand. She was suitably attired for the occasion, her skirt and dress being well gathered in and tucked back, so as not to drag or give her any trouble in moving freely over the field. She said she was going to show them how to work. This was greeted with clapping of hands and cheers. Miss Leibesberger went to work in good earnest, tossed the hay over and over, raked it into rows from one end of the field to the other, and then helped to rake it on piles, and finally assisted in loading and raking after the wagons. It was an exhibition of old-time hay-making, the way "they used to do when she was a young girl," she said, "before the patent machinery was ever heard of." The lady worked in the field the entire day, and kept up her pluck remarkably well.—*Reading (Pa.) Eagle*.

**DISTRIBUTION OF THE HARD WORK.**—None of us, or very few of us, do either hard or soft work because we think we ought; but because we have chanced to fall into the way of it, and cannot help ourselves. Now, nobody does anything well that they cannot help doing; work is only done well when it is done with a will; and no man has a thoroughly sound will unless he knows he is doing what he should, and is in his place. And, depend upon it, all work must be done at last, not in a disorderly, scrambling, doggish way, but in an ordered, soldierly, human way—a lawful way. Men are enlisted for the labor that kills—the labor of war; they are counted, trained, fed, dressed, praised for that. Teach the plough exercise as carefully as you do the sword exercise, and let the officers of troops of life be held as much gentlemen as the officers of troops of death, and all is done; but neither this, nor any other right thing, can be accomplished—you can't even see your way to it—unless, first of all, both servant and master are resolved that, come what will of it, they will do each other justice. People are perpetually squabbling about what will be best to do, or easiest to do, or advisable to do, or profitable to do; but they never, so far as I hear them talk, ask what it is just to do. And it is the law of heaven that you shall not be able to judge what is wise or easy, unless you are first resolved to judge what is just and to do it.

**THE HANGING GARDENS OF ASSYRIA.**—Mr. Rassam's excavations on the Mujelibi Mound have proved that this was the site of the famous hanging gardens, for in its ruins he found wells, aqueducts, and ponderous masses of stone, all proving that the building had been erected, as the Greek writers say, to imitate mountain scenery. The stone used was a black basalt, which is found only in the Armenian hills, and the immense masses must have been floated down the river. In a mound to the south of the mass of city ruins, called Jumjuma, Mr. Rassam discovered the remains of a rich hall or place, with columns composed of enameled bricks and mosaic; the cornices were of painted brick, and the roof of rich Indian blackwood. From the position of this palace or banqueting hall it would appear to have been situated on the bank of the river, and was probably the site of the state festivals and banquets. The inscriptions found there prove the edifice to have been erected by Nebuchadnezzar, and probably beautified by his successors.—*The Athenaeum*.

**DON'T OVER-INDULGE THE CHILDREN.**—Parents do not realize how that home-life which magnifies the pleasures of the table, whose special treats for the children habitually take the form of something to eat or drink, is laying foundations on which it will be all too easy in later life to build the superstructure of narcotism and drunkenness. But the earlier a child learns that there are sweeter and higher satisfactions in the delights of melody and color, in reading the riddles of nature, in the fellowship of choice books, than in the gratification of the animal appetites, the sooner will he come into the highest meaning of life, the less will be the attractions of animal indulgence forever afterwards.—*Good Company*.

**THE bulk of men in every community under our government are animated by the passionate ambition for political office. It is this which does most to make party government what it is. It is this which prevents the administration of any government on a purely business basis. As a matter of fact men do not desire good government pure and simple; they desire as much good government as is consistent with the gratification of their personal ambition, or vanity, or self-interest, or love of their friends; and with their desire to see their enemy's humiliated or foiled, and their prophecies, whether of good or evil, fulfilled.**—*The Nation*.

## Domestic Happiness.

The happiness of home depends in a great degree upon the way in which the marriage relation is regarded. If, as old Rutherford has it, a man considers that the woman was not taken from his head to be his superior, or from his feet to be his slave, but from his side, to be his companion and equal; if so regarding her he confides in her judgment, looks to her in perplexity, considers that she has an interest in his business affairs, consults her on all important matters, lets her share in his pleasures and pursuits, and also in his purse, he lifts her at once to the place God designed that she should fill, her heart is fully satisfied, and he finds in her all he asks for. Such women were Mary Somerville, Mrs. Agassiz, Mrs. Prof. Hitchcock, and many others we might mention. But let his idol fall from the pedestal where she was enshrined before marriage, and become simply the household drudge, nurse-maid, and sempstress, without the wages; having to ask for all she needs, and often preferring to go without rather than to ask; thought too little off to be conversed with, read to, or confided in; the love to the husband dies out, or is transferred to the children, happiness is sought outside of home, and the heart is left bitter and desolate. With many men the great charm in a woman is to have her clinging and dependent. So they take the "child wife" Dora, and find too late it was an Agnes whom they needed. Men and women are essentially different—two distinct halves of humanity, making one perfect whole. Something must be sacrificed to make that whole perfect. If, in the process of growing alike there is some attrition, it is worth the pain. Women gain in strength and fortitude; men in depth and tenderness. "Why did you never marry?" asked a married lady of her charming friend. "Because I never found so splendid a man as you did." "Ah, but I took him in the rough, and have helped make him what he is." There it is; each takes the other in the rough. And whether they become more rough and jagged, or polished corner-stones in the sacred temple of home, depends upon the spirit of mutual love and forbearance which each brings into daily life.

The mother, occupied with her children and household cares during the day, finds heart and brain heavy at its close. Yet it is a great mistake to meet her husband on his return from business with a sorrowful face, or to pour her vexations and annoyances into his wearied ear. Neither should the husband bring the gloom of the counting house to sadden the fireside. That is a sorrowful home where the children stop their sports when the father appears, when he orders them at the least noise to be seated in different corners of the room, when he lies down on the sofa and all must be perfectly hushed, or sits before the fire and never speaks.

But if in closing his front door, he shuts out business cares, how is home gladdened by his presence. The children rush to meet him, they climb his knees, or sit beside him and their pleasant prattle and frolic that follows, divert his mind effectually. The weary mother escapes for a quiet half hour, and returns refreshed, to preside with grace at the tea table. This is the time for telling all the pleasant occurrences of the day, or laughing over its mishaps; reading such family letters as may be shared in common, and telling such items of news as may interest and divert the mind of each. Thus living out of self, and for each other, life takes on added sweetness year by year, and home is a heaven of rest.—*Congregationalist*.

**DISAGREEABLE PEOPLE.**—We should bear with disagreeable people better—and generally find them more agreeable, probably—if we were accustomed to look on their mental infirmities with more of the pity with which we regard their physical deformities. We have only commiseration for the man who is born with club feet, or cross eyes, or St. Vitus' dance. We do not blame and berate him that his efforts are crippled by such disadvantages. But the man is just as deserving of pity who comes into life afflicted with a club-footed sense of propriety, or a cross-eyed judgment, or an epileptic temper. At least the reflection that we might not do near as well as he, were we in his place, should temper our criticism and dislike. "You are pale," said one soldier to another, as they were waiting for the enemy's attack, in a tone that implied some question of his courage. "If you were as afraid as I am you would run away," was the pat reply.—*Good Company*.

**PREMATURE WOMEN.**—When girls midway in their teens throw off their natural, girlish habits and attire, don long skirts, skoot up their hair, and affect the airs and dress of young women, they would often be surprised to know what their elders really think of the improvements. One such young miss went to the depot recently to meet an aged friend of the family, and was surprised to find herself not recognized upon greeting the visitor as she stepped from the car. "Don't you know me, auntie?" "Why, this isn't Maria, is it?" "Certainly; don't you think I look better than I did last summer when you were here?" "No," replied the honest soul, looking the girl over, "to tell you the truth, I don't. Go home and let down your hair and be young while you can, for it will not be many years before you will be glad to have people take you for a girl."—*Springfield Republican*.



## Chaff.

A PARISHIONER of a Berkshire pastor was asked what the color of the parson's eyes was. He didn't really know, "for," he said, "when he prays his eyes are shut, and when he preaches I generally shut mine."

A WOMAN in Omaha recently swallowed a gaiter button, and was choked nearly to death. "We have said a thousand times," says the Burlington *Hawkeye*, "that some serious trouble would yet come of this custom of Omaha women unbuttoning their shoes with their teeth."

GIDEON COOK, a Baptist preacher, was a man very eccentric in speech, even to his last earthly moments. A few hours previous to his death, his brother, also a preacher, came to his bedside and inquired, "Do you think you are dying, Gideon?" And the reply, sharp and quick, came: "Don't know—can't tell; never died."

HEMP came first into use in the cord-age.—*New York News*. And wind instruments in the band-age.—*Rome Sentinel*. And arithmetic in the ad-age.—*Salem Sunbeam*. And money in the coin-age.—*Waterloo Observer*. And cradles in the crib-age.—*Whitehall Times*. And slaves in the bond-age.—*Rome Sentinel*. And trees in the foli-age.—*Albany Argus*. And dogs in the saus-age.—*Ex.* And cows in the pasturage.—*Ex.* And flies in the porr-age.—*Schenectady Union*. And old maids in the dot-age.—*Ex.* And Adam in the man-age—i. e., in our first parent-age.

ONE DAY, while the paragrapher (accent heavy on the second syllable) was railroading his dangerous way toward a doomed village that fate had marked for his next lecture, he was accosted by a commercial traveler from Chicago, and they entered into harmonious converse. "And what are you selling asked the man from the city on the lake. "Music," calmly responded the liar from the man on the river. "Sheet music?" queried the Chicago representative. "Chin music," briefly replied the good man from Burlington. And the Chicago man only got behind the seat and made a gurgling noise with a leathern-covered hottle, and emerged to remark that his colleague would have a blamed sight better line of samples if he would sell cheek.

AN AGED AND HISTORIC SHIP.—The ship that carried William III. (Prince of Orange) to England, when he went to take possession of the Monarchy, had a long life. It was named the Princess Mary, and was built on the Thames. It was more than half a century old when William landed from her at Torbay, November 4th, 1688. She was 80 feet 3 inches long, 23 feet broad, double decked, with two masts, square rigged. Her earlier name is said to have been Brill, but this we believe is not established. She was christened the Princess Mary after the King's consort, when she was selected to hear the fortunes of the monarch to his new kingdom. During the whole of his reign and that of his successor, Queen Anne, she was used as a pleasure yacht and was kept in thorough order, some of the repairs being quite extensive. In 1714, when the vessel came into possession of George I., she ceased by his order to form part of the royal establishment. About 1750, in a fit of economy, the government sold her to the Messrs. Walters, of London, who christened her Betsy Cairns after a favorite West India belle of that name. After a score or more years in the West India trade, during which she was known as a staunch vessel and a fast sailer, she was sold to Messrs. Carlins, of London, who employed her as a collier to take coals from Newcastle to the great metropolis. About the year 1825, more than two centuries probably from the date she was launched, she was purchased by Mr. George Finch Wilson, of South Shields. On the 17th of February, 1827, she was taking a cargo of coals from Shields to Hamburg and struck upon the Black Middens, a dangerous reef of rocks north of the mouth of the Tyne, where a few days afterward she became a total wreck. Her remains were eagerly purchased, and innumerable snuff-boxes and other souvenirs were made from the old oak that had been so indestructible through more than 200 years.

A SENTIMENTAL FLAME.—The Charlotte, N. C., *Observer* tells of a citizen of that county, who, having married in 1843, lighted a fire on his hearthstone as soon as he carried his bride to his new home, and has kept it burning ever since. The citizen being questioned about the matter, says the fire through all these 36 years has never been allowed to go out. In reply to a question, he said that in summer weather, when it was necessary for comfort's sake to keep the fire burning very low, he had to get up frequently at night to replenish it slightly, but that he counted this as nothing when he contemplated that fire going out. He had evidently formed for it a strong attachment, and yet one would not take him for a sentimental man. But this fire is to him a constant reminder of the day when he first brought home his bride. Around it his children have grown up into manhood and womanhood, and their children have gazed into its light. It was the last light that fell upon the eyes of his wife, and he hopes that it will be the last that will fall upon his. Viewed thus, his sentiments in the matter can be understood, and so strong is this sentiment that with the old man it amounts almost to a passion.



## Young Folks' Column.

## Shutting Doors.

"Don't look so cross, Edward, when I call you back to shut the door. Grandmother feels the cold wintry wind; and besides, you will have to spend all your life shutting doors, and might as well begin now."

"Do forgive me, grandmother. I ought to be ashamed to cross you. But what do you mean? I am going to college, and then I am going to be a lawyer."

"Well, admitting all that, I imagine Squire Edward C— will have a good many doors to shut, if he ever makes much of a man."

"What kind of doors? Do tell me, grandmother."

"Sit down a moment, and I will give you a list. In the first place, the door of your ears must be closed against bad language, and evil counsel of the boys and young men you will meet with at college, or you will be undone. Let them once get possession of that door, and I would not give much for Edward C—'s future prospects."

"The door of your eyes, too, must be shut against bad books, idle novels and low, wicked newspapers, or your studies will be neglected, and you will grow up a useless, ignorant man. You will close them sometimes against the fine things exposed for sale in the shop windows, or you will never learn to save your money, or have any left to give away."

"The door of your lips will need especial care, for they guard an unruly member, which makes great use of the bad company let in at the doors of the eyes and ears. The door is very apt to blow open; and if not constantly watched, will let out angry, trifling or vulgar words. It will hackbite, sometimes, worse than the winter's wind, if it is left open too long. I would advise you to keep it shut much of the time, till you have laid up a store of knowledge, or, at least, until you have something valuable to say."

"The inner door of your heart must be well shut against temptation, for conscience, the doorkeeper, grows very indifferent if you disregard his call, and sometimes drops asleep at his post, and when you may think you are very well, you are fast going down to ruin."

"If you carefully guard the outside doors of the eyes, ears and lips, you will keep out many cold blasts of sin, which get in before you think. This 'shutting doors,' you see, Eddy, will be a serious business—one on which your well-doing in this life and the next depends."—*Mother's Magazine*.

THE WHISTLE WILL DRIVE THE WHINE AWAY.—As I was taking a walk early in September, I noticed two little boys on their way to school. The smaller one stumbled and fell, and though he was not very much hurt, he began to whine in a babyish way—not a regular roaring boy-cry, as though he were half killed; but a little, cross whine.

The older boy took his hand in a kind of atherly way, and said—

"Oh, never mind, Jimmy; don't whine, it is a great deal better to whistle."

And he began, in the merriest way, a cheerful boy-whistle.

Jimmy tried to join in the whistle.

"I can't whistle as nice as you, Charlie," said he, "my lips won't pucker up good."

"Oh, that is because you have not got all the whine out yet," said Charles; "but you try a minute, and the whistle will drive the whine away."

So he did, and the last I saw or heard of the little fellows they were whistling away as though that was the chief end of life.—*Work and Play*.

A WELL KNOWN liberal clergyman relates that lately, talking to some youngsters on the coming vacation and diverging into the necessity of kindness to animals, he incidentally remarked: "Boys are often cruel to frogs and toads. I remember a boy wickedly filling up a frog with fire-crackers and then lighting the slow match." He was horrified to see this remark received with the liveliest emotions of interest and delight, and utterly prostrated as he passed out at hearing one urchin say to another: "By jings, that's a new note. Won't we have fun blowing up the bull paddies down in the medder!"

## GOOD HEALTH.

## Sea-Sickness.

Many "sure cures" for sea-sickness have been announced from time to time, but they rarely, if ever, prove effectual in all cases in which they are tried. The malady, like headache and dyspepsia, seems to be of many types and degrees, and a remedy that succeeds in one form or phase of it may utterly fail in another. It is well to keep the various methods of treatment in mind, and, if one chooses, he may test them in turn, until he is able to decide which of them is best suited to his personal case.

Dr. Lœderich, a French physician, highly recommends the treatment of sea-sickness with collodion. This had been the means of warding it off from many who were peculiarly predisposed to suffer from it, and had suffered much before. The collodion is applied with a brush in three successive layers on the epigastric region (over the stomach) and the neighboring parts. It acts in such cases in the same way as in those of peritonitis, where it is a powerful anti-emetic. The *Algerian Journal of Medicine* reports another way of treating sea-sickness. M. Velasco advises injections of 0.005 grain and 0.02 grain of morphine, and says he has experienced its good effects on himself and his family.

A remedy, or rather a preventive of the malady, which we have not seen mentioned in print, but which has been tested and recommended by the physicians on some of the ocean steamers, is bromide of potassium. This should be taken in 20-grain doses, two or three times a day, and, to our personal knowledge, it has worked well in the case of some persons very sensitive to sea-sickness. Tourists will find it convenient to take with them to sea a solution of the bromide prepared of such strength that a teaspoonful contains 20 grains of the salt. This quantity can be taken in a third or half a tumbler of water. We have never known it to fail, but it would not surprise us to learn that it had failed in very desperate cases. One should begin taking it before being exposed, and should, if possible, get well under its influence before the time of trial comes. In many cases smaller doses would probably answer the purpose; they can be graduated according to the person's susceptibility to the influence of bromide. We have never known it necessary to use it to such an extent as to produce symptoms of bromism.

TYPHOID FEVER FROM DISEASED MEAT.—An epidemic of typhoid fever, interesting in its etiology, followed a musical festival at Zurich, in May, 1878. Out of some 700 assistants, 500 were attacked by the disease, of whom 100 died. The symptoms could not be mistaken, and the autopsies confirmed the diagnosis. A minute inquiry into the circumstances left but little doubt that the epidemic was due to the use of bad veal furnished by an innkeeper of the place. It may be claimed by those who attribute to general causes the power of originating specific diseases, that the typhoid fever was due to a septic poison present in the veal, depending possibly on a beginning fermentation, which was not destroyed by the cooking to which it had been submitted. On the other hand, as the animal from which the meat was taken was sick, it may be asked whether it might not have been suffering from typhoid fever, although this disease has never yet been recognized among animals. It is a remarkable fact that in 1839 a similar but much less fatal epidemic occurred in a neighboring locality. After a reunion that took place under similar circumstances, 440 persons were taken sick with all the symptoms of typhoid fever. It is probable that in this case also the meat of a sick calf gave rise to the disease.—*Journal de Medicine*.

CHLORAL IN WHOOPING COUGH.—Dr. C. H. Smith reports that in 200 cases of this disease treated with chloral, he has in every case noticed a marked alleviation of the symptoms and shortening of the period of the disease. Only one case lasted seven weeks, and the majority of the cases were well in from two to six weeks. No other remedy was given.—*N. Y. Medical Journal*.

## DOMESTIC ECONOMY.

## Unfermented Wine.

EDITORS PRESS:—The grape season has come again and the vineyard people of this section expect a hountiful harvest, and this is to urge upon our people the great benefits to be derived from the introduction of the pure unfermented grape juice as one of the most healthful and nutritious drinks that can be used at our meals; besides there is always waste bits enough of choice grapes in every large vineyard to supply the family. If pressed and put up hot in bottles or cans the same as fruit, it would keep and grow better by age and be always ready for use, costing nothing but the labor of saving it. And I call upon all good temperance people in the State, and all those who are opposed to the use of alcoholic drinks, to assist in introducing this drink. You must all be aware that it must soon be one of the best industries of the State and profitable for all, both those who make and those who use it, and giving employment to thousands of people and use for thousands of acres of land that would otherwise lie idle. Some think the prospect is good ahead for wine in foreign countries. What if wine should barely pay for making to send to foreign countries? Our people are well aware that one home market is worth to them more than a dozen foreign ones. The home market is always at their door and certain, while a foreign one is always uncertain, for even were it good, when the freight and commissions should come out of the crop there would be little left for the producer. Consequently I think it would be a great misfortune to the people of this State should the foreign demand for wine be so great as to prevent the introduction of the fresh juice as a drink at home. Let all those interested in extending grape culture try it at home this year. C. C.

Mountain Glen, Cal.

CUCUMBER CATSUP.—A very nice relish, and one of which my family is very fond, is cucumber catsup. The recipe is as follows: Take overgrown cucumbers, before they turn yellow, peel, and grate on a very coarse grater. Allow the pulp to drain on a colander, then sift through a coarse sieve to separate the seeds. Half fill wide-mouthed bottles or preserving jars with this pulp, and fill up with good vinegar. When served, add salt and pepper. It has precisely the odor and flavor of fresh cucumbers, and makes an acceptable accompaniment to cold meats. In our first attempt at making this, finding no grater coarse enough, and having a large cover which had out-lived the wash-boiler to which it belonged, using a large nail, we converted this into a grater, which, if not handsome, was efficient.

BORAX WATER.—Borax water will instantly remove all soils and stains from the hands, and heal all scratches and chafes. To make it, put some crude horax into a large hottle, and fill with water. When the borax is dissolved, add more to the water, until at last the water can absorb no more and a residuum remains at the bottom of the bottle. To the water in which the hands are to be washed after gardening, pour from this bottle enough to make it very soft. It is very cleansing and very healthy. By its use the hands will be kept in excellent condition—smooth, soft and white.

FRIED SMELTS, FRENCH STYLE.—Carefully wipe two pounds of cleaned smelts with a dry cloth; dip them in milk, then roll them in finely powdered cracker crumbs, next in an egg beaten with a saltspoonful of salt and a quarter of a saltspoonful of pepper, and then again in cracker crumbs; fry them in enough smoking fat to cover them until they are golden brown; take them from the fat with a skimmer, lay them on a napkin, or a piece of paper, to absorb the fat, and serve them laid in rows, with a few quarters of lemon on the side of the dish.

BOSTON PICKLES.—Pack in three-gallon jar alternate layers of small cucumbers and salt, and pour over them hoiling water. Let stand until next day, stirring salt from bottom when cool. Pour off the water, and repack in jar with a few small onions, mustard seed, race ginger, sliced horseradish, few cloves, pepper pods and a few sticks of cinnamon. Boil vinegar to cover them, and pour on. Do this with same vinegar several successive mornings. After the last hoiling, when cold, add one-half pint molasses, and one pint alcohol.

PRUNE PIE.—Wash the prunes through several waters; put in a preserving kettle in the proportion of two pounds of fruit to one pound of sugar; pour a quantity of boiling water over them, and let them boil at least two hours. When they are thoroughly done and the syrup thickens, take them from the fire and pour into tin plates lined with paste. Add one teaspoonful of butter and cover with a rich paste.

CORN DODGERS.—Scald one pint of corn meal and a teaspoonful of lard; cool with a little milk, one beaten egg and a little salt; beat hard. Batter must be thick enough for the cakes to retain their shape when dropped from the spoon on the bottom of a hot greased pan.





DEWEY &amp; CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 202 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, 75% CTS. will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.	1 month.	3 mos.	12 mos.
Per line.....	.25	.80	\$ 5.00
Half inch (1 square).....	\$1.00	\$3.00	7.50
One inch.....	2.00	5.00	14.00
			40.00

Quack Advertising positively declined.

The Scientific Press Patent Agency.

DEWEY &amp; CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, October 4, 1879.

## TABLE OF CONTENTS.

**EDITORIALS.**—Guernsey Cattle; Condition of Wheat for Shipment; The Forest Rose Strawberry, 209. The Week; The Industrial Outlook, 216. Colorado River Canyons; State Horticultural Society, 217.

**ILLUSTRATIONS.**—The Forest Rose Strawberry, 209. Mu-Av Canyon, near the Colorado River, 217.

**CORRESPONDENCE.**—The See-Saws of Agriculture; Valuable Salt Works, 210. Points on Land Holding, 212.

**QUERIES AND REPLIES.**—Phylloxera-Resisting Vines; Charcoal Iron; Poisoned Water; Briggs Brothers Raisins; The Cuthbert Raspberry, 216.

**ENTOMOLOGICAL.**—Weevils; Cure for the "Corn Worm," Strawberry Root Borer, 217.

**THE FIELD.**—Killing Morning Glories; The Sugar Cane, 210.

**POULTRY YARD.**—Answers to Queries, 210.

**THE PUBLIC LANDS.**—Investigation of Land Values and Adaptations, 211.

**METEOROLOGICAL.**—Birth of a Storm, 211.

**THE VINEYARD.**—California Wine Interest, 211-213.

**PATRONS OF HUSBANDRY.**—Women in the Grange; Grange Discussions, 212.

**AGRICULTURAL NOTES** from the various counties of California, 212-213.

**NEWS IN BRIEF** on page 213 and other pages.

**HOME CIRCLE.**—The Egg (poetry); Chair-Covers; Little Things; Keeping on the Farm; Temperance Work Perpetual; Haying at Ninety-Two; Distribution of the Hard Work; The Hanging Gardens of Assyria; Domestic Happiness; Disagreeable People; Premature Women, 214. Chess; An Aged and Historic Ship; A Sentimental Flame, 215.

**YOUNG FOLKS' COLUMN.**—Shutting Doors; The Whistle Will Drive the Whine Away, 215.

**GOOD HEALTH.**—Sea-Sickness; Typhoid Fever from Diseased Meat, 215.

**DOMESTIC ECONOMY.**—Unfermented Wine; Cucumber Cakes; Horax Water; Fried Smelts, French Style; Boston Pickles; Prune Pie; Corn Dodgers, 215.

**EDUCATIONAL.**—Rights of Women to Vote for School Officers; Farm School in Dublin, Ireland; California Literary and Scientific Circle, 218.

**MISCELLANEOUS.**—Premiums Awarded at Santa Clara, Solano, Napa and El Dorado County Fairs, 220.

## Business Announcements.

Agricultural Implements, Baker & Hamilton, S. F. Wanted, Address Nurseryman, care Dewey & Co., S. F. Pepper's Nurseries, Petaluma, Sonoma Co. Strawberry Plants, E. P. Roe, Cornwall-on-Hudson, N. Y. Visiting Cards, Clinton Bros. Clintonville, Conn. St. George's Hotel, Timothy Sargent, S. F. 1,000,000 Berry Plants, H. Nyland, Boulder Island, Cal. Trees, Storrs, Harrison & Co., Plainville, Ohio. Pringle's New Hybrid Wheat, B. K. Bliss and Sons, N. Y. Seeds, Geo. F. Silvester, 317 Washington St. S. F. Plants and Bulbs, Peter Henderson, N. Y.

## The Week.

Now there is more trouble. The last thing to vex farmers was the bag combination, and now it is ships. The foreign market is booming, but grain growers cannot realize the benefits because ship-masters are loafing around the main somewhere, instead of flying in and struggling with each other for a load of grain, as they did a few months ago. Then the grain had cheap rates, say £2 a ton; now the ships are few, and the captains will not thank any one to offer any price. They had rather wait and advance their views each time the wheat cable advances, aiming to make the value flow into their own pockets rather than into those of the grain grower. This is about the way the situation looks at present, and it seems to be a question whether the skipper or the farmer will hold out the longer. We are not aware that any effort has been made to corner the ships and thus advance rates; but it is, perhaps, one of those unfortunate occurrences to which the farmer is subject, and which, like the descent of the grasshopper or the hot north wind, introduces itself just at a time when it can do the farmer most harm. It is too soon to see just what will be the outcome of the present condition of affairs, but it would plainly be a good thing to have a score or so more ships just at this time. And here come the clouds and showers; delightful to the dusty tourist, but too soon to meet the demands of the laborer. Better delay your gifts, ye threatening clouds, and give us sunshine for the vintage and the raisin curing, and spare the pastures until ye gather strength to natter in Christmas rejoicing with green hills and flower-decked meadows.

## The Industrial Outlook.

It is cheering to read the papers now-a-days. If one shuns the columns filled with loathsome sensations and horrors, with which nearly all the journals cater to the depraved taste, from catch-penny motives, he is quite apt to feast upon a stirring industrial article, in which the many little indications of returning life to production and trade are gathered into a panoramic picture of approaching prosperity. This is all the more refreshing because we have been kept so long upon a diet of despondency and disaster. Since 1873 there has been a period of hushed machinery and buttoned pockets. At times signs have appeared of revival, but, though hopefully heralded, they have been followed by but little substance. The industrial disease was evidently one which had laid deep hold upon the material interests of the country, and had to be eradicated by a slow process. The patient had first to outlive the malady, and then recover from its effects. Convalescence has now apparently been reached, and the hearts of the people are cheered by the thought of active business, profitable production, and a quick turn of the dollar, which will give all a chance to dance to its ring.

Now, what are the indications, or, in other words, the real facts upon which a consciousness of revival is based? One of the leading financial writers of the East enumerates the following points: "The chief source of national prosperity, agriculture, has within recent years attained a very large expansion, and the crops of 1879 will largely exceed all precedent. Having already attained the position of the largest grain-exporting country, we are now beginning, also, to supply animal food in enormous quantities for the markets of Europe, and our dairy products are similarly forcing their way into countries from which they have hitherto been excluded. This development of our vast prairie regions lays the basis for a corresponding increase in the general commerce of the country, and provides employment for the new system of railroads constructed between 1866 and 1873, so largely in excess (as it was then supposed to be) of the prospective requirements of the country, but for which we are now beginning to find very useful employment. Our textile industries are turning out a larger quantity of goods to-day than at any previous period, and, perhaps, at more than an average rate of profit. The iron trade has suddenly recovered its wonted activity, and there is every probability that this year's product of iron and steel will exceed all precedent. The minor industries share equally with the larger ones in the general improvement; and with the exception of coal mining—which is still afflicted with over-production—there is hardly one branch of trade that is not now well and profitably employed. To these facts must be added the further one that, concurrently with very important deficiencies in the grain crops of Europe, we have this year by far the largest crops in the history of the country—a conjuncture which promises to augment our food exports beyond all former experience and to lay the basis for an increase of our inward as well as outward commerce, while it will give extraordinary activity to our transportation interests. These facts more than justify the recovery of confidence that has occurred within the circles of capital during the current year; and that restoration of confidence will give permanence to the renewal of activity that is so generally evident."

In this State we shall doubtless feel the influences of this general revival both directly and indirectly. The effect upon the demand for our wool, and our orchard and vineyard products will be direct and most gratifying. Already this tendency has shown itself and given cheer to producers. The result will be the greater investment and employment of land in orchard and vineyard culture. These specialties belong to our State by right of natural conditions, and the enterprising way in which they are now being developed in different parts of the State, promises to give many of our towns a national reputation as well as a comfortable support to the industrious ones who live in them. The general injunction must now be to all producers to strive zealously for that style and excellence in their products which will make them light their own way to favor in the eyes of all whose patronage we hope to secure.

The advent of prosperity at the East will also in all probability help us in the way of a desirable population. It is true that many come to this coast because of the industrial depression at the East, and some of them have we believe had continual reason to be pleased with the change; others of course have had the opposite experience. Many have come during the last five years who would have been better situated at home. Indeed, many have followed a forlorn hope across the continent and arriving have lost the hope and retained the "forlornity." Under a different industrial regime at the East we shall doubtless receive a more independent and better endowed class of immigrants, because they will come from choice, not to escape hardship but to gain a situation which seems pleasing to them. Not being compelled to sacrifice what they leave behind they will come with heavier purses and able to buy themselves home free from encumbrances. To such California will indeed seem the land of all the world most desirable. For if they bring their Eastern ideas of frugality and economy and ha-

tred of debt, they will be independent and free-handed to develop and improve their holdings as rapidly as their wisely chosen productive enterprises yield surpluses for such labors.

In spite of the many grievous burdens which many of our devoted industrialists are called upon to bear, the outlook for the future, to those who have strength enough to enter upon it, seems quite promising. There are yet great problems to solve, problems in laws, in soils, in waters and in crops. How to utilize the conditions which are unsurpassable for certain phases of production, is still the great question in whole districts of our State, and while the solution tarries, prosperity lies just beyond the reach. To meet and solve these questions in a time of envying prosperity is hard, but hopeful work, while in a time of outside depression, it would be impossible. There is this encouragement to those of our friends who still lie in the strait between fruitful fields and profitable markets, there is this to assure them that their course will yet be marked out.

## QUERIES AND REPLIES.

## Phylloxera-Resisting Vines.

EDITORS PRESS:—Please inform me through the columns of the PRESS what varieties of grapevine best resist the attacks of the phylloxera, and where these varieties could be obtained.—READER, Orange, Los Angeles county, Cal.

The fullest tests of phylloxera-resisting vines have been made by the French, and it is generally known certain native American varieties have won the distinction of withstanding the attack of the insect. The most authentic information at hand concerning the results of the French tests is found in an official report made recently by Dr. Meunier of the superior commission appointed by the French government. From this report we take certain portions which answer the first question propounded above:

For 14 or 15 years past, in the departments of Gard and Gironde, the stock called the "Jacquez" has resisted very well, in the midst of the phylloxera's ravages, and given good yields long after the native stocks have succumbed. The "Herbemont," the "Cunningham," the "Taylor," the "York Madeira," and the "Vitis Solonis," after being planted six or seven years in the very focus of the phylloxera's attacks, are resisting, and show a very handsome growth, while the other stocks have succumbed. A resistance which in the case of the "Jacquez" has existed for 15 years, in the case of the others for six or seven years, and which has always existed in America, offers almost indisputable assurance for the future, and no argument or facts why it should prove otherwise can be discovered. The "Clinton" is quite widely planted; but of it the report says: When planted in rich, fresh soil it sustains itself passably well; but deprived of these conditions it does not resist the phylloxera. It gives, too, a poor wine, with a foxy taste. This stock has been abandoned by all good wine growers.

The resistance of American stocks is thus explained: The fiber of American-resisting roots is, according to M. Foex, much denser and closer than that of our European vines, and turns into wood (lignifies) much more quickly. So that in the American roots the phylloxera's puncture only attacks the outer bark, upon which it produces little excrescences which fall off like warts. In the case of French roots its puncture causes decay.

Some stocks, such as the "Jacquez" especially, the "Herbemont," and the "Cunningham," can be planted and will yield wine without being grafted. They possess a resisting power equal to every test. The "Jacquez," when cultivated in France, blooms and ripens at the same time with the wild grape; it produces a good red wine of a very dark color, and is highly valued by the trade. It is not difficult of cultivation as regards choice of soil. Its grapes, when ripe, keep for a long time without decaying. Up to the present time it is a stock against which nothing can be said. The "Herbemont" yields a fine red wine, not very dark in color. It blooms six or seven days later than the "Jacquez," and at the same time with the "Balzar;" we shall know this year whether it ripens in this climate, which, however, is probable. It would be a very good vine, to plant in our dry, calcareous, and stony soils, in which it flourishes and grows extremely vigorous. The "Cunningham" produces at once, and quite a good wine, something like the "Madeira." In 1877, in French experiments the "Jacquez" and the "Herbemont," being placed in nursery and in fresh soil, yielded a return of 70% well rooted vines. The "Cunningham" yielded less. The "Riparia," the "Wild Cordifolia," the "Taylor," the "York Madeira" and the "Vitis Solonis" have great powers of resistance to the phylloxera, but yield so little wine that they should be used only to bear graftings from French stocks. They have the advantage of taking root very easily. Other varieties than those named are being tested, and perhaps other varieties will be added to the resisting list, but these have done best so far.

As to where these vines can be obtained, we believe plantations of them have been started in this State, with special reference to the chance of their being needed, but we are not aware that they are yet offered for sale. The largest export of American vines to France is by Bush,

Son & Meissner, of Bushberg, Jeff county, Missouri. They have made a specialty of this line of propagation.

## Charcoal Iron.

EDITORS PRESS:—I have just read with pleasure, Prof. Hildgard's article "Poisoned Water," in RURAL PRESS. Will he please explain what is the character of a metal used by tinners called "charcoal iron." It looks very much like galvanized iron, but is white all through, while in galvanized iron the black will show after use. I want to find if "charcoal iron" is fit for cooking fruit in, making honey or vinegar tank of? Please answer by card or through the PRESS.—L. B. RUMFORD, Bakersfield, Cal.

EDITORS PRESS:—In answer to the above, I would say that "charcoal iron" is, in general, iron smelted by the use of charcoal instead of coke, and on that account contains less of the impurities that tend to render it brittle. It is therefore used for all the finer qualities of sheet, and especially for that subjected to the process of tinning, and serving as the basis of the "tin sheet" used for hollow-ware by tinners. The brand "charcoal iron" on the boxes of such sheet implies that such iron has been used for the purpose, in contradistinction to the inferior kinds, such as are used made into coal-oil cans, etc.

Besides this tinned sheet, charcoal iron sheet is also used untinned, in making such sheet iron articles as involve sharp bends being made while cold. The best of this is often left unplanned, and is annealed after rolling, to give the greatest possible pliancy. In this case it of course retains an iron surface, and would be unfit for the uses mentioned by Mr. Rumford, as the fruit, etc., would assume an inky tint.

If, as I presume, Mr. R. refers to the tinned sheet, it is understood that it is unobjectionable for cooking fruit as well as for tanks for such bland substances as honey. But vinegar is quite another thing; and no metal short of silver, gold or platinum is fit to contain it, unless covered with a protective coating. Here, again, a good coating of asphaltum varnish, put on hot and made thick enough by repetition will answer an excellent purpose where the storage is only temporary. No taste or odor is imparted by such a coating, made of good materials and well laid on and dried by heat.—E. W. HILDGARD, University of California, Berkeley.

## Poisoned Water.

EDITORS PRESS:—I am glad to see your correspondents waking up to the importance of seeing that their families are not poisoned in their daily drink. But we are beginning at the wrong end. Straining at the gnat and swallowing the camel. By all means see that your pipes and tanks are in good shape, and of right material; but see first that the water supply is uncontaminated. Hardly a town in California is furnished with efficient sewers, and the seepage from the disgraceful, unreformed, old-time cesspool contaminates the contents of probably half the wells in the villages. In Monterey you may find cesspool and well for drinking water in shameless juxtaposition. Still typhoid fever and diphtheria are regarded as mysterious dispositions of Providence, instead of being looked on as the natural result of damnable filthy ways of living, from which the domestic cat recoils. How many farmers have a pestiferous hog-wallow in proximity to their wells, full of stinking black mud, the seepage of which returns back to their tea-kettles? Use dry earth in your privies, and let your hogs wallow a hundred yards from your wells, and give your families a chance for health.—ED. BERWICK, Monterey, Cal.

## Briggs Brothers Raisins.

EDITORS PRESS:—We send you by express one box raisins, which please accept, examine and report upon. They have not been through the curing process, which of course improves them greatly. We are successors to A. Briggs, deceased; have over 100 acres of raisin grapes, which promise fair returns, even at the low prices of last and this year.—BRIGGS BROTHERS, Winters, Cal.

This is a style of raisin which carries its own recommendation, from the fragrance which exhales on opening the package to the final examination of the fruit itself. The style of packing is excellent, the designs on the ornamented linings being very appropriate and well executed. The layers are evenly made and the fruit well displayed. As the curing is but partial the marks of a finished raisin are not to be looked for, but the excellence of the grapes used, and the correctness of the drying thus far, are apparent. We understand from other sources that Briggs Brothers raisin crop this year will be large. If such raisins as these sent us are produced, there will not long be too many of them.

## The Cuthbert Raspberry.

EDITORS PRESS:—You wish to know in your issue of Sept. 20th, what is the local experience with the Cuthbert raspberry. I have had the Cuthbert under cultivation two years. It is a profuse grower, and differs from other raspberries. It has healthy and rich foliage which protects the fruit and canes from the hot rays of the sun. As a bearer there is no better. It distributes its fruit nicely through the bush, bearing a large plump berry which comes off easily and does not crumble. It has a fine flavor and is an excellent shipping berry. I have eleven varieties of raspberries and place the Cuthbert at the head of my price list, which I send out with my circulars.—H. NYLAND, Boulder Island, San Joaquin River, Cal.

ON FILE.—"Appliances for Irrigation," H. E. H.; "Amber Cane," W. A. S.; "Seed not True to Name, etc.," M. E.; "Fancy work," N. R.; "Outdoor Schools," L. C.; "Nietos," G. K. M.; "Other Causes of Hard Times," C. W. M.



## ENTOMOLOGICAL.

## Weevils.

EDITORS PRESS:—As there appears to be much ignorance amongst farmers around this district respecting the "Weevil," it would seem to me valuable information if you would kindly throw a little light upon the subject by a description of the destructive little insect, its habits and method of reproduction, and its action upon grain generally.—THOMAS P. HINDE, Anaheim, Cal.

The true weevils belongs to the order *Coleoptera* or beetles, the name of the weevil group being *Rhynchophoridae* or "snout-bearers." There are, according to Packard, about 10,000 species of weevils described by entomologists. The general description which we give of this large family of insects we draw chiefly from the writings of Dr. Harris, in his "Insects Injurious to Vegetation."

Weevils, in the winged state, are hard-shelled beetles, and are distinguished from other insects by having the fore part of the head prolonged into a broad muzzle or a longer and more slender snout, in the end of which the opening of the mouth and the small horny jaws are placed. These beetles are mostly of small size. Their antennae are usually knobbed at the end, and are situated on a muzzle or snout, on each side of which there is generally a short groove to receive the base of the antennae when the latter are turned backwards. Their feelers are very small, and, in most kinds, are concealed within the mouth. The abdomen is often of an oval form, and wider than the thorax. The legs are short, not fitted for running or digging, and the soles of the feet are short and flattened. These beetles are often very hurtful to plants, by boring into the leaves, bark, buds, fruit, and seeds, and feeding upon the soft substance therein contained. They are diurnal insects, and love to come out of their retreats and enjoy the sunshine. Some of them fly well; but others have no wings, or only very short ones, under the wing-cases, and are therefore unable to fly. They walk slowly, and being of a timid nature, and without the means of defence, when alarmed they turn back their antennae under the snout, fold up their legs, and fall from the plants on which they live. They make use of their snouts not only in feeding, but in boring holes, into which they afterwards drop their eggs.

The young of these snout-beetles are mostly short fleshy grubs, of a whitish color, and without legs. The covering of their heads is a hard shell, and the rings of their bodies are very convex or hunched, by both of which characters they are easily distinguished from the maggots of flies. Their jaws are strong and horny, and with them they gnaw those parts of plants which serve for their food. It is in the grub state that weevils are most injurious to vegetation. Some of them bore into and spoil fruits, grain, and seeds; some attack the leaves and stems of plants, causing them to swell and become cankered; while others penetrate into the solid wood, interrupt the course of the sap, and occasion the branch above the seat of attack to wither and die. Most of these grubs are transformed within the vegetable substances upon which they have lived; some, however, when fully grown, go into the ground, where they are changed to pupae, and afterwards to beetles.

Such being the general outline of the characteristics and habits of weevils, we will cite the points concerning the grain weevil, as the most generally destructive pest of its class. Dr. Harris says: The true grain-weevil or wheat-weevil of Europe, *Calandra (Sitophilus) granaria*, or *Curculio granarius* of Linnaeus, in its perfected state is a slender beetle of a pitchy-red color, about one-eighth of an inch long, with a slender snout slightly bent downwards, a coarsely punctured and very long thorax, constituting almost one-half the length of the whole body, and wing-covers that are furrowed and do not entirely cover the tip of the abdomen. This little insect, both in the beetle and grub state, devours stored wheat and other grains, and often commits much havoc in granaries and brew-houses. Its powers of multiplication are very great, for it is stated that a single pair of these destroyers may produce 6,000 descendants in one year. The female deposits her eggs upon the wheat after it is housed, and the young grubs hatched therefrom immediately burrow into the wheat, each individual occupying alone a single grain, the substance of which it devours, so as often to leave nothing but the hull; and this destruction goes on within while no external appearance leads to its discovery, and the loss of weight is the only evidence of the mischief that has been done to the grain. In due time the grubs undergo their transformations, and come out of the hulls in the beetle state, to lay their eggs for another brood. These insects are effectually destroyed by kiln-drying the wheat; and grain that is kept cool, well ventilated, and is frequently moved, is said to be exempt from attack.

## Cure for the "Corn Worm."

EDITORS PRESS:—I see in the RURAL of August 16th an inquiry regarding a remedy for the corn-ear caterpillar. As I got my information from the RURAL, I think in the first year of its publication, and as it has been of inestimable value to me, I take pleasure in reminding you of a sure preventive. Put the seed to soak the night before planting in a rather strong solution of saltpeter and water, and your crop of corn will be entirely free of the pest.—W. J. MILLER, Arroyo Grande, Cal.

We think that our correspondent must refer to some other insect than the one we spoke of in our issue of August 16th. The "steep" for the seed of which he speaks would seem to be a protection for the seed from some earth worm or

grub which might attack it. It would be a far-reaching dose which, applied to seed, would prevent a moth from laying an egg on the silk two months or so afterward. However, we are glad the prescription has proved so valuable to our correspondent.

## Strawberry Root Borers.

EDITORS PRESS:—Can you inform me how to get rid of these grubs? They are rapidly eating off the roots of a fine strawberry plantation. You will greatly oblige me by answering soon. I inclose a sample; they bore into the stem of the plant and remain there till it is all eaten away inside.—EDW. K. EVANS, Stony Point, Sonoma Co., Cal.

These grubs were yellowish white, about half an inch long, tapering from the second segment toward the rear, as is common with many boring larvae. Can any reader tell us of a remedy for them? Digging about the plants and the application of wood ashes, followed by irrigation, would doubtless have a good effect in stimulating the plants, and perhaps reach the grubs. If anyone has succeeded with any treatment, let us hear it.

BUHACH.—We are informed that G. N. Milco, of Stockton, well known as the introducer of the Dalmatian insect powder plant (*Pyrethrum Cinerariaefolium*) has just concluded a business arrangement with E. J. Baldwin, of this city, by which the two gentlemen are to be henceforth associated in the growth and marketing of the insect-destroying herb. Mr. Milco has developed his enterprise with untiring zeal and



MU-AV CANYON, NEAR THE COLORADO RIVER.

has succeeded in bringing his California-grown powder to a point where its superiority over the imported article has been recognized both by practical users and by chemists, and entomologists who have carefully tested its comparative merits. In order to push the growth and manufacture as the excellence of the material deserves, Mr. Milco was compelled to enlist the aid of capital, and Mr. Baldwin furnishes this. We are informed that the plants will be soon transferred to Mr. Baldwin's ranch near Los Angeles, a fine piece of land admirably adapted by soil and abundance of water to the growth of the crop. On the ranch will also be set up the mill for grinding the powder, packing-house, etc. Mr. Milco will go to Los Angeles and have personal supervision of the enterprise. We are glad the matter has taken this promising shape, for we are perfectly sure from our own experiments, of the superior quality of the California-grown powder.

SPANISH WINES AND OLIVES.—The latest advices from the Spanish vineyards and olive orchards are that the olives have suffered for rain; and of grapes the prospects are very good of the common descriptions, but the higher class grapes will be under the average. The general impression among Spaniards is that there is going to be a great trade with them in wines with Great Britain, inasmuch as the clamour of the people will compel the Government to alter the alcoholic scale, allowing the good sound Spanish to replace the artificial ones of France. "No hay nada malo en Espana."

## Colorado River Canyons.

We give an illustration on this page of the Mu-av canyon, a side gorge of the Grand canyon of the Colorado. It is impossible for a mere description to convey any but a faint idea of the sublimity that lines the banks of the Colorado of the West. The walls rise in many instances more than a mile in height, a thousand feet of which is up through granite crags, then steep slopes and perpendicular cliffs rise one above another to the summit. The gorge is black and narrow below, red and gray and flaring above, with crags and angular projections on the walls, which, cut in many places by side canyons, seem to be a vast wilderness of rocks. The waters of the river rush their winding way through the gloomy depths, plunging over steep declivities with a mad roar, spreading out into a placid bosom in some opening beyond. Clouds play in the canyon, or roll down in great masses filling the gorge with gloom, sometimes hanging above from wall to wall, covering the canyon with a roof of impending storm.

Ever and anon a gust of wind sweeps down a side gulch, making a rift in the clouds, and revealing the blue heavens. In some localities volcanic evidences accumulate. Great quantities of cooled lava, and many cinder cones are seen on either side, and then comes an abrupt

tric prisms, and masses of these concentric columns have coalesced. In some places, when the flow occurred, the canyon was probably at about the same depth as it is now, for we can see where the basalt has rolled out on the sands, and, what seems curious to me, the sands are not melted or metamorphosed to any appreciable extent. In places the bed of the river is of sandstone or limestone, in other places of lava, showing that it has all been cut out again where the sandstones and limestones appear; but there is a little yet left where the bed is of lava.

"What a conflict of water and fire there must have been here! Just imagine a river of molten rock, running down into a river of melted snow. What a seething and boiling of the waters; what clouds of steam rolled into the heavens!"

## State Horticultural Society.

The movement toward the permanent establishment of a State Horticultural Society is making fair progress, new names are being received for enrollment as members, and it is to be hoped that the next meeting will place the organization squarely and permanently on its feet. There has been disclosed a general disposition to enlist the co-operation of practical fruit and tree growers and gardeners from the country, and to this end the choice of officers, etc., was postponed until a representative attendance could be had.

The committee appointed at the preliminary meeting September 17th have issued a circular, addressed to all interested in horticulture, as follows:

Pursuant to the call printed in the RURAL PRESS, Bulletin, and other papers, there was a preliminary meeting of those interested in the formation of a State Horticultural Society, held in this city September 17th, which meeting was sufficiently attended to make a permanent organization desirable. The meeting decided that steps should be taken toward the organization of a State Horticultural Society. To this end a committee was appointed to draft a constitution and by-laws, and to address a circular to the horticulturists, fruit-growers and nurserymen of the State, inviting them to send their names for enrollment as members of the Society; also, to invite all interested to attend a meeting for permanent organization, which will be held at the Academy of Sciences, corner of California and Dupont streets, in this city, on Saturday, October 25th, at 1 P. M. In accordance with this action, you and your horticultural friends and neighbors are respectfully invited to attend the meeting, at which officers will be elected and articles of organization adopted. It is necessary that from the beginning of the Society the different committees shall be appointed and their duties defined. We need and wish to have the active co-operation of all who are in any way occupied and interested in horticulture, to attain the results which are expected from a State Horticultural Society.

It is of interest in this connection to state that Oregon horticulturists are also on the point of establishing a State society. This is fortunate, and we hope the movement may succeed, for the two societies could well work together to the benefit of each. A correspondent of the Record-Union writing from Oregon strikes the truth of the matter in these words: "The Horticultural Society promises to be of general benefit in deciding the value of new varieties of fruit, originated here, and identifying disputed varieties. At the last meeting some fine new varieties were shown of seedling growth. It seems that we raise some fruits that possess much more excellence than they do when cultivated in California, and no doubt it works vice versa. We have had the virgin era of fruitfulness, and immunity from all diseases and pests, but the time has come when we have our fair share of them; but, still, our fruit is not wormy. We have got to fight for what we have hereafter, not only in connection with fruit, but also grain. The Horticultural Society can do much good, if well maintained, and if it calls out the practical knowledge of experienced men. The same should be true of your State."

HOW THEY CONSULE THEMSELVES.—The *Republique Francaise*, with charming naïveté, says: Europe has nothing to fear from the importation of American cereals, that the United States is only experimenting with and making the most of virgin soil, which will soon be exhausted and the Americans obliged to come to Europe for breadstuffs.

NEW JOURNALISTIC VENTURE.—We are pleased with the first number of the Santa Rosa *Daily Evening Times*, which was issued September 22d. The proprietors, Ragsdale Bros., "make no rash promises," but, being convinced that Sonoma county should sustain a daily, give it opportunity and their help to do so. Success to their enterprise!

NEWS from Oregon, of Sept. 30th, says: Rain has fallen heavily for the past 24 hours, and indications are favorable for a continuance of the storm. The State Sunday School Convention convened at Salem this morning. Large delegations from all parts of the State and Washington Territory are in attendance.



[CONTINUED FROM PAGE 211.]

following figures of importation for 10 years will show:

1868.....	3,410,000
1869.....	5,964,000
1870.....	6,663,000
1871.....	6,290,000
1872.....	7,080,000
1873.....	5,511,000
1874.....	5,297,000
1875.....	3,263,000
1876.....	2,757,000
1877.....	2,486,000

This very notable reduction may be ascribed, first, to the cheapness and good quality of our own wines, and secondly, to the thorough enforcement of the present customs tariff.

#### Prices.

The prices for wines and brandies were lowest during the year 1876 and the beginning of the year 1877, and so slight was the demand, and so great the stock on hand, that the viniculturists became alarmed throughout the State. These matters have, however, been once again regulated by large distillations in 1877-1878, by an increased home consumption, and a very considerable increase in our exports. It was thought in 1877 that the business was overdone, and that we had too many vines. But a reaction has taken place, and in 1879 our plantations have been greater than for many years back. In the northern wine districts, where, in the fall of 1876, the Mission grape was sold for from \$7.50 to \$10 per ton, and the foreign from \$14 to \$18, in 1878 brought for the Mission from \$12 to \$14, and for the foreign from \$22 to \$26 per ton. From what I am able to learn the following are the average prices per ton asked in the several wine districts mentioned:

Los Angeles, for Mission grapes.....	\$14 to \$15
Napa valley, Mission grapes.....	14 to 15
Sonoma valley, Mission grapes.....	15
Stockton, Mission grapes.....	16

Except in Los Angeles, foreign grapes command from 40% to 60% higher for wine making.

#### The Crop Prospect.

The crop will be larger than that of 1878, though by no means as great as was anticipated at the beginning of the season. It is estimated that not less than 6,000,000 gallons of wine will be made this coming vintage. Napa valley, on the same vines, will yield less than last year. Sonoma will yield considerably more, and Los Angeles county will also yield considerably more than in 1878. From Sacramento and Ed Dorado we have no returns. Santa Clara will also yield more. Relatively, throughout the State, there will be a little over half a crop.

#### Phylloxera.

The ravages of this insect, or pest, seem to be confined to Sonoma. I have looked closely for some signs showing its presence in Napa valley, in Los Angeles, at the Mission San Jose, and in Tehama county, but am gratified to state that in none of these places have I found anything indicating its presence, and it is my sincere hope, as it must be of every well-wisher of the vinicultural interest of our State, that it may never spread or gain a foothold in any new locality. Though great havoc has been created by it throughout Sonoma valley, the people of that locality have to congratulate themselves upon its very slow progress, compared to the devastating ravages and the rapidity with which it executes these in the wine districts of France. Numerous experiments are being made throughout the Sonoma wine district, with the aim in view of either checking or eradicating the pest; and it is to be hoped that some of these may meet with success, and the results be made public. There is a belief that if the vineyard be entirely abandoned—be left without pruning or cultivation whatever—for two or more seasons, that the vines attacked will recruit themselves, and, instead of dying out, as they would otherwise invariably do in two additional years, would, on the contrary, live and regain their pristine vigor. This fact I have noticed to be in a measure true in one vineyard in Sonoma valley, the one known as the Butler vineyard.

## EDUCATIONAL.

### Rights of Women to Vote for School Officers.

[Written for RURAL PRESS by C. L. ANDERSON, M. D.]

Massachusetts is at this time testing the plan of female suffrage at elections for school officers. It is thought by many that the results will be favorable.

It is a fact that school officers, in many cases, are elected by an element that has but little heart in the public schools. Party politics, whisky or business considerations control the votes which elect school officers.

We have for a long time held the opinion that women should have the same right to vote as men; especially women who have property to protect, children to educate, or any individual interest in the public welfare. And most of women have this interest in a higher and purer sense than the average voter of the male sex. Look at the polls on election day and mark the class of voters depositing their ballots! and think whether it might not be improved.

We do not expect women's right to vote would cure all our ills; but we think it would cure some, and better others, and, by no means, make affairs worse.

Particularly in regard to our public school

system the proposition seems most favorable. Nine-tenths of the teachers are women, and the mothers have an infinitely deeper and more vital interest in the schools than the men who elect the officers to govern the schools.

Attention is called to this subject just now for the reason that new laws are soon to be made under a new Constitution, and it is a good time to turn over a new leaf in regard to educational management.

Can women become voters under the new Constitution? A common sense rendering of Sec. 1 Art. II would seem to indicate that at some elections they may vote. Said section simply declares that native male citizens, male Mexicans, by treaty, male naturalized citizens, of the age of 21 years, who have gained a certain residence, "shall be entitled to vote at all elections which are now or may hereafter be authorized by law." It then provides who shall not be allowed to vote: Natives of China, idiots, insane persons, or persons convicted of infamous crime, embezzlement or misappropriation of public money. Such persons (male or female) shall never vote. It does not provide that women under like conditions with men shall not vote. It could not and be consistent with a preceding section (21 of Art. I) which says "no special privileges or immunities shall ever be granted which may not be altered, revoked or repealed by the Legislature." If the sole right of men to vote is not a "special privilege," there are no special privileges. And the matter fairly enough remains with the Legislature to alter and provide.

Whether that infamous decision that women are not citizens, only paralleled by that other decision that the negro has no rights that white men are bound to respect, will remain a binding unrevoked code for years to come in spite of all declarations of human rights, I cannot tell. But I am glad to see Massachusetts prepared to test the matter, and if it works well in regard to schools, I hope California will not be backward in putting such a law in force.

### Farm School in Dublin, Ireland.

EDITORS PRESS:—As an industrial education is one of the things now being discussed in all civilized and progressive countries, I have thought that a brief enumeration of the principal items concerning the English Farm School at Dublin, Ireland, would interest some readers of the PRESS. The writer pursued a three years' course at this institution. It was then under the presidency of Prince Albert, Queen Victoria's Consort.

The institution was founded and funded by the English Government about 50 years ago. The property comprised 180 acres, and the design was to give a thorough agricultural education to young men of 17 years of age, of good moral character, and having a certain fair standard of English education.

The instruction consisted of botany, vegetable and animal physiology, chemistry and geology, diseases and treatment of farm animals, theory and practice of farming, land surveying, horticulture, pomology, and a finishing course in English literature.

About 90 young men were boarded and educated free at government expense, and besides they received about 36 cents a week as pocket money—which was no small amount there, either.

We had to do all the work of this farm, and were divided into two classes, half of which worked out and the other half remained in school alternate days. There were also paying pupils of a limited number, some extra scholars who boarded out but attended all the lectures and witnessed the farm work executed, but unlike the "regulars" were not required to do the work.

The time table was as follows: Rise at 6 A. M., to 6:30, and one part study while the others feed stock, etc.; 8 to 9 lecture; 9 to 9:30 breakfast, after which part go to work, while second part go into school room until dinner, at 2 to 3 P. M., and then again same routine to 6 P. M. The board was very good and the boys healthy, although the fare was not in accordance with American ideas. The memorandum of meals I have now before me, viz.: Sunday breakfast, bread, butter and tea; dinner, mutton one pound, potatoes and vegetables; no pies nor puddings. Supper same as breakfast. Monday the same as Sunday, with the following additional: bread, one pound; new milk, one pint; butter two ounces. At Tuesday dinner, corned or roast beef, vegetables and potatoes, and supper as before, with mush sometimes, etc.

I will now try to detail the main points of the farming as carried on in my time, over 20 years ago. There were about four systems pertaining to the land, which was worked to get the largest return with least expense principally; at the same time all new machinery was tried; also, a few acres set apart for experiments—25 acres were worked as a one-horse small farm, and another of five to show how a few acres could be treated by the spade and manual labor. A few acres were devoted to gardening in all its branches, vinery, orchard, etc. These small farms occupied nearly 40 acres, the balance of this farm, 180 acres, being conducted on the no fence system. The institution owned cattle over 40 head, 40 cows besides calves, sheep, and of course farm working horses and hogs;

and as all were house-fed, the buildings were large.

There were two literary and three agricultural instructors, a matron and some hired help, as plowman and shepherd, but who did almost nothing but show the boys how to set the plow or manage the sheep and cows, which get far more care than usual in California, especially as many of the cattle were prize animals and high priced ones. The animals were house-fed with steamed cut straw, oil cake, beets, hay, grain, etc., the feed varying with the various animals, according to the work expected of them.

The boiler house was near the piggery and cow house. Next came the engine house, which gave power to pump the liquid manure about a quarter of a mile in any direction around the house, as pipes were laid all round—which with hose was distributed principally on the hay pasturage from one of two immense tanks alternately weekly—the returns from this manuring were something marvelous.

The engine also did the threshing, and all such work had to be done in doors, the weather at all times being uncertain. The oil-cake breaker, straw cutter, churns, etc., could all be attached and worked at the same time by this engine.

M. J. O'BRYEN.

Merced, Cal.

### California Literary and Scientific Circle.

This institution is a branch of the Chatauqua Literary and Scientific Circle, of which most of our readers have doubtless heard through the newspapers and magazines. It is, in brief, a method by which one can go to college without crossing one's threshold.

The California branch was organized July 1st, 1879, at the State Sunday-school Assembly, held at Monterey. This organization aims to promote habits of reading and study in nature, art, science, and in secular and sacred literature, in connection with the routine of daily life (especially among those whose educational advantages have been limited), so as to secure to them the college student's general outlook upon the world and life, and to develop the habit of close, connected, persistent thinking. It proposes to encourage individual study in lines and by text books which shall be indicated; by local circles for mutual help and encouragement in such studies; by summer courses of lectures and "students' sessions" at Monterey, and by written reports and examinations.

To defray the expenses of correspondence, monthly reports, etc., an annual fee of 50 cents is required. This amount should be forwarded to the California Secretary. Persons desiring to unite with the C. L. S. C. should forward names to Miss L. M. Washburn, San Jose, Cal.

An average of 40 minutes' reading and study each week-day will enable the student in nine months to complete the books required for the year. The annual examinations will be at the homes of the members and in writing. Lists of questions will be forwarded to them, and by their written replies the "Committee on Examination" can judge whether or not they have read thoughtfully the books required.

The first annual assembly of the Circle will be held at Pacific Grove, Monterey, after the annual meeting of the State Sunday-school Association, during the summer of 1880. This is intended as a supplement and a stimulus to the home study of the year.

The Executive Committee of the California branch of the C. L. S. C. consists, for the present year, of the following members: Rev. C. C. Stratton, D. D., San Jose, Cal., President; Miss Lucy M. Washburn, San Jose, Cal., Secretary; Prof. H. B. Norton, San Jose; Rev. S. H. Willey, D. D., Santa Cruz; Rev. M. M. Gibson, D. D., San Francisco; Rev. J. H. Wythe, M. D., Oakland; Rev. Robert Bentley, D. D., Sacramento; Rev. H. H. Rice, Sacramento; Miss Helen S. Wright, San Jose.

Circulars of information may be obtained of the Secretary.

FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—At Montpellier, on the 28th of August, the annual congress of the Association for the Advancement of Science was opened. The President (M. Bardoux), in the course of his inaugural address, pointed out that the modes of teaching should follow the developments and modern society, and that the old method, in which memory played the principal part, should be abandoned. What was now required was a system of instruction which developed the judgment and set it on its guard against chimeras, without extinguishing the cultivation of the beautiful. This was the urgent reform which secondary instruction needed.

AUTOMATIC ENGINE.—A new automatic pumping engine is in operation at the Providence (R. I.) water works. It has 10 cylinders, five for water and five for steam, arranged alternately in a circle. It possesses an enormous capacity, but it will, without attention from the attendant, do the duty of pumping either for a single faucet or for a dozen steam fire engines. The cylinders are all connected to a single central upright shaft, which automatically either makes one revolution in five minutes or 25 in one minute, according to water required. If the fire burns low, the engine will open the damper; if this is not sufficient, it will put on the blower.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

### CATTLE.

PETER SAXE & SON, 520 Bush St. S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

### SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

### POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry, Berkshire and Magie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California, Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Doves, etc. Eggs for hatching. Send for price list.

### SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

T. G. STARR, San Bernardino, Cal. Poland-China Swine and Black Cochon Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

### BEES.

JOS. I. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## Seedsmen.

### SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco



B. K. BLISS &amp; SONS,

Importers, Growers and dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address

B. K. BLISS &amp; SONS, 34 Barclay Street, N. Y.

### EXOTIC GARDENS.

F. A. MILLER & CO., Mission St., opposite Woodward's Gardens. Send for Catalogue and Price List.

# PIANOS

## LARGEST MUSIC HOUSE

On the Pacific Coast.

WHOLESALE AND RETAIL.

## Lowest Prices and Best Goods.

Write for information concerning any Musical Instrument, and terms of sale. It will be given with pleasure.

ESTABLISHED IN 1850.

## KOHLER & CHASE,

137 and 139 Post Street, San Francisco.

50 Pertumed, Snowflake, Chromo, Motto Cards, name in gold and jet 10c. G. A. SPRING, E. Wallingford, Ct.



Lands for Sale and to Let.

FARMS FOR SALE.

IN THE FERTILE AND HEALTHFUL  
**San Pasqual Valley,**  
San Diego County, Cal.  
TITLES PERFECT.

The owner (an architect) having recovered his health by a residence of four years in this Valley, is desirous of returning to the city, and so offers the following farms for sale

At a Great Sacrifice:

The Home Farm of 200 acres is well fenced and subdivided. There is beside 600 yards of movable panels, 50 Acres in Alfalfa,

Yielding five and six crops a year. There is an abundance of water on the place for stock, besides running water for garden, orchard, etc., and a one-sixth interest in the S. P. V. Ditch Co. House 28x36, enclosed in a lot 200x190, barn and stable, 54x35, two sheds 24x14 and 18x14, smoke-house, 20x14, with an adobe cellar under it, and every convenience as regards large tanks, etc., for making bacon. The implements are of the best, nearly all new, and in good order. They consist of two farm wagons, 10-foot header, header beds, hay rack, mower, gang plow, single do, harrow, 10-foot seeder and cultivator, small do, sulky rake, two sets of strong harness, together with a lot of other tools, bay, grain seed, etc.

Price for the whole, \$4,000; one-half cash, balance on time at 1 per cent.

For Sale Also,

A farm under cultivation of 116 acres, adjoining the above, suitable for grain, corn or alfalfa, with a one-sixth interest in the Ditch Co., and about one and one-quarter miles of fencing, no other improvements. Price, \$1,200; one-third cash, balance on easy terms.

For Sale Also,

A farm of 120 acres, one-quarter mile from the above ranches, mostly damp land, suitable for a nursery, alfalfa, corn, etc. There is a small house, etc., and a ditch running along its upper side. Price, \$900; one-third cash, balance on easy terms.

The neighborhood is exceedingly healthful and growing. Two schools are in the valley, one within one-quarter mile, and the postoffice within one mile, neighbors with families are all around.

My stock consists of superior brood mares, colts, hogs etc., and they may be taken at a valuation if wanted.

For particulars apply to **W. B. STEWART,**  
San Pasqual Valley, San Diego Co., Cal.

Farm For Sale.

Yields an Income of \$4,000 a Year.

Price, \$10,500.



My Farm and Poultry Business yield over \$4,000 a year. The place—116 acres—with orchard, vineyard and improvements, has cost me \$15,000. The good will of the business is worth fully \$6,000. I will sell the business and farm for \$10,500, half cash, or exchange for San Francisco property. It is a bargain such as is seldom offered.

M. EYRE, Napa, Cal.

Law Office in San Francisco, No. 636 Clay St., Room 25.  
I am in Napa each Saturday and Sunday; other days in San Francisco.

FOR SALE.

700 Acres. The Finest Stock and Grain Farm in Northern California.

Price, \$25,000, including Farming implements. The whole under fence.

The Stock upon this farm, all thoroughbred and graded, embracing some of the finest in the State, will be sold at private sale. Among the stock is some that has been awarded different premiums at State and County Fairs.

This is one of the finest opportunities for a man of means in the State. For full particulars apply to

D. B. HAYS,

Real Estate Agent, Oroville, Cal.

C. C. RODGERS,

CALIFORNIA LAND AGENCY,

Office, 276 First St., San Jose, Cal.

GENERAL LAND, REAL ESTATE, U. S. PENSION AND BOUNTY AGENT.

Will buy and sell Land Warrants; Locate and Survey Public Government Land, Pre-emption Homesteads, Soldiers' and Sailors' Homesteads, Timber and Wood Lands, Desert Lands, Etc.



For Sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

ALMOND, RAISIN,

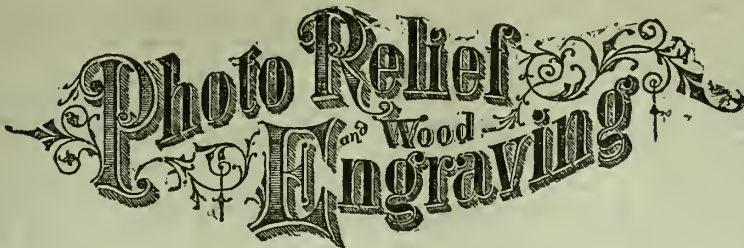
— AND —

Orange Land for Sale

In lots to suit. On the line of Clear Lake Water Works Ditch. Address

D. O. RUMSEY,

Head Capay Valley, Yolo county, Cal.

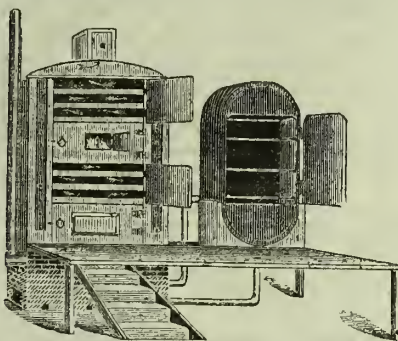


The use of Photography in producing stereotype and electrotype plates for artistic and common printing, forms, comparatively, a new method, in which we are making continual improvements and executing different kinds of work, superior to any before issued. It also enables us to produce certain kinds of work at greatly reduced prices.

Designing and Wood Engraving of every variety in the best style of the art, continued as usual. All orders executed promptly and on the most reasonable terms. We guarantee satisfaction. For the credit of our own journals, our customers can rely upon first-class work of the styles desired.

SCIENTIFIC PRESS ENGRAVING CO.,

No. 202 Sansome St., S. F.



BUTTS'

IMPROVED ANTISEPTIC "CHALLENGE"

Fruit, Vegetable and Hop Drier  
AND CANNING APPARATUS.

The cheapest, quickest and greatest labor-saving Drier ever introduced. Retains the quality, color and flavor of the fruit. The Canning Apparatus has a capacity of from 500 to 4,000 cans per day. Machines varying from 500 lbs. to 10 tons capacity per day constantly on hand. For Circulars, prices, etc., address

WM. BUTTS, Patentee,  
S. E. Cor. Spear and Mission Sts., San Francisco  
P. O. BOX 1,859.

State, County and Individual Rights for Sale.

Howe's U. S. Standard Scales.

SCALES REPAIRED

In City or Country by a Practical Scale Maker with United States Standard Weight.

Platform, Drop Lever, Grain, Hay, Warehouse and Counter Scales, Even Balances and Butcher Scales, White's Money Drawers, Store, Wagon and Box Trucks.

DAVID N. HAWLEY, Agt., 201 and 203 Market Street,  
(Cor. Main) SAN FRANCISCO.



Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$2,500,000,

In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

OFFICERS:

PRESIDENT.....G. W. COLBY.

MANAGER AND CASHIER,  
ALBERT MONTPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

Grangers' Co-operative Business Association,  
of Sacramento Valley.

Location: K & 10th Sts., Sacramento, Cal.  
Dealers in GENERAL PRODUCE, RETAIL GROCERIES, and sale of FRUITS. Desire the co-operation and trade of farmers in general. Pay the highest market rates for all produce, and sell for the smallest profit. Our orders are CASH on delivery. Goods shipped; marked C. O. D. **W. H. HEVENER, Manager.**

A New Forage Plant.

THE GREEN VALLEY GRASS.

The WONDER of the NINETEENTH CENTURY, yields 10 to 14 tons of hay per acre, and from 3,000 to 4,000 bushels of roots, which far excels artichokes as feed for hogs.

Grows without Irrigation.

For price list of seed and roots, address

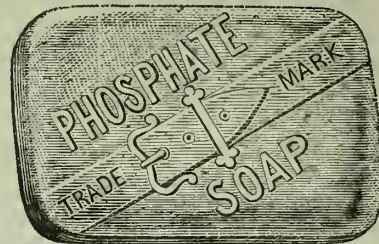
ARTHUR TAYLOR,

Watson, Atchison Co., Mo.



Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

PHOSPHATE SOAP



THE BEST soap for toilet use ever manufactured. BEST because it contains all the excellencies of the most expensive foreign or American soaps without their defects. BEST because it combines strength with delicacy in such a way that its strong detergent qualities do not injure the skin. BEST because it is the result of years of study and experiment in the soap manufacturing business, assisted by modern chemical discoveries. BEST because it contains ingredients beneficial to the skin, which unite chemically with the soap in such a manner as to increase its saponaceous qualities. Every chemist familiar with soap manufacture knows that some ingredients which are in themselves beneficial to the skin cannot be saponified; some are partially neutralized, while others injure the quality of the soap. There are soaps in the market which are to some extent beneficial to the skin, but they are inferior articles for toilet use. PHOSPHATE SOAP is the ONLY article offered to the public which combines all the best elements of toilet soap with medical ingredients beneficial to the skin.

If your wife is in the habit of using cosmetics of any kind, advise her to give up the pernicious practice, as the most harmless face powders obstruct the pores of the skin and sooner or later injure the complexion, while PHOSPHATE SOAP removes all impurities and assists nature in developing a natural, healthy and beautiful skin.

It is an old proverb that an ounce of preventive is better than a pound of cure. Twenty-five cents invested in a cake of PHOSPHATE SOAP will save hundreds of dollars in doctors' bills. It acts as a constant disinfectant, preventing Salt Rheum and other skin diseases.

If your wife will persist in the use of cosmetics, buy her a cake of PHOSPHATE SOAP and tell her to use it every night before retiring. In that way much of the harm will be avoided, as the skin will thereby be able to retain much of its natural vigor and beauty.

No salve or ointment can heal a wound or sore of any kind. Every educated physician will tell you that nature alone can do this. PHOSPHATE SOAP, by its cleansing, soothing and purifying qualities, gives nature a chance to act freely.

Natural beauty surpasses anything which can be imparted by artificial means. PHOSPHATE SOAP gives health to the skin simply by removing impurities and eradicating the poisons which give rise to skin diseases.

Not only for daily use on the face and hands, but for bathing the entire body, there is nothing equal to PHOSPHATE SOAP. It is a thorough disinfectant and removes offensive odors of every kind.

Ladies who have injured the skin by the constant use of cosmetics may do much to restore their faces to that beauty which nature alone can give by constantly using PHOSPHATE SOAP.

For all diseases of the skin use PHOSPHATE SOAP. There is nothing like it for removing impurities and giving the skin a healthy and natural vigor.

Cheap toilet soaps manufactured from rancid and refuse grease injure the skin and are really more expensive than PHOSPHATE SOAP, which retails for 25 cents per cake.

Thousands of articles are palmed off on the public which have no genuine merit, but PHOSPHATE SOAP is the result of modern discoveries of celebrated chemists.

PHOSPHATE SOAP costs no more than other good toilet soaps, while its medicinal qualities make it worth ten times its price to every man, woman and child.

If you want a nice article of Toilet Soap and something that is beneficial to the skin, buy PHOSPHATE SOAP.

Educational.



BUSINESS COLLEGE,  
24 Post Street,  
Near Kearny,  
San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, **E. F. HEALD,** President Business College, San Francisco, Cal.

W. E. CHAMBERLAIN, JR.

THOS. A. ROBINSON



SEND FOR CIRCULAR.

MONEY TO LOAN

AT LOWEST RATES

On Country Real Estate and Grain in Warehouse.

McAFEE BROTHERS.

202 Sansome Street, San Francisco.



The New Non-Poisonous Sheep Dip and Disinfectant. Price, \$2 per gallon. For directions and testimonials, apply to **FALKNER, BELL & CO.,** Sole Agents, 430 California Street, S. F.

OBTAINED IN U. S. AND FOREIGN COUNTRIES; trademarks, labels and copyrights registered through DEWEY & CO.'S MINING AND SCIENTIFIC PRESS Patent Agency, San Francisco. Send for free circular

Patents



## Napa and Solano County Fair Awards.

## Horses.

Thoroughbreds.—N. Coombs, stallion Shannon, \$20; sucking colt, \$3; mare Ruth Ryan, \$15; A. L. Chapman, mare Maggie with colts, \$20; F. W. Lober, stallion Nautuc and family, \$25; W. H. Coombs, br colt by Bayswater, \$10.

Graded horses.—S. S. Drake, stallion Frank D., 2 yrs, by Irwin Davis, \$3; mare Eve, 1 yr, by Admiral, \$5; J. Farmer, mare Comet, 6 yrs, \$10; A. L. Chapman, stallion Twin Boy, 1 yr, \$5; sucking colt, Drake, \$5.

Horses of All Work.—F. W. Lober, mare Lady Childs, \$10; Heald & Woodberry, stallion Jim Blaine, \$5. Sucking colts, other than Thoroughbreds and Graded.—S. S. Drake, sucking colt, spec prem; A. L. Chapman, colt, \$8; F. W. Lober, colt foal, 2d prem; A. T. Hatch, sucking colt, spec prem.

Roadsters.—F. W. Lober, stallion Nautuc Prince, 4 yrs, \$15; Heald & Woodberry, stallion Hambletonian Chief, 2 yrs, \$8; J. H. Lennon, California Gloster, 3 yrs, \$10; G. B. Clifford, mare Maud Clifford, 3 yrs, \$3.

Carriage and Buggy Horses.—J. E. Williston, Rockwell and Mollie McCarty, double team, \$10; J. Brownlie, buggy horse Billy, \$5; R. Hodgkinson, saddle horse Sam Slocum, \$4.

Sweepstakes.—N. Coombs, stallion Sherman, \$15; mare Ruth Ryan, \$20; S. S. Drake, stallion Admiral, \$20; A. L. Chapman, mare Lady Norfolk, \$20.

## Cattle.

C. B. Demming, Durham bull Red Cloud, \$15; calf, \$3; J. Wilson, Jersey bull, \$10, Jersey cow, \$1.

## Sheep.

A. Scott, Cotswold ram, \$5; Cotswold ewes, \$3; 3 spring lambs, \$5.

## Swine.

C. B. Demming, boar, \$5.

## Poultry.

F. McDonald, game cock, \$2; C. B. Demming, bronze turkeys, \$5; A. T. Hatch, Plymouth Rock hens, \$2.50, lot brown Leghorns, \$2.50.

## Grains, Vegetables, Etc.

Mrs. R. E. F. Moore, grain in sheaf, \$5; J. F. Demming, sk wheat, \$5; S. S. Drake, sack wheat, \$3; R. Brownlee, sk barley, \$3; S. S. Drake, sk barley, \$2; O. Cooper, 12 ears corn, \$2; J. W. Farmer, potatoes, \$3, onions, \$1; Mrs. R. E. F. Moore, sk shelled corn, \$2, potatoes, \$5; V. Harrier, squashes, \$3; J. W. Farmer, squashes, \$2; shelled peas, \$1; S. S. Drake, beans, \$1; Mrs. R. E. F. Moore, beans, 50c; sugar beet, \$1; J. W. Farmer, angel wurtzel, 50c; blood beet, \$1; O. Cooper, blood beet, 50c; J. W. Farmer, corn on stock, \$1; Mrs. R. E. F. Moore, broom corn, \$1; Dr. Rose, tobacco, \$3; Geo. Edgumbe, hops, \$2; J. W. Farmer, cabbage, \$1; Mrs. R. E. F. Moore, garden vegetables, \$5; J. W. Farmer, garden vegetables, \$2.50; Mrs. R. E. F. Moore, watermelon, \$2.

## Fruit, Etc.

Mrs. C. B. Demming, colt fruits, \$10; Mrs. R. E. F. Moore, apples, \$5; S. S. Drake, 1 var apples, \$2; Mrs. R. E. F. Moore, 6 var apples, \$3; C. B. Demming, colt pears, \$4; 1 var pears, \$2; 6 var pears, \$3; Mrs. R. E. F. Moore, c-l plums, \$3; 1 var plums, \$2, 6 var plums, \$3; J. F. Demming, quinces, \$2; colt pomegranates, \$2, colt grapes, \$5; G. H. Greenwood, 6 var wine grapes, \$4; C. B. Demming, 6 var table grapes, \$4; Demming & Greenwood, var raisin grapes, \$3; C. B. Demming, colt figs, \$2; A. T. Hatch, colt almonds, \$3; Mrs. R. E. F. Moore, peanuts \$2.

## Dried Fruit, Preserves, Etc.

Mrs. R. E. F. Moore, dried fruit, \$5, apples, \$2; S. S. Drake, pears, \$2, peaches, \$2; Mrs. R. E. F. Moore, plums, apricots, nectarines, cherries, \$2 each; J. F. Demming, raisins, \$5; Mrs. R. E. F. Moore, home-canned fruits and vegetables, \$5, preserves and jellies, \$5; Mrs. C. A. Hutton, pickles and catsup, \$3; Mrs. R. E. F. Moore, honey in comb, \$2.

## Butter and Cheese.

Mrs. C. A. Hutton, butter, \$3; packed butter, \$5, cheese, framed dip and \$5.

## Wine, Cider, Ale, Etc.

Mrs. J. W. Farmer, cider, dip and \$3; McLure & Co., Cronk beer, dip and \$3.

## Domestic Manufactures.

Mrs. D. G. Barnes, fancy tables, \$5; J. H. Ghermann, meehan display in wood, dip and \$5; S. Dannenbaum, carpets, \$2.50; E. C. Raum, gloves, \$2.50; H. C. Barnes, machinists' work, \$5; Weill Bros., boots and shoes, \$2.50; T. McGinnis, leather, dip; harness leather, \$5; D. G. Barnes, wood-turning, \$2; Mrs. C. A. Hutton, soap, dip and \$2; Mrs. H. T. Crocker, fancy table; spec prem recom to Mrs. R. Bogle for hair work; com recom dip to J. S. Taylor & Co. for bak powder; J. Brize for window shades, and T. McGinnis for leather.

## Carriages, Buggies, and Wagons.

O. L. Henderson, carriages, wagons, buggies, etc, dip and \$20, family carriage, \$10, buggy, \$5, skeleton wagon, \$5; Dallyn & Skirts' express wagon, \$5, and com rec spec dip for buggy.

## Saddlery and Harness.

G. B. Richart, carriage and wagon harness, dip and \$15, set double harness, \$5, set single harness, \$5, saddle, \$4; W. E. Richart, age 19, work by apprentice, \$3.

## Agricultural Implements.

H. G. Knapp, side-hill plow, dip and \$2; O. L. Henderson, wheelbarrow, dip.

## Painting, Ornamental Work, Etc.

Mrs. J. A. Rawson, colt oil paintings, dip and \$3, Cal landscape, dip and \$5; Miss F. Hackett, painting in water colors, \$5; J. G. Smith, portrait, \$5, colt photographs, \$3; Miss M. Towle, pencil drawing, \$4; Mrs. A. J. McKie, knitting, \$2; Miss L. Biggs, rag mat, \$2; J. B. Waltenbaugh, rag carpet, \$4; T. Smith, sewg mach, dip and \$5; Mrs. G. W. Edgumbe, sewg mach wk, dip and \$3; Mrs. R. E. F. Moore, lady's dress, \$2; Mrs. G. W. Edgumbe, child's dress, \$2; Mrs. R. E. F. Moore, girls' shirts, \$2; Miss L. Biggs, patchwork, dip and \$2; Mrs. D. G. Barnes, quilting, dip and \$2; Mrs. A. J. McKie, wash and iron, \$2; G. Wentworth, penshp from public school, dip and \$2; Mrs. L. C. Greenwood, hair wk, dip and \$2; Mrs. A. C. Berry, wax wk, dip and \$2; Miss F. Hackett, bend wk, \$3; Mrs. J. A. Rawson, aquarium, \$3, cabinet of minis and petrifications, \$10.

## Embroidery, Needlework, Etc.

Miss G. Hilborn, worsted cmbdy, \$5; Miss E. Snyder, worsted picture, \$5; Mrs. G. L. Voorhees, silk braiding, \$5; Miss M. Devlin, silk cmbdy, \$3; Mrs. D. G. Barnes, embroidery on lace, \$2; Mrs. C. Davis, transfer wk, \$2; Mrs. G. Greenwood, crochet wk, \$2; Miss Neville, knit bed-spread, \$3; Miss C. Whitney, tatng, \$2; Mrs. E. Williams, neting, \$2; Mrs. M. B. Taylor, 78 yrs, bem-stiching, \$2; Miss M. McDermine, tufted nil wk, \$4; Miss M. Devlin, pr win stknks, \$4; Miss L. Watson, pr win stknks by a Miss under 16 yrs, \$3.

## Bread, Crackers and Confectionery.

Mrs. R. E. F. Moore, home-made bread, \$5; Miss H. Hutton, same by a Miss under 16 yrs, \$5; Mrs. A. J. McKie, cake, \$5; Miss A. Walters, cake by a Miss under 16 yrs, \$5; Mrs. A. J. McKie, tarts, \$3; Miss M. Rounds, tarts by a Miss under 16 yrs, \$3; T. S. Gilbert, confectionery, dip and \$2; com recom spec prem to Mrs. McCool for brw bread, and Miss H. Hutton for bread.

## Plants, Bouquets, Wreaths, Etc.

Mrs. J. F. Demming, floral design, \$5; cut roses, \$2.

## Department for Children Under 16 Years.

Allice Bogie, needle work, \$5; Grace Hilborn, worsted emb, \$1.50; Adella Hilborn, crocheted wk, \$1; Grace Hilborn, tatng, \$1; Katie McInnis, trair wk, \$1; Adella Hutton, patchwork, \$3; Della Rounds, pencil drawing, \$2; Corwin Cooper, penshp, \$3; com recom spec prem for pict frames by Greenwood boys.

## Premiums Awarded at Santa Clara District Fair.

## Horses.

Thoroughbreds.—Stallion, 3 yrs, Wm. Boots' Kingston, \$20; mare, 3 yrs, W. Boots' Maima, \$15; mare, 2 yrs, Wm. H. Hall's Mollie II., \$10; mare, 1 yr, W. H. Hall's San Jose Beauty, \$5.

Roadsters.—Stallion, 4 yrs, H. W. Seale's Elmo, \$20; stallion, 3 yrs, B. F. Fish's Young Comet, \$15; mare, 4 yrs, W. Henderson's Big Lize, \$15; mare, 3 yrs, T. Gault's Lady Allen, \$10.

Graded Horses.—Stallion, 3 yrs, W. C. Wilson's Belmont Patchen, \$30; stallion, 2 yrs, H. W. Seale's Colt by Elmo, \$20; mare, 3 yrs, with colt, B. E. Harris' Lady Silva, \$20; mare, 2 yrs, W. Boots' Bessie N., \$15.

California Draft Horses.—Stallion, 3 yrs, J. E. Hanchett's Cecil, \$30; stallion, 2 yrs, M. Thomss' Broderick, \$20; mare, 3 yrs, J. W. Bryant's Fanny Bryant, \$20; mare, 2 yrs, Cole's Black Bess, \$15; imported stallion, 3 yrs, J. McDonald's Bayard, \$30.

Carriage Horses.—Span, C. B. Polhemus' Julia and Ida Livingston, \$20; single buggy horse, W. W. Wright's Skyrocket, \$10.

Sweepstakes.—Stallion, H. W. Seale's Elmo, \$30; mare, W. H. Hall's Mollie II., \$15.

Families.—Stallion, with 4 colts, E. W. Marston's Startle, \$30; mare, with 4 colts, W. C. Wilson's Rebel Daughter, \$30.

## Cattle.

Durham bull, 4 yrs, C. Younger's Red Thorndie, \$20; bull, 3 yrs, J. D. Carr's 6th Duke of Gabilan, \$20; bull, 2 yrs, E. L. Bradley's Duke of Alameda, \$20; bull, 1 yr, C. Younger's Thornhill, \$15; bull calf, J. D. Carr's 21st Duke of Gabilan, \$10; cow, 3 yrs, C. Younger's 1st Rosa Nell, \$20; cow, 3 yrs, W. Quinn's Fuchsia the 4th, \$20.

Durham Cattle.—Cow, 2 yrs, Dr. S. F. Chapin's Jessie Maynard, \$20; cow, 1 yr, J. D. Carr's 4th Belle of Avenue Ranch, \$15; heifer calf, C. Younger's 6th Rose of Forest Home, \$10.

Devons.—Cow, 3 yrs, F. Smith's Nellie Richmond, \$10.

Alderneys.—Bull, 3 yrs, F. Smith's Dan Hinkley, \$10; bull, 2 yrs, B. F. Fish's Gen. Grant, \$10; bull, 1 yr, C. B. Polhemus' Prince, \$5; cow, 3 yrs, C. B. Polhemus' Bessie, \$10; cow, 2 yrs, C. B. Polhemus' Fairy, \$10; cow, 1 yr, C. B. Polhemus' Nonie, \$5. Special premium for 5 calves to C. B. Polhemus.

Ayrshires.—Bull, 3 yrs, G. Bennett's Wellington Callaghan, \$10; bull, 2 yrs, G. Bennett's Laurie Todd, \$10; cow, 3 yrs, G. Bennett's Lady Chapin, \$10; cow, 2 yrs, G. Bennett's Linda Pierce, \$10; cow, 1 yr, G. Bennett's Stellina, \$5.

Sweepstakes.—Bull, J. D. Carr's 6th Duke of Gabilan, \$30; cow, J. D. Carr's Pet of Geneva, \$30; dairy cow, G. Bennett's Young Stella, \$10; cow with calf, und 1 yr, J. D. Carr's 3d Maid of Monterey, \$20.

Graded Cattle.—Cow, 3 yrs, N. B. Edwards' Big Baby, \$15; cow, 2 yrs, W. Quinn's Kate Hayes, \$10.

Herd of Cattle.—Herd, 2 yrs, J. D. Carr's 6th Duke of Gabilan, Hope 22d, 3d Maid of Monterey, and Louna the 4th, \$30; herd, 1 yr, J. D. Carr's 21st Duke of Gabilan, 4th Belle of Avenue Ranch, Leopards the 10th, Hope the 27th, and Fairy Queen the 4th, \$20; bull and 4 calves, J. D. Carr's 6th Duke of Gabilan, 21st Duke of Gabilan, Oxford Beau, 18th Maid of Monterey, Lady Oxford the 2d, \$15; pair, J. D. Carr's 6th Duke of Gabilan and Pet of Geneva, \$10.

## Goats.

Cashmere and Angora.—Thoroughbred buck, J. S. Harris', Bruce, \$10; thoroughbred ewe, C. P. Bailey's Queen of Monterey, \$10; herd of 10, J. S. Harris (prem), \$10.

## Sheep.

French Merino.—Ram, Mrs. Blakow's Defiance, \$10; ewe, Mrs. Blakow's Alice, \$10, 3 ram lambs, \$10, and pen of 5 ewe lambs, Mrs. Blakow, \$10.

Cotswold.—Ram, W. Quinn's Dave, \$10; ewe, W. Quinn's Lizzie, \$10.

Southdowns.—Ram, J. D. Carr's Salinas, \$10; ewe, J. D. Carr's Best Ewe, \$10; pen of 5 ewe lambs, J. D. Carr, \$10.

Sweepstakes.—Ram, Mrs. Blakow's Defiance, \$10; ewe, Mrs. Blakow's Alice, \$10.

## Swine.

Boar, R. Thompson's David, \$10; sow, R. B. Donovan's Berkshire Sow, \$5; pair of pigs, G. McCracken's Tom and Betty, \$5.

## Poultry.

Pair black Spanish chkn, C. W. Love, \$3; pr dark Brahmas, F. E. Collins, \$3; pr drucke, C. W. Love, \$3; 3 white Leghorns, \$3, 3 Plymouth Rocks, \$3, 3 Red Game Bantams, Mrs. J. L. Watkins, \$3; 3 Black Game Sumatras, \$3, pr black Hamburgs, F. E. Collins, \$3; pr Rumples, Mrs. C. D. Horn, \$3; 2 pr Japanese Bantams, H. H. Wicell, \$3; 3 Partridge Cochins, \$3, 3 white Cochins, \$3, 3 Golden Headed Polands, \$3, 3 blue Spanish games, \$3, 3 Plymouth Rocks, A. O. Rix, \$3; 3 white Spangled Polands, C. Mariatt, \$3; 3 Silver Spangled Polands, Wm. Quinn, \$3; pr Silver Spangled Houdans, \$3, pr Houdans, A. O. Rix, \$3.

## Manufactures.

Agric Impls.—T. E. Martin, wind mill, dip; D. M. Osborne & Co, reaper, dip, mowers, dip, self-reaper and binder, dip; G. A. Friermuth, plow, dip; W. Fruhling, dry plow and cultivator combined, dip, and gang plow, dip; F. J. Corning, hay press, dip; N. Beauregard, harrow, dip; F. Perkins, farm gate, dip; Ayers & Co, bay rake, dip; D. M. Osborne & Co, self-reaper, binder and header combined, dip.

Hand Tools.—G. M. Pursell, washing machine, dip; G. B. Bowman, "The Boss Pruner," dip; J. B. Crandall, apple parer, corer and slicer, dip; N. Beauregard, wagon jack, dip.

Wagons and Carriages.—Hatman & Normandin, family carriage, dip, one-horse top buggy, do, express wagon do, family wagon do. Spec prem recom to Hatman & Normandin, full exhibit carriages.

Iron and Woodwork.—Carroll, Kilburn & Co, door work, dip, window sash do, blinds do.

Tanned Leather.—Angora Robe and Glove Co, \$20.

Pottery.—A. Steiger, \$10.

Stoves and Tinware.—J. J. White, stoves and ranges, dip, tin and copper ware, dip.

Domestic Manis.—Williams Bros, hats and caps, dip; Angora Robe and Glove Co, gloves, \$10; Mrs. E. L. Bradley, home-made woolen socks, \$2, patchwork woolen bed quilt, \$5; Mrs. C. D. Horn, home-made cotton stockings, \$2, home-made woolen stockings, \$2; Mrs. J. J. White, patchwork cotton quilt, \$5; Mrs. C. F. Willey, home-made needle work, \$5.

Cabinet Ware.—Bennett, Patterson & Co, parlor furn, \$10, chamber furn, \$10, upholstery, \$10, spring bed, \$5, mattress, \$5.

## Farm Products.

F. Hamilton, 2 sks barley, \$3, 2 sks rye, \$3; J. Stanford, 2 sks wheat, \$3; Mrs. W. H. Scott, 2 sks oats, \$3; Moody Bros, col of flour, \$5, spec prem recom to M. B. French & Co, for col flour, Andrews & Coykendall, exhibit hams, \$3, smoked beef, \$3, salt pork, \$3; Mrs. G. Hostetter, 10 lbs lard, \$3.

Garden Products.—E. N. Neal, squash, \$2; W. Boots, tomatoes, \$2, onions, prem recom; Andrews & Coykendall, potatoes, \$2; W. W. Cozens, watermelons, \$2.

Dairy Products.—Farmers' Union, for Mrs. Rodhouse, butter, \$5.

## Fruits.

L. H. Bascom, pound pear, \$5, apples, \$5, Mission grapes, \$2; F. A. Wilcox, barberries, \$2, Zaute currants, \$2; Mrs. J. Lewis, quince, \$2; A. M. Ogier, raspberries, \$5, blackberries, \$5, strawberries, \$5, pears, \$5, apples, 12 var, \$15; W. Boots, prunes, 6 var, \$5; W. H. Rogers, lemons, \$2; oranges \$2; Mrs. E. L. Bradley, peaches, \$5.

Preserved and Dried Fruits.—Mrs. J. E. Brown, dried prunes and plums, \$5, dried fruit, \$10, Zante currants, \$2, peaches, \$2.

Preserves and Jellies.—Mrs. J. Lewis, preserves, \$5; Miss L. Ogier, Jellies, \$5.

Domestic Canned Fruits.—Mrs. G. K. Hostetter, fruit,

\$10; Mrs. J. Lewis, sweet pickles, \$5; Mrs. C. D. Horn, pickles, \$3.

## Nuts.

Mrs. W. H. Scott, almonds, \$2; L. H. Bascom, blk wel-nuts, \$2; D. B. Moody, English walnuts, \$3; A. M. Ogier, Italian chestnuts, \$2.

## Plants and Flowers.

Mrs. J. J. Watkins, vase, \$3; Mrs. J. Lewis, parlor bouquets, \$3, hang basket \$2; B. S. Fox, greenhouse plants, \$25, hardy ornamental evergreens \$25, cut roses and dahlias \$5, fern and leaf plants \$5.

## Bread and Pastry.

Domestic brown bread, Mrs. I. A. Wilcox, \$2; dom wheat brd \$2, Boston hrn brd, Mrs. C. D. Horn; soda bise, Mrs. J. Sinnott, \$2, cake, \$5; C. W. McGettigan, bakers' brd, dip; spec men of Miss Sikes' cake, A. M. Peeler, pastry, \$5.

## Sewing Machines.

Dip Wheeler & Wilson No. 3, best for all purposes, and dip for fancy wk; also, for best exhibit msch wk.

## Painting and Graining.

W. Kinsel, carriage ptng, \$10; M. A. Stewst, grng, \$10.

## Silverware.

Smith & Ryder, silverware and jewelry, \$10; J. Boschkan, cutlery, \$5.

## Fine Arts.

H. G. Peeler, oil ptng, \$10; F. Lewis, penshp, \$5. Four oil ptngs in main hall, exhibit by M. Bleimer, of Chicago, would have recd prem if entered for same.

## Millinery and Dress Goods.

J. Hart & Son, dressmaking, \$15.

## Embroidery, Fancy and Needle Work.

Mrs. C. D. Horn, bead work, \$3, embroidered handkf, \$2, braid wk, \$2; Jennie Kent, sola cushion, \$3; Mrs. N. E. May, moss wk, \$2; Mrs. J. E. Brown, leather wk, \$2; D. A. Liddy, worsted wk, \$2; Miss M. A. Swope, wax wk, \$5; Miss A. Lewis, hair wk, \$2; L. Camelia, shell wk, \$2; Mrs. C. D. Willey, embroid sofa cush, \$2, emb undersls, \$2, emb collar, \$2; Mrs. C. F. Willey, pin cush, \$2; Miss E. L. Peeler, emb table cloth, \$2; Mrs. G. P. Beal, emb rug, \$5; Mrs. C. A. Pitkin, canvas wk, \$2; wrstd wk, \$2, afghan, \$2; Mrs. G. W. Wilson, cotton tidy, \$2; Miss A. Saxe, toilet set, \$3, lamp mats, \$2; Miss A. Fisher, card brd wk, \$2; Mrs. E. L. Bradley, wrstd crochek wk, \$2, ladies' under wear, \$5; Mrs. J. Sinnott, child's suit, \$5; Angora R. & G, robe and mat, \$2.

## Miscellaneous.

Prem in this dept not stated, but following articles marked: Edipse Incubator Co, self-regulating incubator; F. Dye, pillow-sham holder; Brooks & Stoddard, Russian polish; B. B. Scott & Son, devorng extr; A. O. Rix, almond holder; E. M. Hamilton, eystem sub-irrigation, with machines for making pipe; Felix Sourisseau, firearms and sporting matris; J. Boschkan, hardware.

## El Dorado County Fair Premiums.

## Horses.

J. J. Eckel, 2-yr thoro-bred colt and 1 yr old; L. G. Morris, grade geld, 4 yrs; L. Tubbs, grade mare, 4 yrs; J. A. Wax, grade mare, 3 yrs; L. Williams, grade stallion, 1 yr old; W. R. Tong, grade stallion; L. Williams, horse of all work, stallion; J. H. Miller, 2 yr old; N. S. Miller, 1 yr old; M. Cassidy, br mare Oak Leaf; A. N. Freeman, drft horse; J. C. Brewster, stallion.

## Cattle.

O. N. Morse, Durham bull, cow 1 yr old, and heifer calf; J. Askew, Jersey bull; I. S. Bamber, cow; J. Fox, cow 4 yrs old.

## Goats.

N. Gilmore, Angora buck, 2 yrs; 2d do; under 2 yrs, 2d do; pen of 3 does, 2 yrs, 2d do.

## Swine.

A. Hauhuth, boar, 2 yrs; C. H. McCune, 2d do; J. Brysu, boar, 6 mo and und 1 yr; C. G. Carpenter, 2d do; breed sow 2 yrs, family, sow and pigs; I. S. Bamber, 2d breed sow, 2 yrs; J. Bryan, breed sow, 6 mo and und 1 yr.

## Poultry, Etc.

W. R. Tong, turkeys; J. Askew, lot Leghorn chicks; I. S. Bamber, Brahmas; C. H. Weatherwax, Cochins; T. Clifton, Friz or Porcupine; T. Fraser, Plymouth Rocks, ducks and display poultry; Z. P. Brandon, display gold fish.

## Fruits and Plants.

J. Lyon, apples; C. G. Carpenter, 2d do; Wm. Hendrix, 12 va; I. S. Bamber, pears; W. H. Hooper, 2d; I. S. Bamber, 12, C. G. Carpenter, 6 var; E. M. Smith, peaches; L. Rozler, 2d; E. M. Smith, 6, Wm. Pascoe, 1 var; I. S. Bamber, plums; P. J. Isbell, 2d; Bamber, 5 var; Jacob Lyon, 1 var; Thos Fraser, nectarines; I. S. Bamber, prunes; P. J. Isbell, 2d; I. S. Bamber, figs, also 2d; J. G. O'Brien, seedling fruit; J. Lyon, 2d; W. H. Hooper, display fruit; T. Hardie, var grapes; J. G. O'Brien, 2d; I. S. Bamber, wine grapes; J. G. O'Brien, table grapes; T. Hardie, raisin grapes; Mrs. S. A. Evans, prem for ornamental foliage plants and collect new and rare plants; Mrs. O'Keefe, hang baskets; Mrs. O'Donnell, collect flowers in bloom, and linchias; Mrs. Vignaut, bouquets; T. Hardie, native grapes; W. H. Hoyt, hops; C. H. McCune, tobacco in leaf.

## Dairy and Domestic.

J. Askew, butter in rolls, firkin butter, and lard; A. N. Freeman, 2d in rolls and 2d firkin; Miss L. Anderson, 4 lbs wheat head; Miss M. Reynolds, 2d; Mrs. W. A. Selkirk, biscuits, salt raising, and exhibit and var dom bread.

## Manufactures.

J. W. Dench, double tm harness, carriage harness, gent's saddle, lady's saddle, bridle, boot and shoe leather, and best display in class; Placer Gold Quartz Co, quartz crusher; J. Lyon, clothes wringer and wash bench; H. G. Hulburd, solder wire; J. K. Hlogan, peach pitler (clinging-stone); Weatherwax & Woodward, parlor stove, agate, china and copper ware, portable range, and tinware; J. A. Sigwart, silver ware; F. F. Bars, 2d do; L. D. Marks, pruning shears; H. Ingham, miniature furniture; Oids & Shepardon, spring bed, mattress, bedroom set, and best display in class; A. Beffa, bird cage; H. Ingham, carpenter work; J. M. J. Miller, corer, work; L. Desmarais, burr and shell cornice; L. Rosier, manzanita chair; C. B. Brown, flour sifter and box; A. A. W. Boynton, tanned skins and furs.

## Miscellaneous.

Miss B. Kuhn, silk embroidery; Mrs. B. F. Sherwood, linen emby; Miss B. Kuhn, braid wk; Mrs. Dedman, dress; Miss Isbell, calico dress; Lillie Clippin, calico dress; Mrs. Zimmerman, cot stockings; Mrs. J. E. Saviers, cot emby; Mrs. B. F. Sherwood, worked handkf; Mrs. J. Howatt, wax wk; Miss M. Reynolds, emby with beads; Miss J. Everts, pumpkin seed basket, watch pocket, and crystal-lized cross; Miss Ada Beebe, worsted wreath; Mrs. J. O'Donnell, crochet quilt; Mrs. S. McCumey, rag carpet; Mrs. G. J. Brown, tatting tidy; Mrs. P. Vignaut, leaf and moss work; Mrs. W. Wilsee, hearth rug; Miss B. Kuhn, crochek tidy; Mrs. Howatt, crystalized roses; Mrs. J. Saviers, display ladies' clothing; Mrs. B. D. Mason, knitted wk; Mrs. Starchman, patchwk quilt; Mrs. E. W. Witmer, lamp-stand mat; Mrs. Howatt, hair wk; Mrs. M. Ames, crochek wk; Mrs. Howatt, fancy leather wk; Miss N. Donahue, needle wk; Miss M. Reynolds & Mrs. E. W. Witmer, fancy articles; Hirsch & Colbentz, groceries and canned goods; J. W. Dayton, sewing mach (the Singer); S. Inch, stationery and pocket cutlery; A. P. Hall, fine stationery and perfumery; M. Simon &



bility no longer exists, and the fact has suddenly forced itself upon the minds of buyers, with the result recorded above.

The amount of business done in Wheat and Maize in all positions has been exceptionally heavy, and the slight reaction which took place during the middle of the week has been more than recovered. Nearly all descriptions of Cereal Produce shared in the upward movement; Maize to the extent of 45 per quarter, Barley and Oats 6d, and Beans and Peas 1s.

There has been a very large business done in forward Wheat, principally Californian and Red Winter, American, for both of which quotations indicate an advance of fully 3s per quarter. Maize and Barley are also in good request, at 6d advance.

#### Freights and Charters.

Ships are in small supply and freight rates have sharply advanced. The following charters show current rates: Ship *Snow & Burgess*, 1,655 tons, Wheat to Liverpool, £2 13s; Havre, £2 15s 6d; Cork, £2 15s 6d; Continent, £3 1s 6d. Ship *Three Brothers*, 2,972 tons, Wheat to Cork for orders, half capacity owner's account, balance private. British iron bark *Lady Penrhyn*, 815 tons, Wheat to Cork, owner's account. The chartered Wheat fleet in port numbers 39 vessels of a registered tonnage of 57,510 with a carrying capacity of 86,000 short tons, or 1,720,000 cts. Disengaged tonnage in port, 17,000; on the way, 155,000. During the week ending September 26th, 13 Wheat cargoes were cleared from this port and seven new charters were reported.

#### Eastern Grain and Provision Markets.

New York, September 30.—The Merchandise markets are still active; prices firm. Flour is active, 5c easier. Wheat opened 3c lower, recovering 1¢ 1/2, closing firm. Pork is active for export, 10c higher. Lard is in better demand, 5¢ 7/8 higher.

Chicago, September 27.—The past week's Grain markets on 'Change have been exciting, unsettled, irregular and wildly fluctuating, with a strong tendency to a rise. Wheat, as usual, has led the way, and the minor cereals have followed in its wake. Several failures have occurred, but for very small amounts. The fact is, that the heavy operators who bought at 85c to 90c sold out to 95c to \$1, and went short at the latter figure, so that when the rise came they alone lost. It was their manipulating that caused the heavy break of Wednesday and Thursday. When the break came they filled in quickly, and it is believed they are now securely on the long side. The Provision men have been steadily opposing the higher prices that now seem likely to rule, the secret of their opposition being a fear that, with hogs at present prices, or at higher prices in keeping with Grain, they may be compelled to do what they have occasionally been obliged to do heretofore: buy their Hogs at high prices in the winter and sell their product at low prices in spring and summer. All their efforts have, however, failed as to Grain, and although partially successful in Provisions, yet the tendency in that branch of trade is toward a rise. Sales of Wheat for November were \$1.01 1/2 to \$1.09 1/2, closing to-day at \$1.08; sales November Corn, 35 1/2 to 38c, closing at 36 1/2; bid; sales November Oats, 26 1/2 to 28c, closing at 27 1/2; sales of cash Rye, 58 1/2 to 60c; cash Barley, 76 1/2 to 80c; November Pork, \$3.15 to \$3.57 1/2, closing at \$3.45; November Lard, \$5.50 to \$5.80, closing at \$5.70. Closing cash prices of Wheat, \$1.05 to \$1.05 1/2; Corn, 37c; Oats, 25 1/2; Rye, 60c; Barley, 76c; Pork, \$9.75; Lard, \$5.12 1/2.

#### Eastern Wool Markets.

Boston, September 27.—The Wool market was active, and prices again advanced on nearly all grades, with a decided upward tendency at the close. Transactions have largely increased. The total sales of the week were 3,212,600 lbs of domestic. Holders were very indifferent about selling, and in many instances obtained an advance of 1/2 to 1c. The demand for light fleeces was active, and sales would have been much larger if holders had accepted full current prices for round lots. Combining and delaine selections continue to sustain full prices, with good demand, and all lots offered were taken. Oregon Wool attracted considerable attention, commanding very full prices. Pulled wools were taken as fast as received; sales comprise choice Pennsylvania and Virginia X, XX and No. 1 at 38¢ to 43¢; Michigan X and medium, 36¢ to 40¢; Wisconsin X, 36¢; New York X and medium, 35¢ to 40¢; New Hampshire, 33¢ to 38¢; combining and delaine fleeces, 42¢ to 45¢; coarse combining, 35¢; unwashed combining, 31¢ to 32¢; Eastern and Valley Oregon, 24¢ to 35¢; Georgia, 35¢; unwashed and unmerchantable fleeces, 22¢ to 35¢; Territory, 21¢ to 32¢; scoured, 42¢ to 80¢; tuft washed, 40¢; super and X pulled, 35¢ to 47¢. In California Wool sales were quite large—comprising for the week, 688,000 lbs of Spring at 17¢ to 35¢, and 35,000 lbs Fall at 12¢. Very little new Fall has as yet been received.

New York, September 27.—Wool continues in good, active demand, and prices are maintained. California grades are buoyant and firm. Sales of 248,000 lbs and 60 bales of Spring California at 10¢ to 30¢, the inside price for Locks; 11,000 lbs scoured Spring, and about 100,000 lbs Fall, to arrive, private.

Philadelphia, September 30.—Wool is firm and active; Colorado, 18¢ to 23¢ for washed, 18¢ to 20¢, for unwashed; Extra and Merino pulled, 35¢ to 40¢; No. 1 and Super, 35¢ to 38¢.

#### Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon to-day as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Sept. 10.	WEEK. Sept. 17.	WEEK. Sept. 24.	WEEK. Oct. 1.
Flour, quartersacks..	59,473	28,834	22,760	40,29
Wheat, centals.....	512,161	283,525	423,453	712,57
Barley, centals.....	66,076	57,360	58,529	70,61
Beans, sacks.....	1,953	2,501	3,900	9,06
Corn, centals.....	2,178	2,608	9,955	9,31
Oats, centals.....	7,421	7,089	7,737	16,16
Potatoes, sacks.....	20,080	11,324	9,222	21,795
Onions, sacks.....	2,520	1,690	2,012	1,965
Wool, bales.....	2,210	3,230	2,779	6,647
Hops, bales.....	383	406	350	508
Hay, bales.....	1,898	1,570	1,631	1,687

BAGS—Combinations rates are unchanged. Nearly all the Grain Bags are now held in the ring. Few are demanded.

BARLEY—Unchanged. We note sales: 200 cts Coast Chevalier at \$1.40; 200 cts Light do, \$1.35; 150 tons Good Brewing, 87¢; 300 and 250 cts Good Coast Feed, 72¢; 685 do do, 70c, and 1,000 do Poor do, 67¢.

BEANS—Reds and Limas are a little lower. Other sorts unchanged.

CORN—Large and Small Yellow have both declined. We note sales: 83 cts Large Yellow at 82¢; 95 do do, 80c; 300 and 56 do Fair White, 75c.

DAIRY PRODUCE—Butter has advanced about 5c per lb for all good lots. The Fancy Brands now bring 35c, and there is but little arriving. Cheese seems to be reviving a little, and some sales of Fancy are reported at 11c.

EGGS—Unchanged.

FEED—Prices same as last week.

FRUIT—Fluctuation is chiefly in Table Grapes, as shown in our list.

FRESH MEAT—Fresh Meats of all kinds are abundant and low. Mutton is a shade weaker from over supply.

HOPS—We hear of a sale of 60 bales Russian River at 30c. Most lots are being held for the future. A New

York telegram, dated September 27th, says: "Hops are in fair demand, pretty much everything of prime quality finding quick sale upon arrival. Prices are very firm."

OATS—Sales have been quite frequent. We note the following: 100 cts good Humboldt Feed at \$1.40; 1,000 and 200 do Feed, \$1.25; 200 do do, \$1.20; 500 do light do, \$1.12; 200 do do, \$1.10; 1,080 and 540 do common do, \$1.

ONIONS—The supplies are now all White. The range is according to quality from 45¢ to 50c.

POTATOES—There has been a demand for Red Potatoes for export, and this sort has sold high. Other sorts are not changed.

PROVISIONS—The demand for Provisions is active and prices well maintained. Bacon is especially firm. Eastern Hams are unchanged, but in active demand.

VEGETABLES—Cantaloupes are very low. Green Corn and Green Peas are a little higher, and String Beans reduced a fraction.

WHEAT—Prices are a shade lower because of rise of freights, in spite of the advance abroad. We note sales: 175 tons Shipping and 200 cts choice Milling at \$1.87 1/2; 200 tons No. 1, 60 do and 200 cts do, \$1.85; 350 cts good Shipping, \$1.82 1/2; 175 tons good Wheat mixed with Oats, \$1.75; 100 cts Off Grade, \$1.70, and 400 do Coast, at \$1.60 per cwt.

WOOL—There is now a wide range in San Joaquin Wools. Some dealers quote them 1¢ to 2c lower; others maintain that sales have been up to old quotations excepting objectionable lots. A considerable quantity of Calaveras Wools, classed with San Joaquin, have sold at 20c; being very fine and clean. Northern Wools are about 2c per lb higher. We note sales of 400,000 lbs at 12 1/2 to 20c.

#### DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., October 1, 1879.

BEANS & PEAS.	PEANUTS.
Mayo, cts.....	95 @ 105
Butter.....	1 50 @ 1 75
Oats.....	30 @ 35
Peas.....	50 @ 55
Red.....	90 @ 100
Pink.....	80 @ 100
Sm't White.....	1 35 @ 1 50
Lima.....	— @ 50
Field Peas.....	1 25 @ 1 50
BROOM CORN.	POTATOES.
Southern.....	2 @ 2 1/2
Northern.....	3 @ 4
CHEESE.	POTATOES.
California.....	4 @ 4 1/2
German.....	6 1/2 @ 7
DAIRY PRODUCE, ETC.	POTATOES.
BUTTER.	Petaluma, cts.....
Cal. Fresh Roll, lb	Humboldt.....
Fancy Brands.....	Cuffey Cove.....
Pickle Roll.....	Early Rose, sk.....
Flirin, new.....	Howard M'n Bay, new
Western.....	Malard.....
New York.....	Sweet.....
CHEESE.	POULTRY & GAME.
Cheese, Cal., old, lb	Hens, doz.....
do, new.....	Roosters.....
N. Y. State.....	Broilers.....
do, 10 lbs.....	Ducks, tame, doz.....
Cal. fresh, doz.....	Spring.....
Ducks.....	Teal.....
Oregon.....	Widegeon.....
Eastern, by expts.....	Geese, pair.....
Pickled here.....	Wild Gray, doz.....
Utah.....	White do.....
FEED.	TURKEYS.
Bran, ton.....	14 @ 25
Corn Meal.....	do, Dressed.....
Hay.....	Snipe Eng.....
Middlings.....	do, Common.....
Oil Cake Meal.....	Quail, doz.....
Straw, bale.....	Rabbits.....
do, 100 lbs.....	Hare.....
do, 50 lbs.....	Venison.....
FLOUR.	PANTRY.
Extra City Mills.....	Cal. Bacon, H. & V.....
do, Country Mills.....	Medium.....
do, Oregon.....	Light.....
do, Walla Walla.....	Lard.....
Superfine.....	Cal. Smoked Beef.....
Extra Superfine.....	Shoulders, Covered.....
FRESH MEAT.	HAMS.
Beef, 1st qual, lb	5 @ 5 1/2
Second.....	Dupe's.....
Third.....	Non-Salt.....
Mutton.....	Whittaker.....
Spring Lamb.....	Royal.....
Pork, dressed.....	Reliable.....
Dressed.....	O.K. (Louisville).....
Veal.....	SEEDS.
Milk Calves.....	Alfalfa.....
do, choice.....	do, Chile.....
GRAIN, ETC.	Canary.....
Barley, feed, cts.....	Clover, Red.....
Brewing, new.....	White.....
do, old.....	Cotton.....
Chevalier.....	Flaxseed.....
Buckwheat.....	Hemp.....
Corn, White.....	Italian Rye Grass.....
Yellow.....	Perennial.....
Small Round.....	Millet.....
Oats.....	Mustard, White.....
Milling.....	Brown.....
Rye.....	Rape.....
Wheat, No. 1.....	Ky Blue Grass.....
do, No. 2.....	Sweet V Grass.....
do, No. 3.....	Orchard.....
Choice Milling.....	Red Top.....
HIDES.	Hungarian.....
Hides, dry.....	Lawn.....
Wet salted.....	Mesquit.....
HONEY, ETC.	Timothy.....
Beeswax, lb.....	TALLOW.
Honey in comb.....	Crude.....
do, No. 2.....	Refined.....
Dark.....	WOOL.
Extracted.....	Wool.
HOPS.	San Joaquin and S. Coast.
Oregon.....	Burry.....
California, new.....	Free (dusty).....
Wash. Ter.....	Free (choice).....
Old Hops.....	NITS—Jobbing.
Walnuts, Cal.....	do Chile.....
do Chile.....	Almonds, hd shd lb
Almonds, hd shd lb	Soft shd.....
Soft shd.....	Brazil.....

#### BAGS AND BAGGING.

[JOBBER PRICES.]

WEDNESDAY M., October 1, 1879.

Eng Standard Wheat.....	21 @ 1	Eighties.....	31 @ 4
California Manufacture.....	— @ 1	Hesslau, 60 inch.....	— @ 14
H and Sewed, 22x36.....	— @ 11	45 inch.....	9 @ 10
24x36.....	11 1/2 @ 12	40 inch.....	8 1/2 @ 9
22x40.....	— @ 12	Wool Sacks.....	— @ 12
23x40.....	— @ 12	Hand Sewed, 3 1/2 lb.....	44 @ 45
24x40.....	13 @ 13	4 lb.....	47 @ 52
Machine Swd, 22x36.....	— @ 11	Machine Sewed.....	45 @ 46
four Sacks, halves.....	8 @ 10	Standard Gunnies.....	13 @ 14
Quarters.....	5 @ 6	Bean Bags.....	7 @ 7 1/2

Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & CO.]

SAN FRANCISCO, October 1, 3 P. M.

SILVER, 25. GOLD BARS, 890 @ 910. SILVER BARS, 10 @ 18 1/2 cent. discount.

EXCHANGE on New York, 20, on London bankers, 49 1/2 @ 49 1/4. Commercial, 50; Paris, five francs 50 dollar; Mexican dollars, 82.

LONDON Consols, 97 1/2 to 101; Bonds (4 1/2), 104 1/2. QUOTE SILVER in S. F., by the flask, 3 1/2 lb, 33 1/2.

#### FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., October 1, 1879.

FRUIT MARKET.	APRICOTS.
Apples, box.....	25 @ 1 00
Apricots, box.....	— @ 10
Bananas, bunch.....	3 00 @ 6 00
Blackberries, chst.....	4 00 @ 8 00
Cherries, chst.....	— @ 4
Citrons, Cal.....	100 @ —
Cocoanuts, 100.....	6 00 @ 7 00
Crab Apples.....	— @ —
Currants, chest.....	— @ —
Figs, box.....	40 @ 60
Gooseberries.....	— @ —
Grapes, bx.....	35 @ 50
Muscata.....	40 @ 65
Isabella.....	75 @ 1 00
P. Damascus.....	1 00 @ 1 25
Tokay.....	50 @ 1 00
Limes, Mex.....	8 00 @ 12 00
do, Cal, box.....	4 00 @ 5 00
Lemons, Cal M.....	25 @ 30
Slightly, box.....	10 @ 12 00
Australian.....	4 00 @ 5 00
Nectarines, bsk.....	— @ —
Oranges, Cal M.....	— @ —
do, small.....	— @ —
do, Tahiti.....	— @ —
do, Panama.....	35 @ 50
Peaches, bsk.....	40 @ 60
do, Mountain.....	75 @ 1 25
Pears, bx.....	50 @ 75
Bartlett.....	2 00 @ 2 50
Seckel.....	1 00 @ 1 50
Pineapples, doz.....	8 00 @ 9 00
Plums, box.....	5 00 @ 6 00
Pomegranates.....	8 00 @ 10 00
Prunes, bsk.....	— @ —
Quinces, box.....	50 @ 75
Raspberries, chst.....	7 00 @ 10 00
St'cherries, chst.....	5 00 @ 6 00
Apples, sliced, lb	3 @ 3 1/2
do, quartered.....	2 @ 2 1/2
WATERMELONS.....	1 00 @ 3 00

#### Commission Merchants.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCE.—Traders' National Bank, N. Y.; E. L. Wanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

BRYANT & COOK,

Commission Merchants,

AND DEALERS IN

GRAIN, FLOUR, ETC.

No. 8 Davis St., near Market, San Francisco.

CHARLES NAUMAN. FRANK NAUMAN.

C. & F. NAUMAN & CO.,

Wholesale Commission Merchants

AND DEALERS IN

GRAIN, POTATOES, FRUIT, BUTTER, POULTRY,

EGGS, GAME, ETC.

227 & 229 Washington St., San Francisco.

Consignments Solicited.

#### Mining and Scientific Press Patent Agency.

THE MINING AND SCIENTIFIC PRESS PATENT AGENCY was established in 1860—the first west of the Rocky Mountains. It has kept step with the rapid march of mechanical improvements. The records in its archives, its constantly increasing library, the accumulation of information of special importance to our home inventors, and the experience of its proprietors in an extensive and long continued personal practice in patent business, affords them combined advantages greater than any other agents can possibly offer to Pacific Coast inventors. Circulars of advice free. Address, DEWEY & CO., Office Mining and Scientific Press and Pacific Rural Press, 202 Sansome Street, S. F.—1879.

#### 1,000,000

Strawberry, Raspberry, Blackberry and Cranberry Plants.

STRAWBERRY PLANTS.—The Essex Beauty, Crescent, Cinderella, Forest Rose, Glendale, Juncunda, Monarch of West, Langforth Prolific, Triomphe d' Gand, Wilson Albany.

RASPBERRY PLANTS.—Cuthbert Early, Early Prolific, Reliance, Bride of the Hudson, Brandywine, Heratine, Philadelphia Red, Clark, Henrietta, Hornet, Belle de Fontenay, Delaware Bristol.

BLACKBERRY PLANTS.—Deering Seedling. Early and the most productive of all. I will give satisfactory proof that these Berries have realized \$750 per acre. It paid more than twice as much as the old varieties; also the Early Cluster, the Vina Seedling, Kittanning, the Mammoth Cluster, Missouri Mammoth, Dorchester and Lawton.

CRANBERRY PLANTS.—The Cherry Cranberry Vines at \$10 per 1,000, by mail 64 cents more. I will sell to responsible parties on time, part cash, 10-acre field of Cranberry vines under cultivation. Can be seen at the place. Send for Catalogue.

H. NYLAND, Boulden Island, San Joaquin River.

ONE MILLION WINTER-FLOWERING Plants & Bulbs

Apply by letter for "Special Low Priced List," in which will be found Instructions for Culture.

Peter Henderson & Co.  
35 Cortlandt Street, New York.

#### MONEY!!

\$5,000 to \$50,000 Ready to Loan

On Mortgages of first-class Farms in Monterey, Santa Cruz, Santa Clara and San Mateo counties.

Address EXCHANGE & MART, Santa Cruz, Cal.

#### PRINCIPLE'S

### New Hybrid Wheats, CHAMPLAIN

— AND —

#### DEFIANCE.

Heads 6 in. long—128 bushels to the acre.

These two varieties which have succeeded so wonderfully as SPRING WHEATS, have been shown by experiments to be equally valuable when sown in the Fall for WINTER WHEAT. A trial the past season has proved them the most productive varieties in cultivation.

Illustrated circulars showing different methods of cultivation by which this and other wonderful yields were produced, mailed to all applicants. Price of each variety, \$2.00 per peck, \$7.00 per bushel. Bags containing two bushels, \$12.00. Prices for larger quantities on application. Trial packages by mail, 1 lb 40 cts, 3 lbs \$1.00.

Mold's Ennobled Red and White Winter Wheats.

Two new English varieties introduced last season which we are confident will prove valuable acquisitions to this country. See circular. Price of each variety, \$2.50 per peck, \$8.00 per bushel. Trial packages by mail, 1 lb 50 cts, 3 lbs \$1.25. Address

B. K. BLISS & SONS,

P. O. Box 4129. 34 Barclay St., N. Y.

#### Read This!

New Hotel, Just Opened on the European Plan.

#### ST. GEORGE HOTEL,

812 Kearny Street, near Old City Hall.

Meals served in first-class hotel style, of great variety and good quality, at all hours of the day for 25 cents. Steak and coffee 15 cents; coffee and cakes 10 cents.

Rooms from 25 cents to \$1 per night, as per size and



## Agricultural Articles.

## The Famous "Enterprise."

PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babbitted boxes.

Positively self regulating, with no coiled springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs.

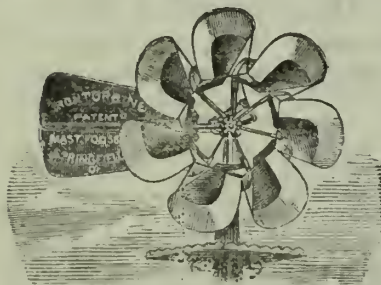
All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

**HORTON & KENNEDY,**

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

## Iron Turbine Wind Engine



## AND BUCKEYE FORCE PUMP.

This machine made of iron, wheel, vanes, etc., made of No. 24 sheet iron, bound and braced with best quality of wrought bar iron, gives more power than any other wheel of same diameter. No wood to swell, shrink, rattle or be destroyed by the wind. The most durable and the best Windmill ever invented. For particulars, price lists, etc., address

**D. E. GOLDSMITH, State Agent,**  
419 Sansome street, San Francisco.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

**MATTESON & WILLIAMSON,**  
STOCKTON, CAL.

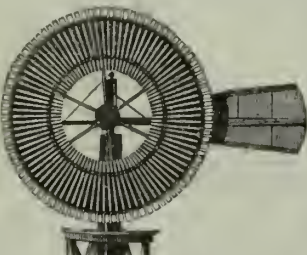
**\$50.**

The New

**Worthington**

Windmill

Manufactured by



**W. D. PARSON,**

1364 San Pablo Avenue, Oakland, Cal.  
Also, maker of the "Colorado Wind Engine," Wind Grist Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern of Deep Well and Artesian Lift Pump Cylinders. Circulars free.

## The Boss Pruner.

Patented Jan. 8, 1878.

**ENTIRELY NEW!**

Works on a cog principle. Smallest size cuts one inch, and largest size two inches in diameter. Has been thoroughly tested, and given perfect satisfaction. Sold by

**GEORGE LARKIN,**

Newcastle, Placer County, Cal.

**F. A. ROBBINS.**

MANUFACTURER OF

Canners and Soap Makers' Presses and Dies  
**JEWELERS' TOOLS.**

**ELECTRICAL and MODEL MACHINERY.**  
No. 7 First St., San Francisco.

## Nathaniel Curry &amp; Bro.,

113 Sansome Street, San Francisco,



Sole Agents for the

## Sharps Rifle Co., of Bridgeport, Conn.

FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO.

Also Agents for W. W. GREENER'S Celebrated Wedgefast, Chokebore, Breech-loading DOUBLE GUNS; and all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America. AMMUNITION of all kinds in quantities to suit.

## Trail Hygienic, Medical and Surgical Sanitarium.

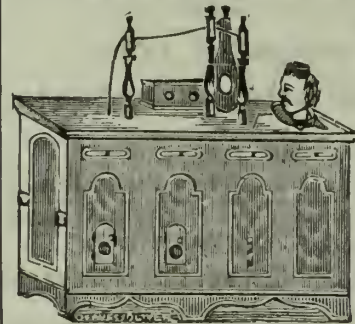
No. 8 Ellis Street, San Francisco, Cal.

## Treatment by a Purely Scientific and Rational Method Without Drugs of any Kind.

THE TREATMENT DEPARTMENT EMBRACES ALL APPROVED REMEDIAL AGENTS, AS OXYGEN INHALATIONS, VACUUM TREATMENT, THERMO-ELECTRIC, TURCO-AMERICAN, ELECTRO-MAGNETIC, GALVANO-CHEMICAL, STEAM, VAPOR, WARM AIR, AND ALL FORMS OF WATER BATHS;

Swedish Movements, The Health Lift, Spirometer or Lung Strengtheners, all Electric, Galvanic and Surgical Appliances, Sun Baths, and Solar Ray Surgery, new and perfect Truss for the Radical Cure of Hernia, lately discovered Chemical Compound for the speedy, safe, painless and permanent removal of Cancers, Scientific and successful method for the Cure of Piles, etc., etc.

**Aims to keep Abreast with, if not in Advance of the Progressive Age.**



It has been the mission of this System to mold public sentiment and this Institution will hope to be no disgrace to the immortal name it has assumed. The time has come when Physicians of this School can afford financially to keep a conscience; in fact it is disastrous financially as well as morally to compromise the truth one iota, hence patients can rest assured that they will be treated by the Physicians after the most approved and scientific methods, out of pure and enlightened selfishness, recognizing the truth and beauty of this great principle:

"The Universe is so ordered and arranged that the real and permanent good of every creature is best subserved in promoting the real and permanent good of every other being."

## THE BOARDING DEPARTMENT.

The table will be supplied with the best the excelsior market of the world affords, embracing fruits, grains, vegetables, meats, fish, fowl, eggs, cream, etc. Regular and transient boarders will be accommodated as well as patients. Business and professional men and women who are tired of restaurant fare, may appreciate eating to live a more healthful and enjoyable life. Pure food means pure blood. Pure blood means good health.

"The vegetarian school has demonstrated beyond the possibility of a doubt that farinaceous dishes, sweet milk and fruit, are sufficient to maintain a hard working man in perfect health. Such a diet might certainly be substituted by sedentary people for their ordinary food."

The Rooms are pleasant, warm, well ventilated and sunny; convenient to treatment rooms, so as to afford the best advantage of nursing and professional attendance.

## GENERAL PRACTICE.

Fever, and in fact all cases may be treated at home successfully. Parturition confinement cases are taken in the Institution or attended at home in any part of the city or country. Preparatory treatment in these cases is most important.

Testimonials of extraordinary cases and cures can be seen on application. The most desperate cases, and especially those that have been given up as incurable by the old methods, are invited. Puerperal and typhoid fever and diphtheria cases, after all other methods have failed, may be said to be a specialty. **Send for the TRAIL HEALTH JOURNAL.**

**DRS. D. C. & MRS. E. D. MOORE,**  
Trail Hygienic Sanitarium, 8 Ellis St. S. F.

## HOLLY &amp; MAGOON'S CULTIVATOR.

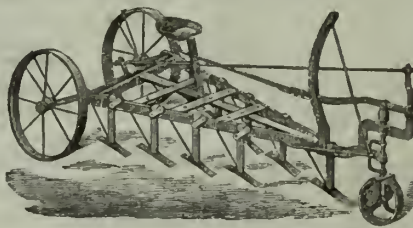
Manufactured by **HOLLY & MAGOON**, Stony Point, Sonoma County, and **E. J. HOLLY**, Lakeville, Sonoma County, Cal.

Jones' Patent, May 29th, 1877, and Holly & Jones, Apr. 8, 1879.

This Cultivator is made by practical men, after years of experience, and better meets the wants of California farmers than anything before offered.

Made of the best material (with wood or iron frame) and warranted in every respect.

Prices  
**REASONABLE.**



For further information address the Manufacturers, or

**M. C. HAWLEY & CO., Agents,**  
San Francisco and Sacramento, Cal.

## A BARCAIN IN BERKSHIRES.

The undersigned offers for sale for the next 30 days a limited number of Pure Bred Berkshires, aged from 3 to 18 months. These pigs are all bred by myself from stock imported from some of the most noted breeders in the United States, and include several Boars fit for service, and a few choice Sows in farrow, to imported Boars. These pigs are not culls, but the choice pigs of their respective litters.

**PRICE LOW FOR CASH.**

A perfect and complete pedigree, and a written guarantee they are as represented sent with each animal sold. Correspondence solicited. Among purchasers of my stock are the following gentlemen well known as men of careful discrimination: Dr. G. A. SHURTLEFF, Superintendent State Insane Asylum; GRANT I. TAGGART, Oakland; J. D. SMITH, Prof. Livermore College; LELAND STANFORD, by E. H. COVEY, Col. PETER SAGE, San Francisco; L. U. SHIFFER, President S. J. V. Ag. Society; W. Mesick, Sacramento; W. C. HOPPING, P. M., Sacramento. For further particulars address

**Bellota, San Joaquin Co., Cal.**

## THE HOME KNITTER!

Simple, light, durable. New in form and method of operation. Knits stockings in woolen or cotton yarn, without a stitch of sewing; narrows and widens perfectly; no weights; no "setting up" of work. Retail price, \$25. Send for descriptive circulars. Reliable agents wanted.

**HOME KNITTER CO., Canton, O.**

**Dewey & Co.,** 202 Sansome St. Patent Ag'ts.

**WANTED.** A man fully competent to manage the sale of DR. NAPHET'S FAMILY MEDICAL WORK and take charge of territory. Must be a good organizer and able to hire and control men; also willing to go into the field and learn how to sell the book and then teach others. Will pay a man who can do this business from \$1,000 to \$3,000 a year after a fair trial. Give age, experience, and send this.

**W. J. HOLLAND & CO., Chicago, Ill.**

## Stock Notices.

## BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

**JOHN RIDER,**

18th and A Streets, Sacramento City, Cal.

## ANGORAS AT THE FAIRS.

The undersigned would announce to those interested in ANGORA GOATS, and the public generally, that he will have a lot of

## Choice Angora Bucks

On Exhibition at the State and District Fairs

This fall, namely: At the State Fair at Sacramento, the Golden Gate Fair at Oakland, the Nevada State Fair at Reno, and the Oregon State Fair at Salem.

These Bucks will be sold at fair rates.

**JOHN S. HARRIS,**

Hollister, San Benito Co., Cal.

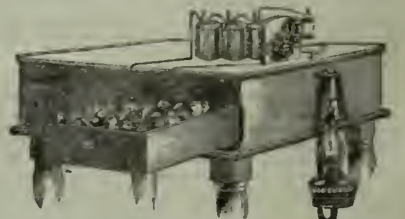
## JOHN ROGERS &amp; SONS,

## GENERAL STOCK AND SALE YARD,

Corner Market and 9th St., San Francisco,

HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN. Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

## MONEY in CHICKENS



## If You Want to Make Money

By raising any number of Chickens at any season of the year without setting hens, procure an

## ECLIPSE INCUBATOR

(E. A. SAMUEL'S Patent).

In both public and private trials on this coast as elsewhere, the "ECLIPSE" has proved itself a perfect and successful Egg Hatcher. It may be examined and its merits proven to customers before they make purchases. Write for particulars and circulars to

**G. G. WICKSON, 349 Market Street, S. F.**  
Agent for the Pacific Coast.

## HERRMANN'S HATS

ARE THE BEST!



Try one and you will Wear no other.

Spring and Summer Styles,

— AT —

336 Kearny St., bet. Bush and Pine,

— AND —

910 Market St., above Stockton.

Send for Illustrated Spring Style Catalogue.

**SEND FOR THE**  
**\$1.50**

## Homœopathic Medicine Case.

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address **BOERICKE & TAFEL,** Homœopathic Pharmacy, San Francisco.

## A Card to Grangers and Farmers.

HAY, GRAIN, HORSES and CATTLE.

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address **S. H. DEPUY, Nos. 11 and 13 Bluxome St., San Francisco.**

50 Perfumed, gilt edge & chromo Cards, elegant case, name in gold, 10c. **ATLANTIC CARD CO., E. Wallingford, Ct.**



H. J. HASKELL,



MANUFACTURER OF

CARRIAGES,  
BUGGIES,

— AND —

SPRING WAGONS,

At the Lowest Rates.

Corner of Alameda and White Streets,  
SAN JOSE, CAL.

THE SINGING CLASS SEASON.

Just out. **THE TEMPLE.** (\$9.00 per dozen), a splendid new Singing School, Convention and Choir Book; by Dr. W. O. PERKINS. As a Choir Book, equal to any of the largest ones. As a Singing School Book, better than the cheaper and smaller ones, since it has much more music; that is, 130 pages of new Songs and Glees, and 150 pages of the best *Metrical Tunes* and *Anthems*. Specimen copies mailed, post-free, for \$1.00.

Remember also **THE VOICE OF WORSHIP** (\$9.00 per dozen), recently advertised; **JOHNSON'S NEW METHOD FOR SINGING CLASSES**, an excellent book, (\$6.00 per dozen); and **L. O. EMERSON'S ONWARD**, (\$7.50 per dozen). Send for Specimens, Catalogues or Circulars.

Just out. **STUDENTS' LIFE IN SONG.** (\$1.50) with introduction by CHARLES DUDLEY WARNER; 115 of the jolliest of College Songs. A capital book for social singing.

Just out. **THE VOICE AS A MUSICAL INSTRUMENT**, by C. H. S. DAVIS, M. D., (37 cts.) An invaluable treatise on the construction and management of the Vocal Organs. With plates.

Just out. The last number of **THE MUSICAL RECORD**. Send 6 cts for one number, \$2.00 for the year. "Wouldn't he without it for five times the price."

OLIVER DITSON & CO., BOSTON.

C. H. Ditson & Co., 843 Broadway, N. Y.

THE WILSON ADJUSTABLE CHAIR,  
With 30 Changes of Position.

Patented in the United States and Foreign Countries.  
BEST CHAIR IN THE WORLD.

Parlor, Combining  
LIBRARY, Beauty,  
Invalid Chair, Lightness,  
Rocker, Strength,  
BED or Simplicity  
LOUNGE, and  
READING POSITION. Comfort.



Same Chair in Cane Seating, very desirable for summer. Manufactured of the best of wrought iron and rivets. Castors made purposely for the Chair. Everything to an exact science. **WILL LAST A LIFE-TIME.** Has been awarded Medals, Prizes and Diplomas for its superiority and merit wherever it has been exhibited. Orders by mail promptly attended to. Goods shipped to any address. C. O. D. Send for Illustrated Circular. Address the **WILSON ADJUSTABLE CHAIR MFG CO.,** 535 Washington St., Boston

J. P. JONES. J. THOMPSON.  
**JONES & THOMPSON.**

Wholesale and Retail Dealers in

Hay, Grain and Feed.

Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,

1535 Mission St., San Francisco.

M. COOKE. R. J. COOKE

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,  
AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREGORY.

Winchester Repeating Rifle,

MODEL 1873.



One-third size by Dr. E. H. Pardee.



The Strength of All its Parts,

The Simplicity of Its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

String measuring from center of target to center of each shot, 32 inches. Average distance of each shot, 1 9-100 inches.

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon harrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon harrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon harrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon harrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carabines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder,

JOHN SKINKER, No. 115 Pine Street, San Francisco

SOLE AGENT FOR THE PACIFIC COAST.

— OFFICE OF THE —

BLACK POINT PACKING AND SLAUGHTER HOUSE.

MERRY, FAULL & CO., Proprietors.

TO OWNERS OF LIVE STOCK!

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

SQUARE DEAL and FULL MARKET PRICES

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices.

Please address our

Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.

In consequence of spurious imitations of

LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

MISSION ROCK DOCK AND GRAIN WAREHOUSES.

SAN FRANCISCO, CAL.

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

GRAIN consigned to us by water insured in open policy at Special Rates. Wheat shipped by railroads via Stockton, care of the CALIFORNIA STEAM NAVIGATION CO. will be received by them at Stockton and delivered at Mission Rock Warehouse at same rate of freight as to Oakland Wharf. Freight paid, Fire Insurance and Loans effected and proceeds forwarded free of commission. Money advanced at bottom rates, Interest payable at end of loan. Fire Insurance 1% per annum. Short Rates of Storage—First month, 30 cents per ton, or 40 cents per ton if delivered. Each month thereafter 20 cents per ton. Weighing in, free. Weighing out, 10 cents per ton.

CHAS. H. SINCLAIR, Superintendent,

Or to the California Dry Dock Co., Office, No. 318 California Street, San Francisco.

WELLS, RICHARDSON & CO'S

PERFECTED

BUTTER COLOR

Gives Butter the gilt-edge color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.

60 Elegant Perfumed Cards, Chromo, Motto, Lily, Etc., 15c. Gift with each pack. H. M. SMITH, Clintonville, Ct.

60 Chromo, perfumed, Snowflake & Lace cards, name on all 15c. Game Authors, 15c. Lyman & Co., Clintonville, Ct.



Pyrethrum Cinerariæ Folium—A California Production.

THE MOST WONDERFUL DISCOVERY OF THE NINETEENTH CENTURY.

This wonderful Insect Powder will exterminate Flies, Weevils, Caterpillars, Mosquitoes, Midges, Crickets, Cockroaches, Spiders, Tarantulas, Scorpions, Ants, Hawk-hugs, Phylloxera, Plant Lice, Moths, Beetles, Grasshoppers, Locusts, Bed-bugs, Fleas, and every species of Insects. Remember that none is genuine unless my Trade-Mark is attached to every package.

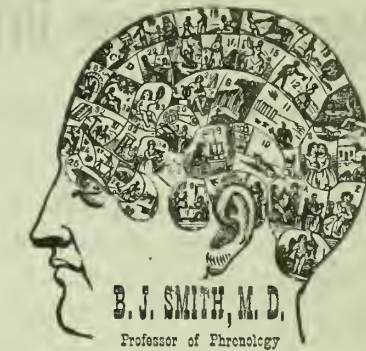
\$100 WILL BE PAID IF IT FAILS TO KILL ANY INSECT.

Endorsed by Prof. E. W. Hilgard, of the University of California, and by Prof. C. V. Riley, Chief Entomological Commissioner at Washington, D. C., and pronounced superior to any imported article, and perfectly harmless to man and beast.

G. N. MILCO.

Patentee and Sole Manufacturer, Stockton, Cal.

CHARLES LANGLEY & CO., Wholesale Druggists, Sole Agents, S. F.



MENTAL HYGIENE.

Proprietor of the Hygienic Medical and Phrenological Institute, 633 California Street, above Kearny.

This Institute has of late been entirely reformed, and is now far more healthful and conveniently arranged for the reception of patients and boarders than ever before, and by combining medical hygiene with the various Water Cure treatments and the most powerful Electrized Horseshoe Magnet in the world, claims to cure speedily and permanently all forms of acute or chronic nervous derangements, Brain, Spinal and Head diseases, St. Vitus Dance, Palsy, Epilepsy and all Rheumatic, Liver and Kidney troubles. The institution has for the past 20 years made a specialty of treating all forms of weakness and diseases peculiar to males and females. By the use of hygienic remedies and electro-motopathy the worst forms of impotency and seminal weakness in males and sterility in females are speedily and permanently overcome. Hygienic board, with or without rooms. Terms moderate. Electro-thermal, Russo-Turkish and Medicated Baths given daily. Mrs. Dr. Smith as Matron has charge of the female bathing department.

DR. SMITH has practiced Phrenology the past 30 years, and during the last 20 years has been constantly using the science connected with Physiognomy, in examining or diagnosing disease in this city, and claims to have made discoveries in the Science of Phrenology that enables him, by an examination of the head, even blindfolded, to determine the disease to which the person is constitutionally subject, or whether the disease at the time afflicting the person, is the result of accident or hereditary weakness; whether CONSUMPTIVE, DYSPLEPTIC, RHEUMATIC, APOPLECTIC, NEURALGIC, LEUCORRHEAL, or SEMINAL. Especially does the form of the head indicate the strength of the uterine, genital or reproductive system. The head is also an index of the natural strength of the lungs, heart, stomach, liver, kidneys, spleen, back or vertebra, and it determines the power of the system in warding off and overcoming disease of all kinds.

Ladies or gentlemen, desirous of obtaining a thorough and correct Phrenological examinations with Fowler and Wells' charts, will meet with a respectful reception at his consulting rooms. Parties can depend upon a reliable delineation of the character of their intimate male or female friends, by presenting a clearly defined photograph.

Phrenological or Physiognomical examinations without charts, \$1.50; with charts, from \$2 to \$3.

INVITATION TO INVALIDS

And all persons who are in any way out of health, who desire to know the nature and causes of their disease, may avail themselves of an examination through phrenology in regard to health free of charge, between the hours of 9 A. M. and 8 P. M. Sundays from 9 A. M. to 12 M.

PLEASANT SUMMER READING.

THE NEW PENELOPE

— AND —

Stories of California Life.

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. Agents wanted for this popular work. Easy sales and large commissions. Address

MRS. F. F. VICTOR,

721 Market St., S. F., Bancroft's Building, top floor.

PRICE, \$2.00.

Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.



# Farmers! Buy the Improved Gem Seed Sower for 1879. Price Reduced to \$30.

It is the only Seed Sower that has given Perfect Satisfaction, and is the only one that the Farmer can depend upon Sowing the Seed Evenly.

## THE GEM

Saves the Price of itself in Sowing 100 Acres over the Old Cahoon Sower.

### Reasons why the GEM is Superior to the Cahoon:

The Gem has two valves that supply the distributor with grain, one for each side of the wagon; therefore one may be closed when sowing by a fence, ditch, or land that is not to be sown.

The distributor of the Gem whirls around horizontally, and throws the seed with great force to the right or left, but does not throw it up or down.

The distributor of the Cahoon on the contrary whirls in a vertical plane like a windmill, and having but one valve, throws its seed equally in all directions—down, up, right and left—the result being that all the grain that is thrown up by a Cahoon Sower eventually falls in the same place as that which is thrown down, thus sowing the grain twice as thick behind the wagon as elsewhere.

The Gem does not throw the Seed up into the air to be blown about by the wind, but throws it sharply to the right and left.

The GEM sows blue-stoned grain perfectly.

The GEM sows about sixty feet wide—the Cahoon about forty.



## THE GEM

Will Sow Perfectly 75 Acres in One Day.

### Directions for Using the Gem Seed Sower:

Bolt the cast iron rim wheel on the inside of the hind wheel of an ordinary-sized Wagon; put the chain on the rim wheel and over the small chain pulley on the Sower, and then bolt the Machine to the bottom of the Wagon, the Disk facing outward; fill the Hopper with Grain; and all is ready.

You will notice there are Two Slides covering two openings; if you open the right hand one (facing the hind end of the wagon), the grain will be sown on the left side and behind the wagon, and vice versa. No grain need be wasted at any time by being thrown where not wanted. Grain should be clean and free from straws, etc.

ALL EXTRAS FOR THE ABOVE CONSTANTLY ON HAND.

### PRICES:

No. 1 Gem, to run with Chain and Bevel Gear, wt. 132 lbs.	\$30
No. 2 Gem, to run with belt gear, wt. 154 lbs.	35
No. 3 Gem, to run with all gears, wt. 165 lbs.	40
Nos. 2 and 3 only made to order.	

The GEM Seed Sower can only be obtained of us, as we are the sole manufacturers.

GEM SEED SOWER, \$30. CAHOON SEED SOWER, \$20 On Time. \$17.50 Cash with Order.

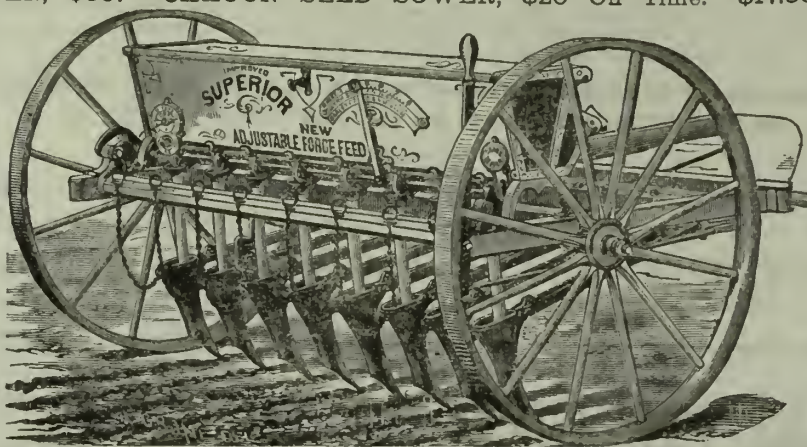
## SUPERIOR BUCKEYE Improved Grain Drill.

Is the only Drill with a Double Feed Continuous Distributor Drill in the World.

### SEND FOR CATALOGUE

And Cash Prices before Buying Elsewhere.

Superior Grain Drill, 6 or 7 inch, 10 hoes	\$110
" " " 6 or 7 " 12 "	120
" " " 7 " 16 "	175
" " " 7 " 20 "	200



Superior Buckeye Improved Grain Drill.

## EVANS SULKY PLOW, \$75.

We keep a Full Stock of the

Genuine Star Moline Plows,

GRANGER GANGS,

Gorham Seeders, Etc.

SEND FOR OUR CATALOGUE.

BAKER & HAMILTON, San Francisco.



SOLE PROPRIETORS AND MANUFACTURERS OF THE

## Celebrated Detrick "E W" 22x36 Grain Bag.

CALCUTTA, DUNDEE and PACIFIC JUTE HAND-SEWED BAGS always on hand. OUR No. 1, No. 2 and No. 3 SECOND-HAND GRAIN BAGS selected and graded with care.

**TWINES.** 3, 4 and 5-ply for Grain Bags, 6 and 8-ply for Potato Gunnies, 3-ply EXTRA FINE for Flour Bags, made expressly for our trade and QUALITY GUARANTEED.

FLOUR BAGS Printed to Order WITHOUT EXTRA CHARGE. POTATO GUNNIES, Wool, Bean, Ore and Salt and Seamless Cotton Bags.

## Tents, Awnings and Hydraulic Hose.

ORDERS PROMPTLY FILLED AT LOWEST MARKET RATES.

119, 121 and 123 Clay St., and 118 and 120 Commercial St., San Francisco.

## American Exchange,

Corner of Sansome and Halleck Streets,

Opposite Wells, Fargo & Co's Express.

SAN FRANCISCO

FURNISHED WITH ALL MODERN IMPROVEMENTS.

Board and Room from \$1.25 to \$2 per day; Board, \$6 per week—\$25 per month; Rooms, \$3.50 to \$7 per week.

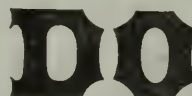
Free Coach to the House from all Boats and Trains. Street Cars pass the Door.

THOS. BRYAN, Proprietor.

## TREES

A large assortment of FRUIT, SHADE, ORNAMENTAL TREES and SHRUBS, ROSES, GREENHOUSE PLANTS, etc.; GRAPE, RASPBERRY, SNYDER BLACKBERRY, APPLE SEEDLINGS. New Fall Catalogue free. Established 1852. BAIRD & TUTTLE, Agents, Bloomington Nursery, Illinois.

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 120 Sutter St., S. F.



NOT FAIL to send for our NEW PRICE LIST. More complete than ever. Contains descriptions of every thing required for personal or family use, with over 1000 illustrations. Send nine cents for it. (Stamps will do.) We sell all goods at wholesale prices in quantities to suit the purchaser. The only institution in America who make this their special business. Address, MONTGOMERY WARD & CO., 227 & 229 Wabash Ave., Chicago, Ills.

60 Perfumed Chromo, 5c. Cards, name on. 10c. 42 Mixed Cards and Fine Pocket Size, 5c. Autograph Album, 25c. Game Albums, 50c. 55 Fun Cards, 10c. Custom Book, Customized, 50c.

## Geo. F. Silvester,

IMPORTER, WHOLESALE AND RETAIL DEALER IN

## SEEDS,

Fruit and Evergreen Trees, Plants, Etc.

ALFALFA, GRASS AND CLOVER SEEDS

In large Quantities and offered in Lots to suit Purchasers.

GREAT REDUCTION IN PRICES

Seed Warehouse, 317 Washington Street, San Francisco.

## R. J. TRUMBULL & CO.,

SUCCESSORS TO

R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

\*"Guide to the Vegetable and Flower Garden" will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL & CO., 419 and 421 Sansome Street, S. F.

## ALMOND HULLER.

Will Hull One Ton Per Day.

ONE OR TWO MEN CAN RUN IT.

Price, \$25. Address

A. O. RIX, Washington, Alameda Co., Cal.

## Baling Fencing Telegraph Telephone Galvanized

## WIRE

## Barbed Fence Wire.

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the Trademark.



## A. S. HALLIDIE

Wire Mills.

Office, No. 6 California St. SAN FRANCISCO.

## WIRE ROPE and CORDAGE

Of every kind on hand or Made to Order.

## Engraving.

Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the MINING AND SCIENTIFIC PRESS, San Francisco, at favorable rates. Send stamp for our circular and samples.



# PACIFIC RURAL PRESS

Volume XVIII.]

SAN FRANCISCO, SATURDAY, OCTOBER 11, 1879.

Number 15.

## Woolen Refuse as Manure.

An enterprising friend gave us last spring a little of the refuse which accumulates in our wool-grading establishments with a request that we try its fertilizing qualities. We tried it on a few plants in our garden as compared with similar plants not thus treated, and the growth seemed to indicate a benefit in the treatment. The amount used was, however, too small to fully demonstrate results. There is, we understand, quite an amount of this material available in this city, and perhaps at some points in the interior, and the question of its value as a fertilizer becomes of some importance. The material, as we received it, was quite rich in wool fiber, although there was, of course, a considerable percentage of dirt therewith. It is certainly worth experiment and investigation with a view to determine its value, and for the purpose of inciting this inquiry we will give the results of some recent tests of the application of refuse wool to land made in Germany. It seems the material used in Germany was the wool after it had served a purpose in cloth, or, in other words, it was woolen rags finely shredded. This would be a purer substance than the refuse from grading, because of the dirt in the latter, although it might be a question whether the fresh wool did not contain some fertilizing matter which would be eliminated by the bleaching, scouring, etc., which attends manufacturing. However this may be, the results from the material used in Germany, taking the points from translations the London Farmer made from German and French papers, may be summarized as follows: Thirty-two acres of land which had been reclaimed two years before from a highly sandy heath were divided into two equal portions, one of which was manured with 20 tons of street sweepings, and the other with 1,000 kilogrammes of shredded woolen clouts, etc. Each patch was sown with common barley. The crop was threshed in August, the yield being four hectoliters from the land manured with street sweepings, and six hectoliters from that treated with the woolen refuse. At the end of October both patches were sown with rye, the yield of which in the following year was two hectoliters from the first patch and four hectoliters from the second. The rye was in such bad condition on the street sweepings manured portion, that the ground was overgrown with weeds and unfit for a further winter crop. It was therefore sown with buckwheat in the following May. The second patch of land, however, was in good condition, and was sown for the second time with rye. In the following June the crops in both patches were sold by auction, the buckwheat realizing 21 gulden, and the rye 50 gulden. Another patch of land, about half a hectare in area, which had previously been turned over to a depth of 70 centimeters, but which had received no manure for two years, was manured with 2,400 kilogrammes of wool refuse, costing 72 gulden, and sown with rye. The crop was subsequently sold standing for 150 gulden. The *Journal d'Agriculture pratique*, writing on the same question, mentions some light soil, manured with 3,000 kilogrammes of woolen rags and refuse from wool spinneries, as having yielded a crop of 65,000 kilogrammes of beet roots. For three successive years land manured in this way yielded better crops than when manured with stable dung.

As a top dressing for meadow land the wool refuse acts most beneficially, especially if previously treated with lime. Rubens recommended woolen rags soaked in liquid manure as a most valuable application to vineyards. A shovelful of the shredded rags is given to each vinestock. Woolen refuse is especially suited for light dry soils, as it not only manures them but also absorbs and retains moisture for a long time, and is consequently of double utility during prolonged drouths. If applied alone, cut up small, its fertilizing action remains in almost undiminished force for three or four years. If a more immediate action be required it should be soaked in liquid manure, and exposed to fermentation in heaps, with or without the addition of sulphuric acid or other solvent agents.

## Season and Soil.

Nowhere better than in this State are illustrated the effects on production of the two factors, season and soil. On the one hand we have seen the grain but three inches high forming a head with perhaps but a single perfect kernel, and another year we have seen the grain on the

three-quarters of a bushel, while the straw declined 500 pounds, or nearly one-third. In the last period both corn and straw declined largely. Dr. Lawes believes that English farmers are now suffering from the effect of the seven years of scarcity which followed the previous years of abundance. He sees evidence in the table that some cause must have operated to keep up the yield of both wheat and straw for so many years, while the soil must have become each year less capable of growing the same crop, and he says it is the great abundance of the seasons of 1863, 1864, 1865, 1868 and 1870 that has caused the ruin of so many English farmers. Assuming that every season of the whole period was equally productive, and that the first unmanured crop of wheat cultivated to each four years, beyond the first given in the table, gave 20 bushels of grain, he is disposed to think that the last might be 12 bushels, or not more than 13. This would be equivalent to a decline of 11 to 12 pounds of grain per acre per annum for the whole time embraced in the above experiments.

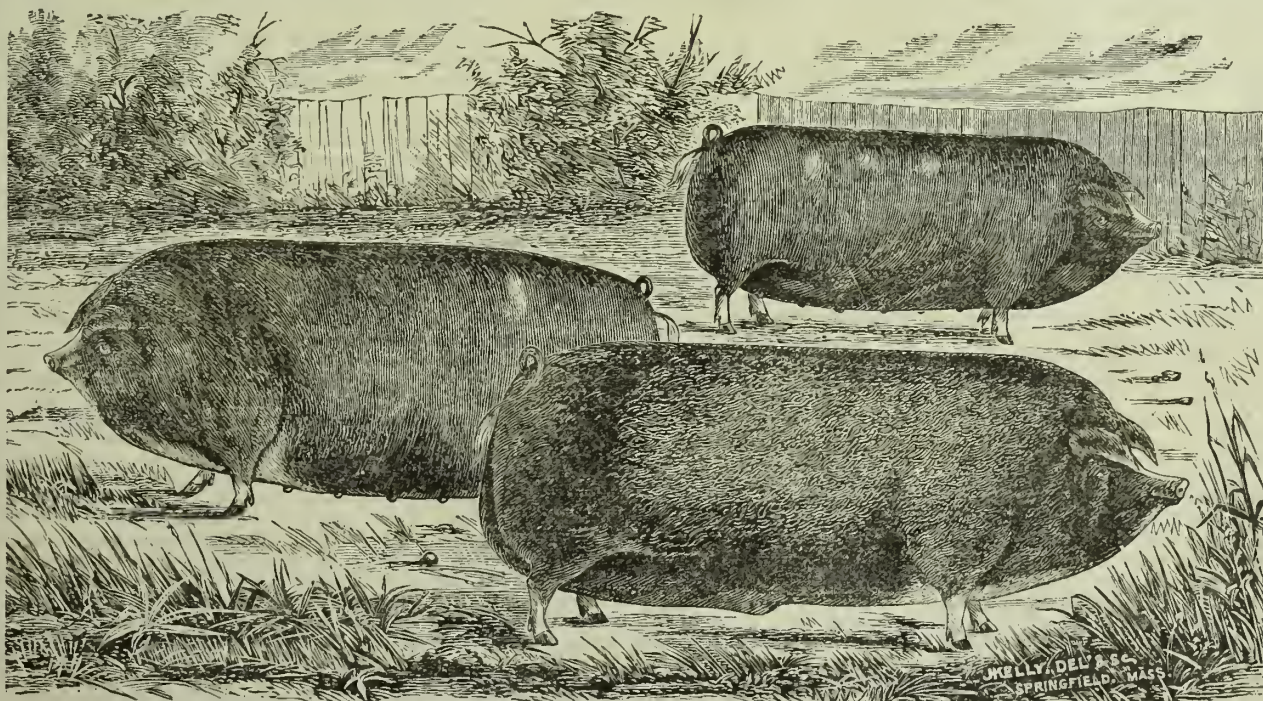
We summarize these conclusions of Dr. Lawes in order that our readers may read them in the light of their own experience, and get all the consolation they honestly can from the belief

## Poland-China Swine.

This breed of hogs which has won such wide favor among pork producers east of the Rocky mountains is also making due progress among our own swine herds. About a year ago we gave an engraving of a pair of Poland-Chinas, and we have to-day a good picture of a larger group. The animals are of the "Black Beauty" strain of blood, and are owned by Alfred Riggs, of Suffield, Connecticut, who has a fine breeding establishment under the management of B. C. Platt, a swine expert of high standing. The boar shown in the engraving is "General 2nd," weighing 720 lbs.; the sow on the left is "Suffield Beauty," weighing 510 lbs., and the sow on the right is "Farmer's Pride," weighing 260 lbs. at seven months' old. These form a group of animals fit to delight an eye trained to porkiness in a hog. The ideal of perfection in porcine shape is in part in the suppression of the waste parts and the development of the useful parts. It may be said that the nearer the animal approaches the outline of a pork barrel the truer it is to acme of available substance. These animals having their longish bodies fully rounded out and being squarely built out fore and aft approach closely to this model, and if one cuts off a few pounds of snout and feet from the dressed animal, the remaining substance, round and solid, is well fitted to fill out a barrel if the barrel were only large enough to contain it.

The increasing popularity of Poland-Chinas in this State is seen by anyone who visits the ranches. It is also apparent by the larger number of exhibitors at our agricultural fairs. The quickness with which the breed attains size, thus enabling the breeder to get a good weight of quite young pork, is one which is of highest importance in this State. The extreme size which is sometimes favored by Eastern butchers is not desirable here, but the hog which will earliest go to market is of decided importance. Without any derogation to the Berkshire which is deservedly popular on this coast, the Poland-China is also winning the recognition which his merits demand.

In a recent article descriptive of the Poland-China breed which Mr. Platt wrote for the *Massachusetts Ploughman*, he says: "There are three classes or strains of Poland-China hog—the Butler County strain, the Black Beauty strain, the Magic strain. The Butler County strain are, in color, spotted or draped with a rather coarse head and bone, a largo frame and long leg, and show little uniformity. Probably more is due to A. C. Morse, of Canton, Ill., for the formation of this strain than to any other one breeder. They make a monster hog when matured. The Black Beauty strain is in color a black bodied hog, with occasionally a spot or two, with more or less white in the face and ears, all feet and tip of tail white, jowl or belly white, are short legged, small head, small thin drooping ears, with very long deep body and deep, heavy hams, and much more susceptibility to lay on flesh than the Butler County strain, being very quiet and docile, can be handled at any time, even when farrowing, are as uniform as so many peas. The Magic strain somewhat resembles the Black Beauty strain in color, but are bred to suit the present public taste by the originator, the demand being for a swine with a finer finish and darker color, with the aptitude to take on fat as young as three or four months old, but do not make so large a hog at maturity as either of the other strains."



MODEL HERD OF FINE-BRED POLAND CHINA SWINE OF THE BLACK BEAUTY STRAIN.

same land several feet high surmounted by heads which were weight-bent. Such is the work of seasons. On the other hand we have seen land which in its virgin heart yielded two or three score bushels to the acre, and afterwards declined to a score or even fewer bushels, although the conditions for growth were similar in either case. Such is the work of soil exhaustion. These two factors are always operating, and it is quite a problem to give each the proper weight when figuring back from harvest to sowing, and endeavoring to account for unusual manifestations or tendencies.

Dr. J. B. Lawes, the well-known English agricultural investigator in an article in the *American Cultivator*, calls attention to some results obtained by him in growing wheat year after year on the same soil without manure. In the table given below will be seen the produce of unmanured wheat given over a period of seven years. The weight per bushel is calculated at 61 pounds, and is obtained by dividing the total grain by 61.

Average Produce.	Bushels per Acre.	Straw—Rs.
Between 1844 and 1850.....	18½	1756
" 1851 and 1857.....	16	1685
" 1858 and 1864.....	16	1614
" 1865 and 1871.....	16½	1106
" 1872 and 1875.....	10½	932

It will be observed that for 14 years, between 1851 and 1864, the produce both of grain and straw showed but little alteration. During the next period of seven years the grain declined

that the decrease of fertility during certain years may be owing not a little to the season over which they have no control, as well as to a one-sided system of farming for which they are so copiously blamed.

**BURYING GRAPES ALIVE.**—A French paper gives the experience of a vine-grower in burying green grapes, vine and all, for the purpose of preserving the fruit in a fresh state. It must be premised that the grapes were not grown by the close-pruning system, but upon trailing vines. In a high-lying, dry place, he dug a pit 1.5 meter long, of the same depth, and 0.75 meter in width, as near as possible to two vines on which the fruit was not yet quite ripe. From these he stripped all the leaves and branches without fruit, and led the bearing branches, with the bunches of grapes attached, into the pit, where he tied them down firmly in such a manner that the fruit hung free in it without anywhere touching the soil. The pit was then covered in with boards, over which a layer of about 20 inches of earth was thrown and lightly trodden down, so as to exclude all air. When opened at the end of the following March, the fruit was found as sound and healthy as when buried in October. On every grape was a small drop of water, just as if a spot of rain had fallen upon it.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

### Irrigation Appliances at Stockton Fair.

EDITORS PRESS:—In proportion to the population there is probably no place on the Pacific coast that has contributed so many useful inventions as Stockton, the city of windmills, the seat of numerous prosperous manufacturing industries. Windmills, plows, harrows, derricks and electric elevators, fanning mills, threshers and harvesters, feeders, self-oiling hoxes, composition metals, adjustable car traction, pumps, patent medicines, etc., etc., have been produced here and find favor in a wide market.

While busy with invention, Stockton people are quick to discern and adopt valuable inventions originating elsewhere, and not slow to improve upon them when adopted. Marster's threshing machine feeder is an example. Patent feeders work machines at the very top of their capacity, and the present separator is hardly up to the mark. Mr. Lissenden, proprietor of the Pacific Agricultural Works, tells us of two important inventions tested the past season, one of which is an agitator that catches the straw as it comes from the cylinder and prevents churning; the other is a cleaver at the tail of the separator that saves almost the last kernel of grain. They will be placed on the market another season, and will be comparatively inexpensive.

The Follansbee double propeller pump was shown in Stockton for the first time in 1878, and its power in discharging water found it favor with all who saw it. Its triumph was short, however, for two lean thinkers of the Cassius order conspired and invented the Norton single propeller pump, which overthrew the sovereignty of the Follansbee pump before fairly established. This single propeller pump was shown at the last Mechanics' fair in San Francisco, and won from Superintendent Gilmore the praise of being the most useful and important invention exhibited. It was one of the most meritorious inventions shown at the San Joaquin fair, and elicited many inquiries and frequent tests of its capacity. Its pumping capacity has been hastily estimated as follows:

4 inch pump.....	500 gallons per minute.
6 " " .....	1,000 " " "
8 " " .....	2,500 " " "
10 " " .....	3,500 " " "
12 " " .....	4,500 " " "

In actual use it has been found to do much better than this. An eight-inch single propeller pump is in use at the Alameda bath-house to pump water from the bay into two bath-rooms. These rooms together have an area of 143,000 square feet, nearly one acre. In four and a half hours time the pump will fill these rooms one foot in depth, which shows a pumping capacity of over 3,900 gallons per minute. There is a large 12-inch pump, owned by T. B. Bigelow, on Rough and Ready island. It was tested there (an 8-inch) in competition with the Centennial and the Follanshee pumps, and showed such marked superiority that it was retained in preference to the other two. A four-inch pump can be purchased for about \$150, and be operated by two horses. These pumps will be found of great value in irrigation, pumping from streams over high banks, from mines and from the holds of leaking vessels. A company, with Mr. John Jackson at the head, has been formed in Stockton to manufacture these pumps, and when it commences operations we shall give further notice.

#### Sub-Irrigation.

One of the most important links in the problem of irrigation is the Abestine sub-irrigation system, invented in 1876 and patented in 1879, by E. M. Hamilton, of Los Angeles, and on exhibition at the State, San Joaquin and Santa Clara fairs. As in many other instances, this system has necessity for a maternal relative. Mr. Hamilton owns several hundred acres in east Los Angeles, and in the summer of 1876 found himself confronted by the question of supply and distribution of water. He had a well and windmill, which gave a small supply of water for orchard and garden, but the greater part was drank up by the greedy rays of a fierce sun, and failed to reach the thirsty rootlets. Economical distribution became a desideratum. He set himself to accomplish the task, and in three days' time wrought out the system, which answers well the purpose intended, and will eventually be brought into use in every county in the State. The system consists of pipe laid in trenches, about a foot beneath the surface of the ground, out of the way of the plow. The pipe is laid at various distances apart, according to the crop to be irrigated, and is made of sand, lime, cement and water, and hardens in 24 hours so as to carry water.

The machine for making the pipe, while simple in construction and operation, is difficult to describe. It consists of sheet-iron pipe, of from 3 to 6 inches in diameter, according to the diameter of the cement pipe desired, and 3 feet in length; this is placed horizontally in the trench. Another piece of pipe, 2 feet in height, and standing upright, with a funnel-shaped mouth for receiving the sand and cement mixture, is fitted on the horizontal pipe near the

back end, and serves as a feeder. The horizontal pipe is open on the lower side, and on the inside are grooves, one on either side, coming together in a V-shape, with the apex near the mouth. On the back end of the horizontal pipe is an upright lever, three feet in length, fastened on a pivot above, and the lower end attached to a rack-plate moving through the slotted grooves opening and closing the pipe as the lever is moved back and forth. Also attached to the lever is a rod, that moves back and forth with the lever and makes the bore in the sand and cement pipe. With each stroke of the lever the machine is propelled backward from 2 to 5 inches, shaping so much pipe. Three men are employed—one to mix the material, one to feed the machine, and one to operate the machine. As soon as the cement pipe is made, and before hardening, holes are made in the top with a conical piece of wood or iron, and in these holes are inserted cork-shaped pieces of wood with holes burned through lengthwise, through which the water rises to saturate the ground. A 5-inch pipe, about a foot in length, is usually set upright over each hole, to prevent earth and roots from clogging it.

We timed a test of the machine in operation on the grounds, and recorded 11 feet of pipe made in 1½ minutes, or at the rate of 440 feet per hour. In field work, including angles and elbows, and working in a trench, 1,600 feet to 2,000 feet is a day's work. The cost is estimated at about one-half cent per foot, including labor. Mr. Hamilton tells us the usual cost per acre for an orchard is \$15 to \$25, and when once laid down will last indefinitely. The advantages of this system are in the ease and certainty with which the water can be regulated; the saving of from three-quarters to nine-tenths of the water, as used in surface irrigation; the prevention of the baking of the surface, and a chilly, disagreeable night air; and the advantage of a loose, mellow, dry surface, with few weeds. The water supply coming from beneath, induces a downward growth of the roots, out of the way of the plow. Fertilizers may be dissolved in the tank or pond, and carried direct to the roots of the trees. In vineyards, perhaps, poisons may be introduced in the water, and thus reach the phylloxera.

Mr. Hamilton made an experiment at home by digging a basin around a tree, into which he poured 30 gallons of water; close to another tree he set an upright pipe in the ground, into which he poured three gallons. The first wet a circumference of five feet and 14 inches in depth; the second wet a circumference of seven feet, and down to moisture.

This system created a great deal of interest wherever shown, and crowds of people constantly viewed the working of a small section made of gas pipe, representing 10 acres, warmly commending the inventor for his ingenious contrivance. One of the Messrs. Briggs, in Sacramento valley, went to Los Angeles to see the system in practice on Mr. Hamilton's ranch, and was so well pleased with what he saw that he returned, saw Mr. Hamilton at the State fair and purchased the right for Yolo and Solano counties. Mr. R. B. Blowers having previously purchased a farm right. Mr. Briggs says that had he used the sub-irrigation system this season his receipts would have been \$40,000 in excess of what they are. Messrs. Overhiser, Wolfe, Beecher, Sargent, Cutting and others, purchased the right for San Joaquin county, with their accustomed judgment in appreciating a "good thing."

#### Well Boring.

Messrs. Haas & Manning are boring a deep well in Stockton, on Hunter street, near Main. Mr. Haas is using the steam well-borer, which is working admirably, and has penetrated to a depth of 690 feet, striking a small flow of water at 650 feet. It is calculated that at 750 feet a strong flow will be struck. A reamer is used ahead of the pipe, and steam jacks are used to sink the casing. Two wells 200 feet deep and one 550 feet deep were bored by this well-borer at the Stockton paper mills, getting a good stream. One of these steam well-borers was sent into Santa Clara county, but we never heard that it accomplished anything; and another to Los Angeles county, where it was hindered, and it is claimed to have been finally broken up through jealousy of rival well-borers. Mr. Haas is an excellent professional engineer, cool and prudent, and the machine has never failed to work satisfactorily under his management. We venture to assert that he will strike water with the steam well-borer anywhere between the San Joaquin river and a line drawn from Merced City through Modesto to Linden in San Joaquin county.

The Norton pump, the Abestine system of sub-irrigation and the Haas & Manning steam well-borer, are invaluable in solving the irrigation problem, and we believe it is chiefly through these and kindred appliances that we shall supply our thirsty orchards, fields and gardens, for eight or ten years to come. We shall have need soon of a big-brained, honest, far-sighted Governor, who shall recommend and urge a survey for a comprehensive scheme of irrigation, impounding water in the mountains, and turning rivers on the plains. To co-operate and carry this into effect, the farmers should elect the best and ablest man among them. An expenditure of millions of dollars will be involved, and this will afford an extraordinary opportunity for jobbery and vaunting incompetency. It is properly the province of the State to do this work that it may be impartial, and planned on a scale that shall economize the waters of the State and effect the greatest

amount of good for the greatest number of land holders. The greatness of California's future depends on irrigation. The Midas touch of water shall turn our fields to gold and shame the vaunted days of the Argonauts. The past two years has afforded us a breathing spell, and we can now take a calm survey of the past and calculate upon the future. The era of cabins and shifting tents is behind us. We have come to stay. In every business enterprise within the last year we have noticed the care to secure a firm foundation. That is the policy to which we must adhere in the future. It is the policy that must be adopted by the State. There has been much of folly in the past; we have sowed the wind and unless we have a care, we shall reap a whirlwind. The business economy of this State is like a ladder with the bottom rounds knocked out; it leans against the most inviting fields of enterprise; but the missing rounds keep down too many of the poor men. We have too many who wear an excellent livery to serve a questionable end; the ugly head and long neck of the political camel is thrust in upon us, and we need statesmen and honest votes to drive it away. We must look more to our farming interests, the sure basis and foundation of all our future prosperity. Our agriculture must and shall be paramount to all other interests, and unless it is fostered and encouraged we shall drift as helplessly as a Godless Israel.

H. E. HALLETT.

### Seed not True to Name.

EDITORS PRESS:—Some weeks ago I briefly stated the law, in answer to the complaint of a correspondent who had paid for pure alfalfa seed which produced dodder. Complaints of the carelessness, if not actual dishonesty of seedsmen, are frequent, and it may be well for the farmer to know that he has a remedy.

A seedsmen impliedly warrants his seed to be true to name and fit to plant, and in such condition as to produce if properly planted. If the seed prove otherwise he is responsible to the purchaser; and if the buyer has planted the seed and cultivated the crop he can recover from the seller the difference in value between the crop produced and what would have been produced if the seed had been pure and fresh.

If I order and pay for alfalfa sufficient to plant 10 acres, and plant and tend the same, and after a year find 10 acres of dodder, I can recover from the seller of the seed the difference in value between 10 acres of dodder and 10 of alfalfa. If these 10 acres of dodder are worth but \$200, while 10 acres of alfalfa will be worth \$1,000, I can cause the seedsmen to pay me \$800. I need not prove that he knew the seed was not pure. In selling me alfalfa seed he, without any express words, warrants it to be pure and fit to sow, and he is responsible for the result even though he really thought it so, unless he expressly limits his responsibility at the time of the sale.

It may not be uninteresting to quote some of the decisions of the Courts in this matter. If purchasers who are swindled or caused a loss by impure seed would sue the sellers, in a very short time no seedsmen would sell any but pure, fresh seed. He could not afford to do otherwise.

In the case of Randall vs. Raper (Ellis, B and E, page 84), seed barley had been sold and warranted to be the "Chevalierseed barley." The barley was sown, and proved to be an inferior and less productive variety of barley. The barley received was less valuable by \$75 than the same quantity of Chevalier barley would have been; but it was proved that the purchaser lost in the yield of his crop, by reason of the difference, the sum of \$1,305. It was held that the loss in the yield was the natural result of the difference in the seed, and the plaintiff had judgment for \$1,305. In Mullett vs. Mason (L. R., 1 C. P. 559), a cattle dealer sold a cow as sound and free from disease, when he knew she was not. The purchaser turned her in with five other cows of his, which caught the disease and died. The dealer was compelled to pay the value of the five cows. In Passenger vs. Thorburn (34 New York, 634), the defendant sold seed as Bristol cabbage seed which produced common cabbages, and the buyer recovered as damages the value of a crop of Bristol cabbages, such as ordinarily would have been produced that year, deducting the expense of raising the crop, and also the value of the crop actually raised therefrom. The case of Flick vs. Wetherbee (20 Wis., 392), presented substantially the same question, and was ruled in the same way. Each of these cases arose on a warranty without any imputation of scienter, *suggestio falsi* or *suppression veri*; that is, knowledge, suggestion of anything false, or suppression of anything true; there was no intention to deceive; the seedsmen thought the seed was exactly what he sold it for. See, also, White vs. Madison (26 New York, 117), and White vs. Miller (71 New York, 118). Sedgwick on Damages (4th Ed. pp. 334-5). And in case the seller knew the seed was not what he represented it to be, he would also be liable to punitive or exemplary damages, and the jury would be instructed that they could give additional damages to cover the cost of lawyers' fees, and to punish the seller for his dishonesty. Such exemplary or punitive damages are allowed in this State in cases of maliciousness or fraud.

The proofs are usually easy. For instance, a farmer purchases alfalfa seed sufficient to seed 10 acres. He cultivates the ground carefully in

the usual mode, and at the end of the year finds he has 10 acres of dodder. He proves by his neighbors that the 10 acres with the dodder on them are worth but \$200, while the same land with the customary stand of alfalfa, which would ordinarily have been produced, would be worth \$1,500, he can recover from the seller \$1,300; and this, as I have said in the absence of any fraud or deceit on the part of the seller of the seed.

MANUEL EYRE.

Law Office, 636 Clay street, San Francisco.

### Pyrethrum Cinerariæ Folium.

EDITORS PRESS:—I have for some time past carried on experiments and investigations in reference to the qualities and best methods of using the insecticide derived from the flowers of several species of *Pyrethrum*, and generally known under the name of "Persian Insect Powder," but introduced into cultivation in this State by Mr. G. N. Milco, of Stockton, under the Dalmatian title of "Buhach." The species cultivated by Mr. M. he states to be the *Pyrethrum Cinerariæ folium*; and it seems that he has had to contend with many difficulties in finding the proper conditions for its successful growth on the large scale. These, however, he appears now to have completely overcome; and considering that California, exposed as she is to the importation of all the world's "bugs," has a special interest in cheap and efficacious insecticides, I have taken some pains in determining the conditions of the successful application of this promising agent which has long been the one of the indispensables of a traveler's outfit; since it enables him to get a sound night's sleep under circumstances which would oblige most people to eschew even the attempt of going to bed. It has always been a matter of remark that a person could sleep without the slightest injury in a bed powdered over with "Persian Insect Powder," whose slight but penetrating odor would be death to the stoutest bed-bug and nimblest flea. Of late years the usefulness of the powder has been increased by the invention of small bellows, "insufflators," by which it is ejected from the nozzle in a dust-cloud, which speedily disposes flies, mosquitoes, etc., to leave the premises; one such, of great convenience, has been invented by Mr. Milco. Another mode of producing a similar effect is to roast the powder on a hot shovel, somewhat on the principle of the old-time "smudge," but with much greater effect on the insects and infinitely greater comfort to human kind. For in my own experience I have frequently been perplexed as to which was preferable—the bite of the "gallinipper" or that of the smudge; my inclination being to regard, as the greatest aggravation, whichever of the two happened to have the best chance at me.

The problem to the solution of which I have applied myself, is that of using effectually in the open air, and especially on plants, the death-dealing properties of the powder, which is simply, when properly made, the flowers of the plant dried and ground into the finest powder that can be made of so oily a substance. Such is the first quality of the imported insect powder, and such is, more especially, the product furnished by Mr. Milco under the name of "Buhach." Then there are some, such as "Lyon's Magnetic" and others, which seem to be the refuse flower stems, etc., from the preparation of the genuine article, and are, of course, much inferior in their action on insects.

It has, however, often been noted by those accustomed to the use of the "Persian Powder," that it would sometimes unaccountably fail to drive off the enemies of sleep, and this occurs more especially when bought in out-of-the-way places, where there is but little demand for it. To understand this, and to use the powder to the best advantage in each case, it must be kept in mind that: 1st, the active insecticide substance is a volatile oil or "essence," which can be extracted either by the usual method of steam distillation, or by extraction with solvents, such as ether, alcohol, or benzine; 2d, this oil, under the influence of air, not only volatilizes, but is also subject to rapid oxidation, whereby it is converted into a greenish-black, inactive resin. It follows from these premises that: 1st, the powder cannot act to advantage where there is a rapid and frequent change of air; 2d, it is of the greatest importance that the substance should be fresh, and kept tightly packed, to exclude access of air as much as possible, for precisely the same reason that hops must be similarly treated.

Hence I find that Milco's fresh product is equal in efficacy to the best, and superior to most of the imported product, although some of the best of the latter yields twice as much extract soluble in ether; but that extract, in the case of "Buhach," is a clear, greenish, volatile oil, while that from imported, and therefore as a rule much older powder, is dark and thickish, or, in the case of "Lyon's Magnetic," actually crumbly.

Like all volatile oils, the essence of *pyrethrum* is slightly soluble in water; and I think, from my experiments, that the tea, or infusion, prepared from the flowers, which need not be ground up for the purpose, is the most convenient and efficacious form of using this insecticide in the open air, provided that it is used at times when the water will not evaporate too rapidly, and that it is applied, not by pouring over in a stream, or even in drops, but in the form of spray from a syringe with fine holes in its rose. In this



case, the fluid will reach the insect despite of its water-shedding surfaces, hairs, etc., and stay long enough to kill. Thus applied, I have found it to be efficient even against the armored scale bug of the orange and lemon, which falls off in the course of two or three days after the application, while the young brood is almost instantly destroyed. As the flower tea, unlike the whale soap, leaves the leaves perfectly clean, it is preferable on that score alone, and in the future, it can hardly fail also to be the cheaper of the two. This is the more likely, as the tea made of the leaves and stems has similar, although considerably weaker effects; and if the farmer or fruit grower were to raise the plants, he would save all the expense of harvesting and grinding the flower-heads, by simply using the header, curing the upper stems, leaves and flower-heads all together, as he would hops, and making the tea of this material by the hoghead. It should be diligently kept in mind, that the least amount of boiling will seriously injure the strength of this tea, which should be made with briskly boiling water, but then covered over closely, so as to allow of as little evaporation as possible. The details of its most economical and effectual use on the large scale remains, of course, to be worked out by practice.

Some observations reported to me seem to render it probable that the cultivation of the *Pyrethrum* between the rows of other plants will, in a great measure, protect these from the attacks of insects; as, of course, the plants themselves are let severely alone by them. It might even seem worth while to try this plan against the phylloxera, in so far as the winged insect could scarcely escape the deadly effects of the *Pyrethrum*, thus preventing its spread. It has been reported that a certain kind of sumac has thus served to save many of the vineyards of the Isle of Cyprus. And, by the way, either the sumac, or the *Pyrethrum*, would be a vastly smaller evil in the vineyard than the eucalyptus, between which and the phylloxera, I should think there was little choice, so far as obtaining a crop of fruit is concerned.

I shall continue the experiments on the uses of the *Pyrethrum* as an insecticide, and will give detailed results in the biennial report of the Agricultural College, soon to be published.

E. W. HILGARD.

University of California, October 3d, 1879.

### Agriculture in Western Nevada.

EDITORS PRESS:—From Aurora north our course took us through remarkable agricultural lands of western Nevada. The vast Sierra range of mountains, gradually rising from the plains of California, for a distance of 70, 80 or 100 miles, to a height of from 10,000 to 15,000 feet, here, in this region, suddenly breaks off as an immense wall from 3,000 to 6,000 feet high, irregularly gorged by canyons, varied by spurs, capped by snowy peaks and covered by vast forests of pine, fir and cedar, gathering great depths of snow in winter to be poured down in summer as streams of purest water, spreading life and beauty through the otherwise desert regions to the east. Thus at the foot of this great crest range of the Sierras, there are, in western Nevada, some of the finest, cultivated lands of the Great West, fine in good productions, admirable in the contrast of lovely green fields, with immediately adjoining utterly desolate wastes. To the west, this lofty Sierra range rises in all its solid grandeur, too steep for any but a mountaineer safely to climb; to the north and south different featured spurs extend out their rugged forms, while on the east innumerable broken, parallel ranges, treeless, rugged, irregular mountains, are seen, rising one beyond another almost without end. Here, smiling in peace and verdure, are these cultivated fields, gardens of loveliness, oasis of beauty.

First, north of Aurora, is Green valley, green with grass, grain and varieties of vegetables. The next is Sweetwater, where a pure, clear, babbling stream winds its pleasant way through smooth fields of rich grass, invigorated by its moisture and diversified by groves of willows. The next is the one pleasant farm of Collins, on the East Fork of Walker's river; then comes Compton's, and again, Wiley's stock farms, long stretches of green fields between dry hills along a little thread of a stream, or no stream at all, as a half mile or so of only moist soil appears, and again a little running water. Long desolations intervene between these different places; but passing such we come again into a larger region of cultivated fields, called Smith's valley. This is on West Walker river, where winding its tortuous way through the mountains, it suddenly spreads out its life-giving influence over a wide valley of richest soil, extensively reclaimed from the dry sagebrush by an excellent system of irrigation. The large, fine farms of Simpson, Mather, Callahan, Man, Hutson and others, are beautiful in themselves, and attest the richness of the soil of the State, wherever water for irrigation can be had. Wellington is their central place of business, with its one well-conducted, pleasantly ornamented hotel, temperance in principle, embowered in a grove of trees, musical with murmurs of the laughing waters of the stream on the banks of which it stands. Here we turned east 12 miles over a mountain ridge, through which the winding river breaks

its way, and came down into a still larger valley, called Mason's, perhaps 30 miles irregularly in length, and eight or so in average width, if an average could be made. Here the east and west branches of Walker river, flowing parallel some distance, come together, and afford means for extensive and admirable irrigation beyond all we have as yet seen. We should judge that this valley must contain some 150,000 acres or more, of which some 30,000 are finely irrigated and improved. Wheat, barley, oats and rye yield well, equal to the average in California, while the market is nearly twice as good. Vegetables, well irrigated, grow large in size and in great abundance. One farmer took us through his garden of eight acres, the finest country garden of its size we had seen. The portion for cabbage was one and a half acres, which, he said, would yield 20 tons to the acre, selling at Bodie, to which he was hauling, at from five to seven cents the pound; or, even at five cents, \$2,000 the acre. Is this large? Yet such are the figures. The eight acres only took two good workmen to care for them, and the farmer could haul and sell his own produce. Still, \$16,000 from eight acres sounds large, yet such are the figures. One hundred acres for a farm are sometimes better, when well attended, than 10,000 in stock.

But not half of this valley which could well be irrigated, is now improved, for not only can the water of the large river be better used, but vast tracts of dry sagebrush land has inexhaustible supplies of water 10 and 12 feet beneath, available for irrigation by windmill pumps.

If we were to particularize the fine farms already well cultivated, we should need to speak of those of Osborn, Barrett, Adams, Beach, Millsap, Baker, Houston, Sanders, Hinds, Spragg, Bennett, Nichol, Holland, Snyder, and others, all apparently doing well, and also enjoying the helpful weekly visits of the RURAL PRESS.

The only flouring mill of this fine valley is the one built, owned and run by Mr. W. R. Lee. With the exception of two iron shafts, one set of gearing and the run of stone, everything about this mill was built by Mr. Lee himself, and in its structure are involved a few remarkable improvements. One is in a peculiar modifying of the wooden 34-inch turbine wheel, so that, by only a six and a half foot head of water, a 17-horse power is secured, easily grinding 24 barrels of flour a day. Another feature is that the flour is not carried up to the bolt by endless, cupped belt, but is blown up by a blast, so as to be cooled the more readily, and thus be better ensured from injury by heat, while other advantages accrue from the same means, rendering the flour really the best in quality possible. On the whole, we were inclined to think this a model of a flouring mill, to be well copied after. But we may not be over particular, lest our article be too long. To conclude, we are not certain but that this Mason valley will prove to be not only one of the largest agricultural valleys of the State, but also the richest, most varied in its productions, and the finest in cultivation. S. V. B.

## THE FIELD.

### Sorghum Sugar.

EDITORS PRESS:—I have raised this year almost one acre of early Amber cane, but there being no cane mill in this part of the country, I am unable to determine its value here for making sugar. The cane seems rich in saccharine matter, and is greedily eaten by horses and hogs. I would like to learn if Prof. Sanders, who advertised early Amber cane seed in the PRESS last spring, or anyone else in the State, has succeeded in granulating the syrup from this variety of cane. I think likely there will be one or more mills in this county next year, and I know several farmers who propose to test the matter whether or not we can raise our own raw sugar. By publishing in the PRESS the name and address of any one who has been able to granulate the syrup of this cane, you will oblige.—CHAS. W. MCMASTER, Los Angeles.

EDITORS PRESS:—In answer to the above I would say: Amber cane syrup naturally granulates. I have never seen any that did not, either before or after being put away for use. Sixty pounds, or even more, of sugar have frequently been found in the bottom of a barrel after using out the syrup with which it had been filled.

But no one can succeed in sugar, or even syrup making, without: 1st, information; 2d, practice. The information required is too voluminous for a newspaper article. It can best be obtained from any one of the numerous books on the subject, or a pamphlet called the "Clough Refining Process," which will be sent for a three-cent stamp by the Blymer Manufacturing Co., Cincinnati, Ohio, which will enable one to make a fair article of sugar. But experience must teach all. Every little change of soil, climate, or condition of cane, requires a variation in process of manufacturing, and this can only be learned by experiment and experience.

Speaking of experience, I will tell you the most important fact from mine. It is that the Imphees are the future sugar-producing plants of our country. In our county, Amber cane can be grown big enough for mills to begin work on it in June; this can be followed by (fresh from the field) Oomseana, Neazana, Libernian (of all of which I will forward specimen heads to the RURAL soon), and last, Chinese Imphee—not the sorghum, but the bearded, high-headed, black Imphee, some of the stalks of which, here on my place, grow six inches in circumference, and the juice of which (see page 250, Agricultural Report, 1877,) contains about one pound of crystallizable sugar to six pounds of juice.

Beginning with the Amber cane in June, and ending with this in January, will give an abundance of raw material for sugar making for over seven months of the year. More anon. W. A. SANDERS.

Fresno Seed Farm.

## THE APIARY.

### Honey Sage as Bee Forage in Dry Climates.

EDITORS PRESS:—Much has been said during the last 15 years concerning plants that have some merit as being rich in nectar-secreting qualities. Still, withal, few, if any, have undertaken to cultivate large fields of them. Buckwheat and several varieties of clover have been planted quite extensively in the Eastern States, the planters having bee-pasturage in view only as a secondary consideration. The seed of the former is marketed at the flouring-mill, the latter is raised for soiling cattle and for hay. Honey gathered from buckwheat is dark in color, and of a not too inviting flavor or fragrance, and for this reason it does not meet with a ready sale. Some of the clovers yield a honey that is nearly equal to the best of our California brands. Prof. Cook, in his "Manual of the Apiary," places clover honey ahead of our sage honey. Whether he has done it through mistake or not I am at a loss to determine; but I know this, and our Californian beekeepers will sustain me when I say that if sage honey is not better than clover honey, it is equal to it in every respect. White clover does not succeed in our dry climate, and because of this we lose a crop of honey that would just double our present harvest.

Teasel blossoms are much sought after by the bees, and the honey is of a quality that finds a ready sale. If there were a better market in this State for the burs, there would be some chance of the beekeeper planting it for his bees, for then it would be somewhat profitable. As it is, if he were to plant it exclusively for its honey qualities, he would not receive as large a crop as do his brethren in the Eastern States.

Fruit and some forest trees are rich in honey, but the beekeeper is shy in planting them, as they require age before a crop of any consequence can be had. Still, withal, he should plant as many as he can afford on his property, and if his means will allow, furnish his neighbors with trees to plant. When all available ground is occupied with other trees or plants, utilize the banks of rivers, creeks, roadsides and other places that are useless for the cultivation of fruit trees. Aside from the Eucalypti and a few other ornamental, forest or shade trees, there are none that will do to plant in this climate and furnish a supply of nectar that will remunerate the beekeeper for his trouble. The same may be said of numerous annuals, biennials and perennials.

No dependence can here be placed in copious rains. Such being the case, let us look around and make some inquiries. Have we not some native plant that will, under favorable circumstances, be more sure of supplying the want that the modern beekeeper will be so apt to require within the next decade? Without giving any list of plants, we will see what merits the well-known sage has. Not many years ago some enterprising bee men, J. S. Harbison being the pioneer, located a few stands of bees in the section of country now known as the honey region of California. The result was that in a few years men flocked from all parts of the Union to locate in this new honanza; for such it proved to be, for honey flowed there as it never did in the land mentioned in the Bible. California henceforth received a new appellation. In the pioneer days she earned the title of "El Dorado"—the land of gold; now she is dubbed the "modern land of milk and honey."

From the sage plants of the lower counties of this State the bees revel in honey. During some years the number of bees was not sufficient to gather the nectar from the bloom, and thousands of pounds were evaporated and wafted into the deserts of Arizona.

As we have before ventured to say, no country can compete with our beautiful sage honey, which is so well known to nearly every household in the land. Its crystal clearness and delicious flavor commend it to all lovers of that most pure and healthful liquid. The sage honey of this State is finding its way into most of the great markets of Europe. As no plant has been found to take the place of the sage on this coast, it is strange that some wide-awake apiarian does not have a piece of ground, say fifty acres, thoroughly cultivated and planted to the white and the black sage. Our beekeepers know its many good qualities, and it is a fact that any plant or tree that receives a liberal share of attention always makes a better growth than those that are left to take care of themselves. Again, cultivated plants secrete more nectar than uncultivated ones.

Let the apiarians in all parts of this State look more to cultivated crops of meritorious honey-producing flora. If this is dictated that in the not

herds of sheep will be covered with a thrifty growth of sage plants. Their silvery foliage will give the hills the appearance of being covered with a mantle of silver fleece and the air will at evening-time be fragrant with the pleasant aroma exhaled from the leaves and blossoms. Or at the first breathing of the dawn, when everything is awaking from the drowsy slumbers of night, the apiarian steps from his vine-clad cottage and passes through his city of never-ceaseless workers and inhales the sweet perfume that escapes from the magazines that are so bounteously filled with nectar gathered from his broad acres of sage plants, and as he watches the little laborious insects leave their sweet homes and speed through the air to the little hill over which the great rising sun is shining, and the dew sparkling in all the colors of the prism on the leaves of the thousand honey-producing plants, his heart will leap within his honest breast as he contemplates the many visits each bee will make in quest of the precious nectar, or the many thousands of them that will deposit their load of pure, sparkling honey that will, at the end of the day's toil, turn the scales past the hundreds. And as he thinks of the rich returns he will receive from his agent across the wide ocean, he plans for the future comforts of his helpmate and his little ones.

When the plants are well established, which will be when they are two years old, they will yield rich returns, and the seed will scatter and take root on adjoining land. Year after year the plants will increase; more acres will bloom, and the hives will groan under the weight of honey, that will in quality surpass that of Mt. Hymettus.

The product of the apiaries of this State, having received such a favorable reputation abroad, the men already engaged in the business, as well as those that will hereafter do so, should by all possible ways and means maintain that good estimation. From present appearances, we doubt if the hills on which the sage plants grow are allowed to be continually made pasture ranges for sheep and cattle that there will not be sufficient bee forage grow on them to sustain bees enough to collect honey for home consumption. Again, fires sweep over vast tracts of land, and all vegetation is swept away; and as the sage blooms the second year from the seed, there will be a season after the fire in which the bees will be apt to starve unless fed or taken elsewhere.

As the white, blue and black sage does so well, is of easy culture, and yields a large quantity and an excellent quality of honey, it should be distributed in all parts of the State where it will grow; and in a few years, where one pound is now gathered there will then be from five to ten.

In conclusion I will say, do not wait for your neighbor to try it first, but obtain the seed now, and have plants to set out next spring. Propagate by cuttings as well as by seed, and thereby increase rapidly. Plant on the hill-sides, on the banks of creeks and by the roadside. Do this, and the honey-producing flora of your locality will be augmented; and perhaps in a shorter time than one thinks the bees will be collecting exclusively from sage blossoms, and the honey will be as clear and limpid as one could desire. W. A. PRYAL.

N. Temescal, Cal.

### Los Angeles Notes.

EDITORS PRESS:—The star of hope has not altogether hid itself from the beekeepers in southern California. On the occasion of the last beekeepers' meeting, in the city of Los Angeles, a bank (the Commercial), made the beekeepers a proposition to handle the entire honey crop of 1880, should we have any. The proposition was received, and will form the most prominent part of the discussions on their next meeting.

The bank proposes to receive honey at their house (not agreed as yet, whether said house will be in Los Angeles or Wilmington), grade, and put up in form best suited for export, by ocean or rail. Furthermore that they will label, truly, all honey handled by them as per grade. Europe is looked to as the market. Our beekeepers, so far as consulted, seem rather favorable to the proposition. One feature, however, is prominent in said proposition: the bank will have to enter into the business as merchants as well, if the business of handling the honey crop is undertaken, because of the adversity of so many of the beekeepers the present year. With some of us, now, we only expect to get through with a few hives, and will be in need of the last cent, that is in our meager supply, in the year 1880, and it will therefore justify none of the parties to the agreement to open an account, but to sell on the spot. A place for the small fry to enter the boat is, too, a pressing necessity. Lord, save us from the sharks. We have fed sharks enough—is our cry.

Our Bees.

Down hill he goes! fetch him a kick! is the cry in this Christian land. One of my model neighbors the other day, to be up to the fashion, notified me too keep my bees and a water-trough, else he would flag, too, for war on

of the quill told me last week, in

[CONTINUED ON PAGE 234.]



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### Meeting of the State Grange.

First Day—Tuesday.

The meetings of the eighth annual session of the State Grange began in Oakland on Tuesday. The following named Patrons and Matrons officiated:

Master, I. C. Steele; Overseer, B. R. Spilman, Steward, S. H. McCreary, *pro tem*: Assistant-Steward, E. W. S. Woods; Lecturer, B. Pilkington; Chaplain, Mrs. Jeanne C. Carr; Secretary, Amos Adams; Gate Keeper, T. T. Hooper; Ceres, Mrs. S. H. Webster; Pomona, Mrs. Sarah H. Dewey, *pro tem*; Flora, Mrs. Nellie Babcock, *pro tem*; Lady Assistant-Steward, Mrs. P. H. McGrew; Executive Committee, Messrs. C. Grattan, G. W. Hancock, P. H. McGrew.

At the morning hour a number of members were in attendance, and after some introductory work the meeting adjourned to 1 P. M. At that hour the session was opened in due form, after the singing of a number of the most stirring Grange songs.

#### Committees.

After the prescribed ceremonies of the Order were completed, the Worthy Master appointed the following committees for the session:

On Order of Business—Wm. Johnson, F. J. Russell, J. F. Deming, Mrs. L. A. Clark and Mrs. A. T. Dewey.

On Good of the Order—J. Strentzel, J. H. Gardner and Mrs. W. Johnson.

On Appeals—S. T. Coulter, Otis Clark and Mrs. G. W. Hancock.

On Legislation—Wm. Johnson, G. W. Hancock and Mrs. J. C. Carr.

On Finance—J. V. Webster, E. Kelsey, W. B. Stamper and Mrs. J. Mertes.

On Co-operation—W. R. Phelps, J. Adams and Mrs. N. J. Babcock.

On Resolutions—E. Fiske, N. Murtes, R. C. Haile, Mrs. Coulter and Mrs. Wm. B. West.

On Officers' Reports—A. Frink, J. E. B. Bass and Mrs. M. Reese.

On Constitution and By-Laws—J. V. Webster, J. Mewhinny and Mrs. L. Frink.

The Executive Committee of the State Grange are to act as Committee on Publication.

On Education—J. V. Webster, J. Strentzel, B. A. Spilman, Mrs. J. C. Carr, and F. M. Kimball.

#### Worthy Master's Address.

Worthy Master Steele then delivered an excellent address, the opening sentence of which was as follows:

"In obedience to a custom of our Order, I offer you such facts and suggestions as seem likely to aid you in your efforts to promote agriculture, foster the spirit of progress, and raise the standard of intellectual and moral culture in our Order."

After allusions to various matters, of interest only to members of the Order, he referred to mortgage-debt as a crushing incubus upon the farming interests of the State, and reminded members that the principles of the Grange discouraged debt. The importance of education in the Grange was dwelt upon, and also, fuller statistics for the use of farmers, that they may properly regulate production, and avoid glutting the market with their products. He announced the very true principle that "co-operative effort must be based on correct business principles to insure success." Practical means, such as Boards of Trade, telegraphic communication, etc., were recommended. He urged the importance of attempting to cultivate sugar, coffee and tea in California, and referred to the desire of Agricultural Commissioner Le Duc to establish experimental stations. He favored the establishment of one or more such stations on this coast, and called attention to education and the vital interest to farmers of having the education provided for by the new Constitution made as practical as possible, especially in the rural districts. He reminded them that to farmers and their wives is intrusted the proper control of the schools near their homes. The address closed as follows:

"Patrons, stand by your principles. Principles never die. By virtue of that invisible, subtle power that holds the Union in balance, we are moving onward and upward to a glorious destiny. Banded together for mutual protection and progress, with our hopes enshrined in an altar dedicated to the right, we should cultivate that spirit of liberality that brings harmony to independence."

#### Other Reports.

The report of Secretary Amos Adams was encouraging, as it showed that the State Grange is now out of debt, and that a number of delinquent Granges have recently paid their dues and are now in good standing.

Worthy Lecturer, B. Pilkington, then submitted his report, of which is given the following outline. He traced apparent depression among some of the Granges of the State "to needed monetary and business difficulties concomitant." Yet "of such intense political excitement as to what should be done, and valuable experience as to what should be done, policy on cal and financial." He also gave a report on his work as State Lecturer for the

past year, and closed by the quotation of some fine verses on the "The Patron's Declaration." Seventy members were present at Tuesday session, 20 of whom were ladies.

#### Tuesday Evening Session.

The evening session was devoted entirely to the discussion of the welfare of the Grange. Dr. Strentzel, Chairman, read the report of the Committee on the Good of the Order, and its adoption was followed by interesting and encouraging speeches by some of the ablest speakers present.

#### Wednesday.

The forenoon was occupied principally by reviewing and discussing reports not yet ready for publication. In the afternoon the election of officers occupied the entire session, resulting as follows:

Master—B. R. SPILMAN, North Butte, Sutter Co. Overseer—S. L. COULTER, Santa Rosa, Sonoma Co. Lecturer—MRS. JEANNE C. CARR, of Sacramento. Steward—THOS. T. HOOPER, Birds Landing, Solano Co. Assistant Steward—E. W. S. WOODS, Acampo, San Joaquin Co. Chaplain—JOEL RUSSELL, Haywood, Alameda Co. Treasurer—J. V. WEBSTER, East Oakland, Alameda Co. Secretary—AMOS ADAMS, Franklin, Sacramento Co. Gate Keeper—W. L. OVERHISER, Stockton. Ceres—MRS. C. H. IVINS, Cambria, San Luis Obispo. Pomona—MRS. P. H. MCGREW, East Oakland. Flora—MRS. OTIS CLARK, North Butte, Sutter Co. Lady Assistant Steward—MRS. T. T. HOOPER, Rio Vista, Solano Co.

P. H. McGrew, East Oakland, was re-elected a member of the Executive Committee for a term of three years.

B. R. Spilman, elected Worthy Master, has served two years as Overseer. He is a large grain and stock farmer at North Butte, in Sutter county, about 20 miles northwest of Marysville. He is a man tall of stature, firm of mind, and 65 years of age. He was born in Allen county, Kentucky, in 1814, and was married in 1836 to Margaret Collins, of the same place, with whom he is still living. He came to California in 1850, and engaged in mining for two years in Nevada county, in farming in Yuba county eight years and at his present home 16 years. Brother Spilman is well-to-do in this world's goods, is a faithful and zealous Patron, and promises to give much of his time to his office. He has two grown sons, who are now operating his farm; also, a widowed daughter, whose children he is now supporting and educating.

Of the other officers elected we have not now time and space to speak separately. All are well known as earnest and active workers in the Grange.

Many of the representatives present are old members of the State Grange. Being familiar to each other in heart and hand, much good feeling is manifested.

On account of the severe illness of Nelson Carr, Worthy Steward, himself and wife are, for the first time, absent from this session of the State Grange, and much sympathy and sincere regrets are expressed therefor.

Odd Fellows' hall, in which the Grange sessions are held, is handsomely furnished and one of the finest and most comfortable society halls in the State. A large portion of the members are stopping at the Grand Central hotel, situated near the hall. The Grand Central is the largest hotel in the State outside of San Francisco. It is 300 feet in length and four stories in height, with a commodious elevator. By special arrangements board and rooms are furnished to Patrons for \$1.25 per day. We believe in no instance before has the State Grange been so favorably situated for holding its sessions with so much comfort and convenience. The climate in Oakland proves all that could be desired on the part of members, all of whom seem well pleased with the situation.

### Hard Times and High Rates of Interest. No. 3.

EDITORS PRESS:—In speaking of the enhancement of the price of land as the principal cause of the high rate of interest prevailing in California since it became a State, I do not wish to ignore the existence of general laws as modifying causes. The abundance or scarcity of capital, per capita, is one of them. The prevailing disposition and habits of individuals and communities, in regard to an active or leisure life and saving or consuming value, which varies in individuals at different periods of life, and in communities at different times, are among the modifying causes. Then there is risk, or cost of insurance, which must be provided for in the price of the use of the capital, the same as any item of cost must appear in the average price of commodities. But here comparison ceases, for while the law of cost completely controls the average price of commodities under competition, the law of demand and supply merely fluctuates it as much above as below cost. In the case of interest, demand and supply is the main governing law. The rate of interest will be such as to equalize the demand for loans with the supply. Exactly as much as some people are desirous to borrow at that rate, others are willing to lend. If more is demanded than offered, interest will rise, if the reverse, it will fall, to the point of establishing the equation of demand and supply.

Now we come to our original proposition. Government, within a few years, gives away or sells for a trifle millions of acres of land, including town sites, rich mines and soil. Every capitalist and nine-tenths of borrowers know about the average increase of population, and

the resulting increase in the price of business lots and farms. When A, the money lender, knows or believes that the ownership of a certain lot or farm will yield to his capital 8% of enhanced price and 8% rent net per year, he is very sure not to lend his money to B for less than 16%, even if B has the laudable intention of encouraging labor by manufacturing or farming.

The opportunity afforded by Government of unrestricted ownership of land has furnished an immense demand for capital, to enable individuals to acquire it, in order not only to secure the benefit of its use, but also to secure the rise in price, caused by the presence and labors of the whole people. We believe the facts and arguments presented have clearly proved our propositions; but we want people not to have a mere shadowy belief, but to know error exists to be corrected, and wrong to be redressed, and it is their duty and best interests to do it. So, to make our position stronger, we will try to demolish some popular errors, simply because in some minds they stand in the way of truth.

Gold and silver, either as bullion or coin, representing so much capital, has no more influence, by its abundance or scarcity, over the prevailing rate of interest, than capital in any other form. This proposition becomes apparent when we consider that farms, houses, and property of all kinds may be hired, as well as money, and although the consideration paid for use may be called hire, or rent, it is essentially interest. When men borrow money, that is not what they want to use, really. They exchange it without delay for property, by the use of which they make profit. Profit includes interest, risk and cost of supervision. It is the capital and universal exchange value which is borrowed, and interest is paid on the capital value, on what is supposed can be made by the use of that capital after it is exchanged for capital in some other form. Probably two-thirds of all obligations to pay money interest have arisen from transactions where no money has passed between the parties. Such being the facts, the phrase, "interest on capital" is more appropriate than "interest on money."

Since nothing can be more unproductive than money (except for brokerage), can any good reason be shown why its abundance or scarcity has more influence over the rate of interest than any other form of convertible capital?

An abundance or scarcity of gold and silver as a medium of exchange, or any other form of currency, has no effect whatever on the rate of interest.

Had this social law been otherwise, we ought to have been blessed with the very lowest rates, since the people of California, in the past 30 years, have handled more gold and silver than any equal population in the world. An abundance of money can have no other effect than to depreciate gold and silver to the value of bullion for export and diminish the power of money to buy other property, but not the power of money to buy or earn money. If \$100 of capital at interest will earn \$10, then an abundance of money, or inflation, that will depreciate the \$100 one-half, will have the same effect on the \$10, the relation between principal and interest remaining the same, whether in case of inflation or scarcity (Mill, Vol. 2, page 210.)

Our Eastern brethren since the war have been experimenting on this subject. Most of them discovered that the interest on capital was determined, mostly, by the expectation of gain by its use. Thus before the war a \$50-dog would earn \$3 a year clear. After the war, he became a \$100-dog, and earned \$6. The dog was the same, no better or worse. Some thought the dog had "riz," but that was found to be a mistake. After a few wagon loads of paper money had been burned, the value of the dog came down to \$50 again, when it became apparent the value of the dog and his earnings had remained the same all the time. The change in nominal value and earnings was a change in the value of money, by its abundance or scarcity, and still, all the time, the proportion between the dog and his earnings remained the same. The dog's name was "property."

D. A. LEARNED.

#### Stockton, Cal.

WHAT ENGLAND PAYS FOR IMPORTED FOOD.—In the course of an article on the situation in English agriculture, the London *Farmer* gives the following mournfully interesting table and comments thereupon. The table gives the amount of money paid to foreign countries for cereal produce in the four past cereal years:

	1873-4.	1877-8.	1876-7.	1875-6.
Wheat.....	25,452,561.	32,241,960.	26,959,014.	28,448,806.
Barley.....	3,993,069.	5,339,971.	4,933,567.	3,555,310.
Oats.....	4,012,432.	4,538,446.	5,221,175.	4,722,659.
Peas.....	559,332.	806,525.	565,859.	681,909.
Beans.....	649,334.	1,141,201.	1,722,176.	1,804,940.
Corn.....	10,305,004.	12,880,593.	10,648,150.	11,443,417.
Flour.....	7,134,925.	7,268,945.	5,895,101.	4,802,035.
Total.....	52,130,697.	64,717,041.	55,945,071.	55,259,175.

The greatly reduced expenditure of 1878-9 on cereal produce equals a reduction on taxation of the whole cost of the army or of the entire income tax plus 20% on the customs. This valuable assistance will be lost with the new cereal year, which, according to all appearances, must expect to pay as much to foreigners for cereal produce as did the bad year, 1877-8.

CATTLE COMING THIS WAY.—The *Reno Gazette* says that Dunprey and Hildreth recently purchased Evans' Brothers band of cattle in Clover valley, and they are now en route for California on foot, 2,500 strong.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### ALAMEDA.

HEAVY SHEARING.—EDITORS PRESS: Twenty head of young ewes, exhibited at the Golden Gate and State Agricultural fairs, where they took first and second premiums, have been sheared since the fairs, and gave fleeces of six months' growth, weighing as follows: 9 lbs. 8 oz.; 9 lbs. 12 oz.; 10 lbs. 4 oz.; 11 lbs. 6 oz.; 12 lbs.; 11 lbs. 8 oz.; 10 lbs. 12 oz.; 11 lbs. 4 oz.; 12 lbs. 8 oz.; 14 lbs. 8 oz.; 9 lbs. 8 oz.; 10 lbs. 4 oz.; 9 lbs. 7 oz.; 10 lbs. 11 oz.; 12 lbs. 8 oz.; 11 lbs. 4 oz.; 9 lbs. 7 oz.; 10 lbs. 8 oz.; 12 lbs. and 13 lbs. 4 oz. The average is 11 lbs. 1½ oz. The sheep yielding the above fleeces are Spanish Merinos, not large, as compared with the French, and their wool is of a fine quality.—J. H. STROBRIDGE, Haywards, Oct. 2d, 1879.

BEET GROWING.—E. T. Gennert, in Boston *Cultivator*: W. F. Emory, of Alvarado, Cal., is a farmer who owns a farm containing eight (whole) acres. On these he has an orchard, besides which he raises mostly beans, potatoes and carrots. This he calls his homestead, and although he, a carpenter by trade, has no house on his homestead, as he hires land as best he can, this year having hired from different parties 52 acres in all, including a small dwelling on it for which he pays a cash rent of \$750 per annum, and of which land he has 50 acres in sugar beets, he owns three good working horses, and has hired most the time till the crop was all in three more, for which he paid each fifty cents per day in cash, he finding the harness, tools and driver. He plowed first very shallow then 14 inches deep, with three horses, then, shortly before planting, shallow again, doing all the planting by team and at 15 inches apart. The thinning and cultivating he contracted for at \$1.25 per ton, which includes digging, and he thinks the beet fields will leave enough profit after rent of land and money to pay for thinning and cultivating has been taken out, to enable him to build a house on his homestead farm, and this at the rate of \$4 per ton for beets delivered at the factory.

GRAPES.—Reporter: Josiah Stanford, of Warm Springs, has been having grapes brought here on the cars from his place in Menlo Park. His men and teams were busy all last week hauling them from the station to the Springs, where he is having them converted into wine. He has an extensive vineyard at the Springs also. T. W. Millard has some of the finest grapes I have seen. He has a number of men employed picking grapes to make wine.

#### BUTTE.

CHANCE FOR BROOM MAKERS.—*Record*, Oct. 4: We are informed that there have been fifty tons of broom corn grown on the Rancho Chico this season, and that it is for sale at reasonable terms. Extra inducements will be given to any competent parties who will start a broom factory in this section, and a future supply will be guaranteed. Here is a chance for a new industry, and, as every little helps, we hope to see some live man take hold of this enterprise.

#### FRESNO.

A NEW STYLE OF LEVELING LAND.—*Expositor*. Thos. R. Lowe, of Fresno, is here trying to introduce his hydraulic process for leveling land, and as he intends visiting other irrigation districts in this valley for the same purpose, I will here state that I have examined his plans very carefully, and consider them eminently practical, and of all else the "one thing needful" for this valley, and also that I propose to advocate their adoption by Messrs. Lux & Miller on this and other of their ranches. As to the necessity and utility of having land leveled properly before attempting to irrigate, to those who have had experience in irrigating these rough lands an explanation on that score would be entirely useless. But for the benefit of the uninitiated I will recount a few of the disadvantages the irrigator on rough lands has to encounter. For instance, under the present system, we are compelled to throw up numerous levees, some of them one and a half and two feet in height, and on account of their devious and winding courses in following the contour of the land, making it difficult and expensive in cultivating the grounds enclosed by them. And then oftentimes, after covering the land until the tops of the levees are reached, we have numerous elevations, some of them of considerable extent, that the water does not reach; and, again, almost invariably in such cases, numerous depressions are found, upon which the water stands so long that it scalds the life out of the crop. And, again, ten times as much water is required to irrigate rough as level land. After five or six years of active everyday experience with irrigation, and that on a large scale, and the preparation of the land for the same, I am able to assert, without fear of contradiction, that the most important and momentous problem for solution in this valley is how to level and prepare land for irrigation in the cheapest and best possible manner. I can think of nothing that would cause a greater revival of business activity than the inauguration of an industry such as is proposed by Mr. Lowe. For if he can, as he claims, level land at two dollars an acre, and make good wages at it, there will be no limit to the demand for such work, until the entire country is gone over and brought under a perfect system of irrigation, as it will be readily seen on the examination of the Lowe process that the land, immediately after having been leveled in this manner, is in the best possible condition for putting in a crop, and that in-

An article in last week's issue was "Some Points on" It should have been No. 2 of this series.



can be cultivated in this manner as well in the dry summer as in the winter time.—*J. W. Schmitz, Lux & Miller's Ranch.*

**SORGHUM.**—*Expositor*, Oct. 1: C. Myers, who lives in the Mendocino neighborhood, has this year put up a large quantity of sorghum syrup, from cane grown by himself and other farmers in his vicinity. He has had 14 years' experience in this line. We have tasted of syrup of his manufacture, and are free to pronounce it an excellent article. Sorghum cane grows readily on the irrigated lands of this county, and there is no reason why the manufacturing of syrup and sugar should not be profitably carried on here.

#### KERN.

**ITEMS.**—*Courier*, Oct. 2: The dairies in the Kern River valley have done a good business during the summer, in spite of the heat. There has been a home market for all the butter, at better prices than could be obtained in San Francisco. About 9,000 sheep have been shorn at the Bakersfield corrals the past week, and the work still goes on.

#### LASSEN.

**CROPS, ETC.**—*Cor. Reno Gazette*: We have had a pretty good grain crop this year. Several hundred tons will be sent away. It generally pays to raise wheat for the Reno market. The hay crop is a little short this season, but there is plenty to feed the cattle that are driven here from Oregon and fattened. You will see a good deal of it sticking to the ribs of the cattle that will go to Reno during the winter. There is always a chance to drive stock to your market at any time. No fruit crop to speak of this season. The late frost killed all the chances last spring. "Jack" bothers us a good deal. He comes early and stays late. We would have been glad of a little cool weather this summer. Now the nights are sultry, and have been so for a whole fortnight, so that the roosters keep awake all night and crow and flap their wings to get a little air. Everybody keeps well, however. It would be hard to find a healthier community than this. Fires are burning all around in the woods and the air is hazy with smoke.

#### LOS ANGELES.

**GRAPE GROWING.**—*Downey Outlook*, Oct. 4: We made a trip last Monday to Mr. J. H. Burke's vineyard, on the "Barton ranch," where we found him with a force picking grapes. There are about 7,000 vines on 8 acres of land. We have no remembrance of ever having seen a more thrifty vineyard. The vines, which are about 25 years old, were loaded down with grapes of the Mission variety, each averaging about 15 pounds. Mr. Burke has sold the crop to L. J. Rose, of San Gabriel valley, at \$16 per ton delivered, the cost of hauling and picking being about \$2 per ton. The bunches are very full and the flavor is excellent. The soil is on a sand-ridge, and the water is about 14 feet below the surface. No irrigation is required, and the soil needs but little working. Mr. Burke says that raising grapes at \$10 a ton is more profitable than corn at \$3 per cental. He proposes to plant 40 acres more with the Mission vine in the same vicinity.

**SHEARING.**—*Express*, Oct. 4: A gang of Indians has just finished the work of shearing 27,000 sheep on the Alamitos and Cerritos ranches, for which they received the aggregate sum of \$11,000.

**GRAPE PRICES.**—*Herald*, Oct. 3: Mr. L. J. Rose and other vignerons are buying all the grapes that reach the San Gabriel valley at 80 cents a hundred. Eight-mule teams are engaged in hauling grapes from Los Angeles to Mr. Rose's vats. The fact is that the whole grape crop of California is small this year, and that \$16 a ton, the price which is being realized hereabouts, is very moderate. But there is one pleasant feature about it, and that is that the Eastern demand for California wines and brandies is large and increasing, and the full crop next year will make the industrious vinedriller rich.

**HIVE ROBBERS.**—*Westminster Cor. Anaheim Gazette*: Mr. Rowell, of Santa Ana, who owns a bee ranch in Trahuco canyon, and who has suffered the loss of several stands of honey from the depredations of bears, determined to lie in wait for the unwelcome visitants, and last night succeeded in shooting a large grizzly who came for his regular meal of (bee) bread and honey. The bee-men are jubilant over the killing already of three or four of these grizzly knights of the mountains, but say that there are a few more left of the same sort. To-day Mr. Rowell is regaling the epicures of Santa Ana with a toothsome steak from bruin's carcass which had been made as sweet as honey and the honey-comb could make it.

#### MONTEREY.

**FORBIDDEN.**—*Cor. Index*: The occurrence of the recent fires, just at the opening of the hunting season, by which thousands of acres of feed and much other valuable property have been destroyed in this and adjoining counties, is bearing its legitimate fruit in the shape of numerous copies, on fences and other conspicuous places, of that suggestive legend: "Trespassers will be prosecuted to the extent of the law—no shooting or camping on these premises."

#### NAPA.

**SHIPPING GRAPES.**—*Register*, Oct. 4: Mr. T. B. McClure commenced shipping his grapes to San Francisco Monday, per steamer. The marketing of the crop of this vineyard will occupy three or four weeks. The shipping of large quantities of grapes to San Francisco will tend to decrease the amount of wine made in this city this fall. Another carload of choice

grapes, containing ten tons, from Pine Station, attached to the passenger train, went down the road this morning, destined for the East. This is the second carload shipped within the past week.

**STEAM CRUSHER.**—At Oakville grape crushing continues steadily. H. W. Crabb has facilities now, with his new steam crusher, to crush 100 tons a day, which is mashing grapes at a pretty rapid rate.

**MONTICELLO.**—The busy season is not yet over with us. All the farmers are hurrying to get their grain hauled to market, the more so that grain is raising in price. There will be a month's work yet.

#### SAN BENITO.

**HOLDING GRAIN.**—*Hollister Enterprise*, Oct. 4: Nearly all the grain raised in San Benito county has been stored in warehouses, the farmers preferring to wait until prices are higher rather than sell at the present rates.

**DRY WORK.**—The Moran Bros. are summer-fallowing and sowing grain in Grass valley. They have already put in 60 acres of wheat and barley, and we understand that it is their intention to plow and sow all the land they have before the fall rains set in. This is something new in the farming line in that district, and many have grave doubts over its success. Should it prove successful, however, there are many farmers of the county who will doubtless adopt this plan. The people of the San Joaquin and Sacramento valleys successfully farm their land in this manner and we see no reason why our farmers should not do likewise here.

#### SAN DIEGO.

**DRY WORK.**—*News*, Oct. 3: We hear of a little doing in the way of planting potatoes in the dry earth, looking for the necessary moisture soon, and a little plowing in places that will hear it. Aside from this, the movement is in removing hay to town, and of this we do not see a great deal coming in and being stacked up as is usual in the fall of the year. The price of hay continues low, say \$10.

#### SAN JOAQUIN.

**HOP HOUSES.**—*Lodi Review*: Thomas Clement and Edwin Whipple are hop-growers, near the Poland. The former has three hop-houses, varying in size. The largest is a two-story brick, 30x90 feet, sitting on the brow of a hill that overlooks the hop yard; the other two, placed at some distance apart, are 30x50 and 18x40 respectively. The lower story of the building is used for a furnace; there are a good many hundred feet of hot-air pipes passing through the room in every direction. The upper story is used for drying the hops, and is divided as follows: The floor that divides the two stories is composed of narrow slats or edging laid some distance apart. Over this is a coarse thin canvas, stretched from side to side, and connected with a large round beam that extends across the building near the center. There are two of these beams on either side, with a narrow board chute or slide between. The hops are scattered evenly over the whole extent of the canvas, and after they have remained long enough to dry—about 12 hours is the time necessary for the drying process—then the canvas is rolled over these huge beams, and at every turn the hops are brought nearer to and emptied into the slide trough before described. Then they are pushed along on to another stretch of canvas into the air, with a covering to protect them from the wind. Here they are tossed and moved about till cooled sufficiently, from which place they are run into the press and are baled. This ranch has turned out about 16 bales per day, averaging 170 pounds per bale. Four pounds of green hops, however, make only one of dried. In favorable years the land has produced 2,000 pounds per acre, but this year the yield has been much less than the average.

#### SAN LUIS OBISPO.

**SQUIRREL POISON.**—*Tribune* Oct. 4: The following recipe has been used with good effect by Mr. A. J. Hudson, of Josephine. Mr. Hudson says that the mixture slays the squirrels by the thousands if spread around their haunts. The ingredients are simple and can be procured at any drug store. Four gallons of wheat washed clean; one quart of cleaned, strained honey; one gill of water, mixed with honey; one ounce cyanide of potassium; one ounce strychnine; five drops oil of peppermint; seven drops oil of annis. The cyanide of potassium and strychnine should be well pulverized. Mix the ingredients with the honey in the order that they are given, commencing with the water, and then mix all with the wheat. Stir into the mixture two quarts of flour; put out to dry and stir well continually until thoroughly dry, to prevent the wheat from clodding together in balls. When not in use keep in an air-tight vessel.

#### SANTA CLARA.

**CANNING FACTORY.**—*Mercury*: The San Jose Fruit Packing Company are just now overcrowded with business. They are engaged in putting up quinces, grapes and tomatoes, employing upwards of a hundred hands. The goods are being shipped directly East to supply orders which are coming in so fast that the company is afraid it will not be able to supply the demand. There is a constantly growing demand for Santa Clara county fruits in the Eastern market, which will necessitate on the part of the company a further increase of facilities to supply it.

#### SANTA CRUZ.

**BET SUGAR.**—*Courier*, Oct. 3: The beet sugar works at Soquel are running full blast

and turning out large quantities of sugar. Last Saturday 149 barrels were shipped to San Francisco on board the steamer *San Vicente*.

#### SONOMA.

**LIFE ON A SMALL PLACE.**—*Healdsburg Flag*: A. M. Baker, of the Island Gardens, makes a living off 14 acres, 6 of which were in a non-paying crop of spuds, this year, and two in corn, leaving the most of his income to proceed from six acres. The secret lies in the fact that he has a bit of our rich bottom land, which is annually overflowed. He keeps a good man at work on the place during six months, and is himself constantly on the road during that time disposing of his produce. He protects his place from the current of the winter stream with willows.

**WHEAT.**—*Enterprise*, Oct. 2: Up to the present time only a small per cent. of this year's wheat production has been shipped from Healdsburg, the farmers generally preferring to hold in anticipation of higher prices. At the Granger's warehouse upward of 2,000 tons are now stored, the building being almost completely filled, almost the only space remaining being in the aisles. Bloom & Cohn have in their warehouse on the island about 800 tons. The wheat this year is much cleaner than that of last season, and therefore but a small proportion has had to be run through the fanning mills at either warehouse.

**WOOL.**—During the week past considerable wool has been brought to town, the result of the fall clip. In Healdsburg 18 and 20 cents has been paid this week; some are holding for an advance, but most producers are satisfied with present quotations and sell to local buyers. The revenue from wool this year will be greater in Sonoma county than that of any previous year.

**A CARP COMPANY.**—On the 15th of last May the Lenni Fish Propagating Company was incorporated in San Francisco, for the purpose of propagating carp, trout and other fish. The works of the company are located on Sonoma creek, and about \$7,000 have already been expended in the erection of buildings, etc. One pond contains two and one-half acres, in which are probably 40,000 carp.

**GRAPES.**—*Healdsburg Enterprise*: A considerable part of the production will be used up in local wineries, though the largest per cent. will be shipped to San Francisco. Buyers are up from the city securing all they can and paying from \$12 to \$20 per ton, according to variety. The yield of Flaming Tokays and some other foreign varieties will be far short this year, owing to injury done by the hot spells in the early stage of their development.

#### YOLO.

**ITEMS.**—*Democrat*, Oct. 2: Stubble burning has already commenced in many portions of the county. It is yet early, however, and no one, except those desiring to dry plow will destroy their feed for some time yet. There is a considerable quantity of wool arriving, but the buyers complain of its inferior quality. While good wool is in demand and commands a good price, the majority of the fall clip is so dirty that it is scarcely salable at any price. Most of the farmers are just now engaged in putting up straw for winter use. The practice of preserving each year a good supply of this article has been found to work so well that it has become a general custom among farmers. No one thinks of destroying their stubble now until he has provided himself with an abundant supply of straw.

#### WASHINGTON.

**SHIPPING GRAIN.**—*Walla Walla Union*, Sept. 27: All the warehouses at the depot are full of wheat, and great piles of it are on the outside platforms. There are many thousand tons at the depot awaiting shipment. During the week the number of trains running to Wallula was reduced to two a day. Even with that number the boats cannot take away the grain as fast as it is hauled to Wallula. Good judges estimate that over one-third of the crop of Walla Walla valley will have to be held over until spring, while not a third of the product of Columbia and Whitman counties will be marketed this fall, owing to the low water in the Snake and the lack of means of transportation on the Columbia river.

**A GHASTLY JOKE.**—It is said that at an agricultural dinner which recently came off in England, at which the absence of tenant-farmers was the most conspicuous feature, the health of the farmers was drunk with somewhat wry faces, but with curiously loud applause from the landlords round the table, one of whom, being the principal banker of the town, took upon himself to return thanks for the farmers, beginning his speech with the grim joke: "My lords and gentlemen, although you may not know it, I am really one of the largest farmers in the country." And so he was, for there was scarcely a man at the table who was not under his harrow and crusher. The thought arises whether something of this kind could not occur in this State.

**PERSONAL.**—The announcement is made that Mr. J. H. Nicholson, late of the Bank of California, has this day been admitted to a partnership in the bag and bagging business of E. Detrick & Co., which will be conducted under the same firm name and address as heretofore. Mr. Nicholson's recognized ability and his former acquaintance with the demands of the business, will give E. Detrick & Co., increased facilities for meeting the wants of their rapidly increasing trade and enable them to fill orders with still greater satisfaction to their patrons.

#### News in Brief.

A DAMAGING brush fire near Santa Cruz. GRANT will be in Chicago November 13th. A FISH-CULTURE ASSOCIATION has been formed in Chicago.

At Pittsburg 150 tanners struck for an increase of wages.

COOPER the American forger has been captured in London.

YELLOW FEVER has taken a fresh start at Concordia, Miss.

THE situation in Eastern Roumelia is considered very critical.

GORTSCHAKOFF will visit Berlin for a conference with Bismarck.

THE disturbance in Eastern Roumelia is becoming a guerrilla war.

THE Hyde Park Bank, at Scranton, Pa., has made an assignment.

MOBILE has removed her quarantine restrictions against New Orleans.

A REUNION of survivors of Southern prisons took place at Toledo, O.

THE weather last week was as warm in New York as in midsummer.

A STEAMER from Europe brought to New York, Oct. 1st, \$440,000 in gold.

PRESIDENT HAYES and party were warmly received at Springfield, Ill.

THE report of the Russian victory over the Tekke Turcomans is confirmed.

ST. GOTHARD PASS, in Switzerland, is hlocked with snow, suspending traffic.

DURING September the coinage of the U. S. Mints amounted to \$9,279,906.

THE Philadelphia Mint, during August, coined 1,808,050 silver dollars.

An advance in freight rates from Chicago to New York will take effect Oct. 13th.

GEN. GRANT and party, en route to Yosemite, were warmly welcomed at Stockton.

THE Spanish government has sent 4,000 men to Cuba, and will soon send 4,500 more.

THE returns of the recent German elections indicate the success of the Conservatives.

It is denied from Pittsburg that a general strike of Trades Unions is contemplated.

BARON CHALICE will succeed Count Zichy as Austrian Ambassador at Constantinople.

TWENTY-FIVE important political trials will be held in St. Petersburg during October.

Up to Oct. 1st arrears of pension claims had been settled to the amount of \$20,734,507.

An earthquake was felt at Oakland and other places around the bay on the morning of the 2d.

THE United States Assay Office at New York, Oct. 1st, paid out \$639,127 in specie.

THE capital stock of the Bank of California is to be reduced from \$5,000,000 to \$3,000,000.

HON. FRANCIS GILLETTE, ex-United States Senator, died at Hartford, Conn., Sept. 30th.

THE United States steamer *Tuscarora* has been ordered to leave San Francisco for Mazatlan.

THE Treasury purchased 239,000 ounces of silver bullion for the Philadelphia Mint, Oct. 1st.

ACCORDING to dispatches, the insurgents in Cuba are being worsted by the Government troops.

In a fight between soldiers and desperadoes in Indian Territory, nine of the latter were killed.

BONDS amounting to \$28,000, stolen from the National bank of Baltimore in 1878, have been recovered.

SMITH, who stole bullion from the S. F. Mint, has been sentenced to four years in the State Prison.

THE industrial parade at Indianapolis was a great success, every branch of trade being represented.

SIXTY THOUSAND dollars in gold 20-franc pieces arrived at New York on the 2d inst. from France.

THE exports from the United States for the year ending August 31st exceeded the imports \$289,709,341.

YELLOW FEVER is abating somewhat at Memphis, and Nashville has raised its quarantine against that city.

UNITED STATES JUDGE DRUMMOND has decided to retire from the Bench on reaching his 70th year, Oct. 16th.

PROF. WISE, the aeronaut, ascended in a balloon from St. Louis Sept. 28th, and has not since been heard of.

THE Indian Salvador, who murdered Paul Rieger in Marin county, was hanged on the 2d inst. at San Rafael.

JOHN E. GREEN has been awarded \$15,833 for the loss of a leg in the Old Colony railroad disaster in Massachusetts.

MAJOR C. H. HEMPESTED, formerly Governor Bigler's Private Secretary, died in Salt Lake, Sunday, and was buried yesterday.

No further news is received from the scene of the Thornburgh disaster in Colorado, but troops are hastening to the relief of the corralled soldiers.

A DETERMINED attempt is being made in Washington Territory to recapture the escaped Perkins murderers—one of them having already been killed by officers.

THE Western Union Telegraph Company has made another reduction in its tariff, to take effect Nov. 1st, rates from San Francisco to Eastern cities will be \$2.

ANOTHER disaster to the Government troops is reported from Colorado—Major Thornburgh's command having been ambuscaded on Milk river by Ute Indians and suffering heavy loss, the commander of the expedition being among the slain. Active preparations are being made to capture the Indians.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### Meeting of the State Grange.

First Day—Tuesday.

The meetings of the eighth annual session of the State Grange began in Oakland on Tuesday. The following named Patrons and Matrons officiated:

Master, I. C. Steele; Overseer, B. R. Spilman, Steward, S. H. McCreary, *pro tem*: Assistant-Steward, E. W. S. Woods; Lecturer, B. Pilkington; Chaplain, Mrs. Jeanne C. Carr; Secretary, Amos Adams; Gate Keeper, T. T. Hooper; Ceres, Mrs. S. H. Webster; Pomona, Mrs. Sarah H. Dewey, *pro tem*; Flora, Mrs. Nellie Babcock, *pro tem*; Lady Assistant-Steward, Mrs. P. H. McGrew; Executive Committee, Messrs. C. Grattan, G. W. Hancock, P. H. McGrew.

At the morning hour a number of members were in attendance, and after some introductory work the meeting adjourned to 1 P. M. At that hour the session was opened in due form, after the singing of a number of the most stirring Grange songs.

#### Committees.

After the prescribed ceremonies of the Order were completed, the Worthy Master appointed the following committees for the session:

On Order of Business—Wm. Johnson, F. J. Russell, J. F. Deming, Mrs. L. A. Clark and Mrs. A. T. Dewey.

On Good of the Order—J. Strentzel, J. H. Gardner and Mrs. W. Johnson.

On Appeals—S. T. Coulter, Otis Clark and Mrs. G. W. Hancock.

On Legislation—Wm. Johnson, G. W. Hancock and Mrs. J. C. Carr.

On Finance—J. V. Webster, E. Kelsey, W. B. Stamper and Mrs. J. Mertes.

On Co-operation—W. R. Phelps, J. Adams and Mrs. N. J. Babcock.

On Resolutions—E. Fiske, N. Murtes, R. C. Haile, Mrs. Coulter and Mrs. Wm. B. West.

On Officers' Reports—A. Frink, J. E. B. Bass and Mrs. M. Reese.

On Constitution and By-Laws—J. V. Webster, J. Mewhinny and Mrs. L. Frink.

The Executive Committee of the State Grange are to act as Committee on Publication.

On Education—J. V. Webster, J. Strentzel, B. A. Spilman, Mrs. J. C. Carr, and F. M. Kimball.

#### Worthy Master's Address.

Worthy Master Steele then delivered an excellent address, the opening sentence of which was as follows:

"In obedience to a custom of our Order, I offer you such facts and suggestions as seem likely to aid you in your efforts to promote agriculture, foster the spirit of progress, and raise the standard of intellectual and moral culture in our Order."

After allusions to various matters, of interest only to members of the Order, he referred to mortgage-debt as a crushing incubus upon the farming interests of the State, and reminded members that the principles of the Grange discouraged debt. The importance of education in the Grange was dwelt upon, and also, fuller statistics for the use of farmers, that they may properly regulate production, and avoid glutting the market with their products. He announced the very true principle that "co-operative effort must be based on correct business principles to insure success." Practical means, such as Boards of Trade, telegraphic communication, etc., were recommended. He urged the importance of attempting to cultivate sugar, coffee and tea in California, and referred to the desire of Agricultural Commissioner Le Duc to establish experimental stations. He favored the establishment of one or more such stations on this coast, and called attention to education and the vital interest to farmers of having the education provided for by the new Constitution made as practical as possible, especially in the rural districts. He reminded them that to farmers and their wives is intrusted the proper control of the schools near their homes. The address closed as follows:

"Patrons, stand by your principles. Principles never die. By virtue of that invisible, subtle power that holds the Union in balance, we are moving onward and upward to a glorious destiny. Banded together for mutual protection and progress, with our hopes enshrined in an altar dedicated to the right, we should cultivate that spirit of liberality that brings harmony to independence."

#### Other Reports.

The report of Secretary Amos Adams was encouraging, as it showed that the State Grange is now out of debt, and that a number of delinquent Granges have recently paid their dues and are now in good standing.

Worthy Lecturer, B. Pilkington, then submitted his report, of which is given the following outline. He traced apparent depression among some of the Granges of the State "to our great monetary and business difficulties connected with a year of such intense political excitement." Yet we have gained valuable experience as to what should be Grange policy "on subjects social, commercial, co-operative, political and financial." He also gave a business report on his work as State Lecturer for the

past year, and closed by the quotation of some fine verses on the "The Patron's Declaration." Seventy members were present at Tuesday session, 20 of whom were ladies.

#### Tuesday Evening Session.

The evening session was devoted entirely to the discussion of the welfare of the Grange. Dr. Strentzel, Chairman, read the report of the Committee on the Good of the Order, and its adoption was followed by interesting and encouraging speeches by some of the ablest speakers present.

#### Wednesday.

The forenoon was occupied principally by reviewing and discussing reports not yet ready for publication. In the afternoon the election of officers occupied the entire session, resulting as follows:

Master—B. R. SPILMAN, North Butte, Sutter Co. Overseer—S. L. COULTER, Santa Rosa, Sonoma Co. Lecturer—MRS. JEANNE C. CARR, of Sacramento. Steward—THOS. T. HOOPER, Birds Landing, Solano Co. Assistant Steward—E. W. S. WOODS, Acampo, San Joaquin Co. Chaplain—JOEL RUSSELL, Haywood, Alameda Co. Treasurer—J. V. WEBSTER, East Oakland, Alameda Co. Secretary—AMOS ADAMS, Franklin, Sacramento Co. Gate Keeper—W. L. OVERHISER, Stockton. Ceres—MRS. C. H. IVINS, Cambria, San Luis Obispo. Pomona—MRS. P. H. MCGREW, East Oakland. Flora—MRS. OTIS CLARK, North Butte, Sutter Co. Lady Assistant Steward—MRS. T. T. HOOPER, Rio Vista, Solano Co.

P. H. McGrew, East Oakland, was re-elected a member of the Executive Committee for a term of three years.

B. R. Spilman, elected Worthy Master, has served two years as Overseer. He is a large grain and stock farmer at North Butte, in Sutter county, about 20 miles northwest of Marysville. He is a man tall of stature, firm of mind, and 65 years of age. He was born in Allen county, Kentucky, in 1814, and was married in 1836 to Margaret Collins, of the same place, with whom he is still living. He came to California in 1850, and engaged in mining for two years in Nevada county, in farming in Yuba county eight years and at his present home 16 years. Brother Spilman is well-to-do in this world's goods, is a faithful and zealous Patron, and promises to give much of his time to his office. He has two grown sons, who are now operating his farm; also, a widowed daughter, whose children he is now supporting and educating.

Of the other officers elected we have not now time and space to speak separately. All are well known as earnest and active workers in the Grange.

Many of the representatives present are old members of the State Grange. Being familiar to each other in heart and hand, much good feeling is manifested.

On account of the severe illness of Nelson Carr, Worthy Steward, himself and wife are, for the first time, absent from this session of the State Grange, and much sympathy and sincere regrets are expressed therefor.

Odd Fellows' hall, in which the Grange sessions are held, is handsomely furnished and one of the finest and most comfortable society halls in the State. A large portion of the members are stopping at the Grand Central hotel, situated near the hall. The Grand Central is the largest hotel in the State outside of San Francisco. It is 300 feet in length and four stories in height, with a commodious elevator. By special arrangements board and rooms are furnished to Patrons for \$1.25 per day. We believe in no instance before has the State Grange been so favorably situated for holding its sessions with so much comfort and convenience. The climate in Oakland proves all that could be desired on the part of members, all of whom seem well pleased with the situation.

### Hard Times and High Rates of Interest. No. 3.

EDITORS PRESS:—In speaking of the enhancement of the price of land as the principal cause of the high rate of interest prevailing in California since it became a State, I do not wish to ignore the existence of general laws as modifying causes. The abundance or scarcity of capital, per capita, is one of them. The prevailing disposition and habits of individuals and communities, in regard to an active or leisure life and saving or consuming value, which varies in individuals at different periods of life, and in communities at different times, are among the modifying causes. Then there is risk, or cost of insurance, which must be provided for in the price of the use of the capital, the same as any item of cost must appear in the average price of commodities. But here comparison ceases, for while the law of cost completely controls the average price of commodities under competition, the law of demand and supply merely fluctuates it as much above as below cost. In the case of interest, demand and supply is the main governing law. The rate of interest will be such as to equalize the demand for loans with the supply. Exactly as much as some people are desirous to borrow at that rate, others are willing to lend. If more is demanded than offered, interest will rise, if the reverse, it will fall, to the point of establishing the equation of demand and supply.

Now we come to our original proposition. Government, within a few years, gives away or sells for a trifle millions of acres of land, including town sites, rich mines and soil. Every capitalist and nine-tenths of borrowers know about the average increase of population, and

"An article in last week's issue was 'Some Points on Land Holding.' It should have been No. 2 of this series.—*ENDS PRESS.*"

the resulting increase in the price of business lots and farms. When A, the money lender, knows or believes that the ownership of a certain lot or farm will yield to his capital 8% of enhanced price and 8% rent net per year, he is very sure not to lend his money to B for less than 16%, even if B has the laudable intention of encouraging labor by manufacturing or farming.

The opportunity afforded by Government of unrestricted ownership of land has furnished an immense demand for capital, to enable individuals to acquire it, in order not only to secure the benefit of its use, but also to secure the rise in price, caused by the presence and labors of the whole people. We believe the facts and arguments presented have clearly proved our propositions; but we want people not to have a mere shadowy belief, but to know error exists to be corrected, and wrong to be redressed, and it is their duty and best interests to do it. So, to make our position stronger, we will try to demolish some popular errors, simply because in some minds they stand in the way of truth.

Gold and silver, either as bullion or coin, representing so much capital, has no more influence, by its abundance or scarcity, over the prevailing rate of interest, than capital in any other form. This proposition becomes apparent when we consider that farms, houses, and property of all kinds may be hired, as well as money, and although the consideration paid for use may be called hire, or rent, it is essentially interest. When men borrow money, that is not what they want to use, really. They exchange it without delay for property, by the use of which they make profit. Profit includes interest, risk and cost of supervision. It is the capital and universal exchange value which is borrowed, and interest is paid on the capital value, on what is supposed can be made by the use of that capital after it is exchanged for capital in some other form. Probably two-thirds of all obligations to pay money interest have arisen from transactions where no money has passed between the parties. Such being the facts, the phrase, "interest on capital" is more appropriate than "interest on money."

Since nothing can be more unproductive than money (except for brokerage), can any good reason be shown why its abundance or scarcity has more influence over the rate of interest than any other form of convertible capital?

An abundance or scarcity of gold and silver as a medium of exchange, or any other form of currency, has no effect whatever on the rate of interest.

Had this social law been otherwise, we ought to have been blessed with the very lowest rates, since the people of California, in the past 30 years, have handled more gold and silver than any equal population in the world. An abundance of money can have no other effect than to depreciate gold and silver to the value of bullion for export and diminish the power of money to buy other property, but not the power of money to buy or earn money. If \$100 of capital at interest will earn \$10, then an abundance of money, or inflation, that will depreciate the \$100 one-half, will have the same effect on the \$10, the relation between principal and interest remaining the same, whether in case of inflation or scarcity (Mill, Vol. 2, page 210.)

Our Eastern brethren since the war have been experimenting on this subject. Most of them discovered that the interest on capital was determined, mostly, by the expectation of gain by its use. Thus before the war a \$50-dog would earn \$3 a year clear. After the war, he became a \$100-dog, and earned \$6. The dog was the same, no better or worse. Some thought the dog had "riz," but that was found to be a mistake. After a few wagon loads of paper money had been burned, the value of the dog came down to \$50 again, when it became apparent the value of the dog and his earnings had remained the same all the time. The change in nominal value and earnings was a change in the value of money, by its abundance or scarcity, and still, all the time, the proportion between the dog and his earnings remained the same. The dog's name was "property."

D. A. LEARNED.

Stockton, Cal.

WHAT ENGLAND PAYS FOR IMPORTED FOOD.—In the course of an article on the situation in English agriculture, the London *Farmer* gives the following mournfully interesting table and comments thereupon. The table gives the amount of money paid to foreign countries for cereal produce in the four past cereal years:

	1878-9.	1877-8.	1876-7.	1875-6.
Wheat.....	25,452,561	32,241,960	26,950,014	28,443,896
Barley.....	3,993,060	5,880,971	4,933,567	3,555,319
Oats.....	4,012,432	4,538,448	5,221,175	4,722,659
Peas.....	559,352	806,525	565,859	631,000
Beans.....	640,334	1,141,201	1,732,176	1,804,940
Corn.....	10,305,004	12,880,508	10,048,150	11,443,417
Flour.....	7,134,925	7,268,945	5,895,101	4,802,035

Total.....52,136,097. 64,717,641. 55,948,071. 55,259,175

The greatly reduced expenditure of 1878-9 on cereal produce equals a reduction on taxation of the whole cost of the army or of the entire income tax plus 20% on the customs. This valuable assistance will be lost with the new cereal year, which, according to all appearances, must expect to pay as much to foreigners for cereal produce as did the bad year, 1877-8.

CATTLE COMING THIS WAY.—The *Reno Gazette* says that Dunprey and Hildreth recently purchased Evans' Brothers band of cattle in Clover valley, and they are now en route for California on foot, 2,500 strong.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### ALAMEDA.

HEAVY SHEARING.—EDITORS PRESS: Twenty head of young ewes, exhibited at the Golden Gate and State Agricultural fairs, where they took first and second premiums, have been sheared since the fairs, and gave fleeces of six months' growth, weighing as follows: 9 lbs. 8 oz.; 9 lbs. 12 oz.; 10 lbs. 4 oz.; 11 lbs. 6 oz.; 12 lbs.; 11 lbs. 8 oz.; 10 lbs. 12 oz.; 11 lbs. 4 oz.; 12 lbs. 8 oz.; 14 lbs. 8 oz.; 9 lbs. 8 oz.; 10 lbs. 4 oz.; 9 lbs. 7 oz.; 10 lbs. 11 oz.; 12 lbs. 8 oz.; 11 lbs. 4 oz.; 9 lbs. 7 oz.; 10 lbs. 8 oz.; 12 lbs. and 13 lbs. 4 oz. The average is 11 lbs. 1½ oz. The sheep yielding the above fleeces are Spanish Merinos, not large, as compared with the French, and their wool is of a fine quality.—J. H. STROBRIDGE, Hayswards, Oct. 2d. 1879.

BEET GROWING.—E. T. Gennert, in Boston *Cultivator*: W. F. Emory, of Alvarado, Cal., is a farmer who owns a farm containing eight (whole) acres. On these he has an orchard, besides which he raises mostly beans, potatoes and carrots. This he calls his homestead, and although he, a carpenter by trade, has no house on his homestead, as he hires land as best he can, this year having hired from different parties 52 acres in all, including a small dwelling on it for which he pays a cash rent of \$750 per annum, and of which land he has 50 acres in sugar beets, he owns three good working horses, and has hired most the time till the crop was all in three more, for which he paid each fifty cents per day in cash, he finding the harness, tools and driver. He plowed first very shallow then 14 inches deep, with three horses, then, shortly before planting, shallow again, doing all the planting by team and at 15 inches apart. The thinning and cultivating he contracted for at \$1.25 per ton, which includes digging, and he thinks the beet fields will leave enough profit after rent of land and money to pay for thinning and cultivating has been taken out, to enable him to build a house on his homestead farm, and this at the rate of \$4 per ton for beets delivered at the factory.

GRAPES.—Reporter: Josiah Staunford, of Warm Springs, has been having grapes brought here on the cars from his place in Menlo Park. His men and teams were busy all last week hauling them from the station to the Springs, where he is having them converted into wine. He has an extensive vineyard at the Springs also. T. W. Millard has some of the finest grapes I have seen. He has a number of men employed picking grapes to make wine.

#### BUTTE.

CHANCE FOR BROOM MAKERS.—Record, Oct. 4: We are informed that there have been fifty tons of broom corn grown on the Rancho Chico this season, and that it is for sale at reasonable terms. Extra inducements will be given to any competent parties who will start a broom factory in this section, and a future supply will be guaranteed. Here is a chance for a new industry, and, as every little helps, we hope to see some live man take hold of this enterprise.

#### FRESNO.

A NEW STYLE OF LEVELING LAND.—Expositor: Thos. R. Lowe, of Fresno, is here trying to introduce his hydraulic process for leveling land, and as he intends visiting other irrigation districts in this valley for the same purpose, I will here state that I have examined his plans very carefully, and consider them eminently practical, and of all else the "one thing needful" for this valley, also that I propose to advocate their adoption by Messrs. Lux & Miller on this and other of their ranches. As to the necessity and utility of having land leveled properly before attempting to irrigate, to those who have had experience in irrigating these rough lands an explanation on that score would be entirely useless. But for the benefit of the uninitiated I will recount a few of the disadvantages the irrigator on rough lands has to encounter. For instance, under the present system, we are compelled to throw up numerous levees, some of them one and a half and two feet in height, and on account of their devious and winding courses in following the contour of the land, making it difficult and expensive in cultivating the grounds enclosed by them. And then oftentimes, after covering the land until the tops of the levees are reached, we have numerous elevations, some of them of considerable extent, that the water does not reach; and, again, almost invariably in such cases, numerous depressions are found, upon which the water stands so long that it scalds the life out of the crop. And, again, ten times as much water is required to irrigate rough as level land. After five or six years of active everyday experience with irrigation, and that on a large scale, and the preparation of the land for the same, I am able to assert, without fear of contradiction, that the most important and momentous problem for solution in this valley is how to level and prepare land for irrigation in the cheapest and best possible manner. I can think of nothing that would cause a greater revival of business activity than the inauguration of an industry such as is proposed by Mr. Lowe. For if he can, as he claims, level land at two dollars an acre, and make good wages at it, there will be no limit to the demand for such work, until the entire country is gone over and brought under a perfect system of irrigation, as it will be readily seen on the examination of the Lowe process that the land, immediately after having been leveled in this manner, is in the best possible condition for putting in a crop, and that in-



can be cultivated in this manner as well in the dry summer as in the winter time.—*J. W. Schmitz, Lux & Miller's Ranch.*

**SORGHUM.**—*Expositor*, Oct. 1: C. Myers, who lives in the Mendocino neighborhood, has this year put up a large quantity of sorghum syrup, from cane grown by himself and other farmers in his vicinity. He has had 14 years' experience in this line. We have tasted of syrup of his manufacture, and are free to pronounce it an excellent article. Sorghum cane grows readily on the irrigated lands of this county, and there is no reason why the manufacturing of syrup and sugar should not be profitably carried on here.

#### KERN.

**ITEMS.**—*Courier*, Oct. 2: The dairies in the Kern River valley have done a good business during the summer, in spite of the heat. There has been a home market for all the butter, at better prices than could be obtained in San Francisco. About 9,000 sheep have been shorn at the Bakersfield corrals the past week, and the work still goes on.

#### LASSEN.

**CROPS, ETC.**—*Cor. Reno Gazette*: We have had a pretty good grain crop this year. Several hundred tons will be sent away. It generally pays to raise wheat for the Reno market. The hay crop is a little short this season, but there is plenty to feed the cattle that are driven here from Oregon and fattened. You will see a good deal of it sticking to the ribs of the cattle that will go to Reno during the winter. There is always a chance to drive stock to your market at any time. No fruit crop to speak of this season. The late frost killed all the chances last spring. "Jack" bothers us a good deal. He comes early and stays late. We would have been glad of a little cool weather this summer. Now the nights are sultry, and have been so for a whole fortnight, so that the roosters keep awake all night and crow and flap their wings to get a little air. Everybody keeps well, however. It would be hard to find a healthier community than this. Fires are burning all around in the woods and the air is bazy with smoke.

#### LOS ANGELES.

**GRAPE GROWING.**—*Downey Outlook*, Oct. 4: We made a trip last Monday to Mr. J. H. Burke's vineyard, on the "Barton ranch," where we found him with a force picking grapes. There are about 7,000 vines on 8 acres of land. We have no remembrance of ever having seen a more thrifty vineyard. The vines, which are about 25 years old, were loaded down with grapes of the Mission variety, each averaging about 15 pounds. Mr. Burke has sold the crop to L. J. Rose, of San Gabriel valley, at \$16 per ton delivered, the cost of hauling and picking being about \$2 per ton. The bunches are very full and the flavor is excellent. The soil is on a sand-ridge, and the water is about 14 feet below the surface. No irrigation is required, and the soil needs but little working. Mr. Burke says that raising grapes at \$10 a ton is more profitable than corn at \$3 per cental. He proposes to plant 40 acres more with the Mission vine in the same vicinity.

**SHEARING.**—*Express*, Oct. 4: A gang of Indians has just finished the work of shearing 27,000 sheep on the Alamitos and Cerritos ranches, for which they received the aggregate sum of \$11,000.

**GRAPE PRICES.**—*Herald*, Oct. 3: Mr. L. J. Rose and other vignerons are buying all the grapes that reach the San Gabriel valley at 80 cents a hundred. Eight-mule teams are engaged in hauling grapes from Los Angeles to Mr. Rose's vats. The fact is that the whole grape crop of California is small this year, and that \$16 a ton, the price which is being realized hereabouts, is very moderate. But there is one pleasant feature about it, and that is that the Eastern demand for California wines and brandies is large and increasing, and the full crop next year will make the industrious vineyardist rich.

**HIVE ROBBERS.**—*Westminster Cor. Anaheim Gazette*: Mr. Rowell, of Santa Ana, who owns a bee ranch in Trabuco canyon, and who has suffered the loss of several stands of honey from the depredations of bears, determined to lie in wait for the unwelcome visitants, and last night succeeded in shooting a large grizzly who came for his regular meal of (bee) bread and honey. The bee-men are jubilant over the killing already of three or four of these grizzly knights of the mountains, but say that there are a few more left of the same sort. To-day Mr. Rowell is regaling the epicures of Santa Ana with a toothsome steak from bruin's carcass which had been made as sweet as honey and the honey-comb could make it.

#### MONTEREY.

**FORBIDDEN.**—*Cor. Index*: The occurrence of the recent fires, just at the opening of the hunting season, by which thousands of acres of feed and much other valuable property have been destroyed in this and adjoining counties, is bearing its legitimate fruit in the shape of numerous copies, on fences and other conspicuous places, of that suggestive legend: "Trespassers will be prosecuted to the extent of the law—no shooting or camping on these premises."

#### NAPA.

**SHIPPING GRAPES.**—*Register*, Oct. 4: Mr. T. B. McClure commenced shipping his grapes to San Francisco Monday, per steamer. The marketing of the crop of this vineyard will occupy three or four weeks. The shipping of large quantities of grapes to San Francisco will tend to decrease the amount of wine made in this city this fall. Another carload of choice

grapes, containing ten tons, from Pine Station, attached to the passenger train, went down the road this morning, destined for the East. This is the second carload shipped within the past week.

**STEAM CRUSHER.**—At Oakville grape crushing continues steadily. H. W. Crabb has facilities now, with his new steam crusher, to crush 100 tons a day, which is mashing grapes at a pretty rapid rate.

**MONTICELLO.**—The busy season is not yet over with us. All the farmers are hurrying to get their grain hauled to market, the more so that grain is raising in price. There will be a month's work yet.

#### SAN BENITO.

**HOLDING GRAIN.**—*Hollister Enterprise*, Oct. 4: Nearly all the grain raised in San Benito county has been stored in warehouses, the farmers preferring to wait until prices are higher rather than sell at the present rates.

**DRY WORK.**—The Moran Bros. are summer-fallowing and sowing grain in Grass valley. They have already put in 60 acres of wheat and barley, and we understand that it is their intention to plow and sow all the land they have before the fall rains set in. This is something new in the farming line in that district, and many have grave doubts over its success. Should it prove successful, however, there are many farmers of the county who will doubtless adopt this plan. The people of the San Joaquin and Sacramento valleys successfully farm their land in this manner and we see no reason why our farmers should not do likewise here.

#### SAN DIEGO.

**DRY WORK.**—*News*, Oct. 3: We hear of a little doing in the way of planting potatoes in the dry earth, looking for the necessary moisture soon, and a little plowing in places that will bear it. Aside from this, the movement is in removing bay to town, and of this we do not see a great deal coming in and being stacked up as is usual in the fall of the year. The price of hay continues low, say \$10.

#### SAN JOAQUIN.

**HOP HOUSES.**—*Lodi Review*: Thomas Clement and Edwin Whipple are hop-growers, near the Poland. The former has three hop-houses, varying in size. The largest is a two-story brick, 30x90 feet, sitting on the brow of a hill that overlooks the hop yard; the other two, placed at some distance apart, are 30x50 and 18x40 respectively. The lower story of the building is used for a furnace; there are a good many hundred feet of hot-air pipes passing through the room in every direction. The upper story is used for drying the hops, and is divided as follows: The floor that divides the two stories is composed of narrow slats or edging laid some distance apart. Over this is a coarse thin canvas, stretched from side to side, and connected with a large round beam that extends across the building near the center. There are two of these beams on either side, with a narrow board chute or slide between. The hops are scattered evenly over the whole extent of the canvas, and after they have remained long enough to dry—about 12 hours is the time necessary for the drying process—then the canvas is rolled over these huge beams, and at every turn the hops are brought nearer to and emptied into the slide trough before described. Then they are pushed along on to another stretch of canvas into the air, with a covering to protect them from the wind. Here they are tossed and moved about till cooled sufficiently, from which place they are run into the press and are baled. This ranch has turned out about 16 bales per day, averaging 170 pounds per bale. Four pounds of green hops, however, make only one of dried. In favorable years the land has produced 2,000 pounds per acre, but this year the yield has been much less than the average.

#### SAN LUIS OBISPO.

**SQUIRREL POISON.**—*Tribune* Oct. 4: The following recipe has been used with good effect by Mr. A. J. Hudson, of Josephine. Mr. Hudson says that the mixture slays the squirrels by the thousands if spread around their haunts. The ingredients are simple and can be procured at any drug store. Four gallons of wheat washed clean; one quart of cleaned, strained honey; one gill of water, mixed with honey; one ounce cyanide of potassium; one ounce strychnine; five drops oil of peppermint; seven drops oil of anis. The cyanide of potassium and strychnine should be well pulverized. Mix the ingredients with the honey in the order that they are given, commencing with the water, and then mix all with the wheat. Stir into the mixture two quarts of flour; put out to dry and stir well continually until thoroughly dry, to prevent the wheat from clodding together in balls. When not in use keep in an air-tight vessel.

#### SANTA CLARA.

**CANNING FACTORY.**—*Mercury*: The San Jose Fruit Packing Company are just now overcrowded with business. They are engaged in putting up quinces, grapes and tomatoes, employing upwards of a hundred hands. The goods are being shipped directly East to supply orders which are coming in so fast that the company is afraid it will not be able to supply the demand. There is a constantly growing demand for Santa Clara county fruits in the Eastern market, which will necessitate on the part of the company a further increase of facilities to supply it.

#### SANTA CRUZ.

**BEEET SUGAR.**—*Courier*, Oct. 3: The beet sugar works at Soquel are running full blast

and turning out large quantities of sugar. Last Saturday 149 barrels were shipped to San Francisco on board the steamer *San Vicente*.

#### SONOMA.

**LIFE ON A SMALL PLACE.**—*Healdsburg Flag*: A. M. Baker, of the Island Gardens, makes a living off 14 acres, 6 of which were in a non-paying crop of spuds, this year, and two in corn, leaving the most of his income to proceed from six acres. The secret lies in the fact that he has a bit of our rich bottom land, which is annually overflowed. He keeps a good man at work on the place during six months, and is himself constantly on the road during that time disposing of his produce. He protects his place from the current of the winter stream with willows.

**WHEAT.**—*Enterprise*, Oct. 2: Up to the present time only a small per cent. of this year's wheat production has been shipped from Healdsburg, the farmers generally preferring to hold in anticipation of higher prices. At the Granger's warehouse upward of 2,000 tons are now stored, the building being almost completely filled, almost the only space remaining being in the aisles. Bloom & Cohn have in their warehouse on the island about 800 tons. The wheat this year is much cleaner than that of last season, and therefore but a small proportion has had to be run through the fanning mills at either warehouse.

**WOOL.**—During the week past considerable wool has been brought to town, the result of the fall clip. In Healdsburg 18 and 20 cents has been paid this week; some are holding for an advance, but most producers are satisfied with present quotations and sell to local buyers. The revenue from wool this year will be greater in Sonoma county than that of any previous year.

**A CARP COMPANY.**—On the 15th of last May the Lenni Fish Propagating Company was incorporated in San Francisco, for the purpose of propagating carp, trout and other fish. The works of the company are located on Sonoma creek, and about \$7,000 have already been expended in the erection of buildings, etc. One pond contains two and one-half acres, in which are probably 40,000 carp.

**GRAPE.**—*Healdsburg Enterprise*: A considerable part of the production will be used up in local wineries, though the largest per cent. will be shipped to San Francisco. Buyers are up from the city securing all they can and paying from \$12 to \$20 per ton, according to variety. The yield of Flaming Tokays and some other foreign varieties will be far short this year, owing to injury done by the bot spells in the early stage of their development.

#### YOLO.

**ITEMS.**—*Democrat*, Oct. 2: Stubble burning has already commenced in many portions of the county. It is yet early, however, and no one, except those desiring to dry plow will destroy their feed for some time yet. There is a considerable quantity of wool arriving, but the buyers complain of its inferior quality. While good wool is in demand and commands a good price, the majority of the fall clip is so dirty that it is scarcely salable at any price. Most of the farmers are just now engaged in putting up straw for winter use. The practice of preserving each year a good supply of this article has been found to work so well that it has become a general custom among farmers. No one thinks of destroying their stubble now until he has provided himself with an abundant supply of straw.

#### WASHINGTON.

**SHIPPING GRAIN.**—*Walla Walla Union*, Sept. 27: All the warehouses at the depot are full of wheat, and great piles of it are on the outside platforms. There are many thousand tons at the depot awaiting shipment. During the week the number of trains running to Walla Walla was reduced to two a day. Even with that number the boats cannot take away the grain as fast as it is baled to Walla Walla. Good judges estimate that over one-third of the crop of Walla Walla valley will have to be held over until spring, while not a third of the product of Columbia and Whitman counties will be marketed this fall, owing to the low water in the Snake and the lack of means of transportation on the Columbia river.

**A GHASTLY JOKE.**—It is said that at an agricultural dinner which recently came off in England, at which the absence of tenant-farmers was the most conspicuous feature, the health of the farmers was drunk with some rather wry faces, but with curiously loud applause from the landlords round the table, one of whom, being the principal banker of the town, took upon himself to return thanks for the farmers, beginning his speech with the grim joke: "My lords and gentlemen, although you may not know it, I am really one of the largest farmers in the country." And so he was, for there was scarcely a man at the table who was not under his harrow and crusher. The thought arises whether something of this kind could not occur in this State.

**PERSONAL.**—The announcement is made that Mr. J. H. Nicholson, late of the Bank of California, has this day been admitted to a partnership in the bag and bagging business of E. Detrick & Co., which will be conducted under the same firm name and address as heretofore. Mr. Nicholson's recognized ability and his former acquaintance with the demands of the business, will give E. Detrick & Co., increased facilities for meeting the wants of their rapidly increasing trade and enable them to fill orders with still greater satisfaction to their patrons.

#### News in Brief.

A DAMAGING brush fire near Santa Cruz. GRANT will be in Chicago November 13th. A FISH-CULTURE ASSOCIATION has been formed in Chicago.

AT PITTSBURGH 150 tanners struck for an increase of wages.

COOPER the American forger has been captured in London.

YELLOW FEVER has taken a fresh start at Concordia, Miss.

THE situation in Eastern Roumelia is considered very critical.

GORTSCHAKOFF will visit Berlin for a conference with Bismarck.

THE disturbance in Eastern Roumelia is becoming a guerrilla war.

THE Hyde Park Bank, at Scranton, Pa., has made an assignment.

MOBILE has removed her quarantine restrictions against New Orleans.

A REUNION of survivors of Southern prisons took place at Toledo, O.

THE weather last week was as warm in New York as in midsummer.

A STEAMER from Europe brought to New York, Oct. 1st, \$440,000 in gold.

PRESIDENT HAYES and party were warmly received at Springfield, Ill.

THE report of the Russian victory over the Tekke Turcomans is confirmed.

ST. GOTHARD PASS, in Switzerland, is blocked with snow, suspending traffic.

DURING September the coinage of the U. S. Mints amounted to \$9,279,906.

THE Philadelphia Mint, during August, coined 1,808,050 silver dollars.

AN advance in freight rates from Chicago to New York will take effect Oct. 13th.

GEN. GRANT and party, en route to Yosemite, were warmly welcomed at Stockton.

THE Spanish government has sent 4,000 men to Cuba, and will soon send 4,500 more.

THE returns of the recent German elections indicate the success of the Conservatives.

IT is denied from Pittsburgh that a general strike of Trades Unions is contemplated.

BARON CHALICE will succeed Count Zichy as Austrian Ambassador at Constantinople.

TWENTY-FIVE important political trials will be held in St. Petersburg during October.

UP to Oct. 1st arrears of pension claims had been settled to the amount of \$20,734,507.

AN earthquake was felt at Oakland and other places around the bay on the morning of the 2d.

THE United States Assay Office at New York, Oct. 1st, paid out \$639,127 in specie.

THE capital stock of the Bank of California is to be reduced from \$5,000,000 to \$3,000,000.

HON. FRANCIS GILLETTE, ex-United States Senator, died at Hartford, Conn., Sept. 30th.

THE United States steamer *Tuscarora* has been ordered to leave San Francisco for Mazatlan.

THE Treasury purchased 239,000 ounces of silver bullion for the Philadelphia Mint, Oct. 1st.

ACCORDING to dispatches, the insurgents in Cuba are being worsted by the Government troops.

IN a fight between soldiers and desperadoes in Indian Territory, nine of the latter were killed.

BONDS amounting to \$28,000, stolen from the National bank of Baltimore in 1878, have been recovered.

SMITH, who stole bullion from the S. F. Mint, has been sentenced to four years in the State Prison.

THE industrial parade at Indianapolis was a great success, every branch of trade being represented.

SIXTY THOUSAND dollars in gold 20-franc pieces arrived at New York on the 2d inst. from France.

THE exports from the United States for the year ending August 31st exceeded the imports \$289,709,341.

YELLOW FEVER is abating somewhat at Memphis, and Nashville has raised its quarantine against that city.

UNITED STATES JUDGE DRUMMOND has decided to retire from the Bench on reaching his 70th year, Oct. 16th.

PROF. WISE, the aeronaut, ascended in a balloon from St. Louis Sept. 28th, and has not since been heard of.

THE Indian Salvador, who murdered Paul Rieger in Marin county, was hanged on the 2d inst. at San Rafael.

JOHN E. GREEN has been awarded \$15,833 for the loss of a leg in the Old Colony railroad disaster in Massachusetts.

MAJOR C. H. HEMPFEST, formerly Governor Bigler's Private Secretary, died in Salt Lake, Sunday, and was buried yesterday.

No further news is received from the scene of the Thornburgh disaster in Colorado, but troops are hastening to the relief of the corralled soldiers.

A DETERMINED attempt is being made in Washington Territory to recapture the escaped Perkins murderers—one of them having already been killed by officers.

THE Western Union Telegraph Company has made another reduction in its tariff, to take effect Nov. 1st, rates from San Francisco to Eastern cities will be \$2.

ANOTHER disaster to the Government troops is reported from Colorado—Major Thornburgh's command having been ambuscaded on Milk river by Ute Indians and suffering heavy loss, the commander of the expedition being among the slain. Active preparations are being made to capture the Indians.





### The Dinner of Herbs Where Love Is.

A good wife stood by her casement brown,  
And mused through her falling tears,  
Of the endless round of a work-a-day life,  
And its dun and weary years;  
And she sighed, "Ah, me! life's songs and flowers  
Are never for such as I;  
But through verdureless meads and moss-grown springs  
My pathway ever must lie."

And lo! from over the brow of the hill,  
Their sweet faces kissed by the sun,  
To that low, brown house, by the tasseled pine,  
A troop of children run.  
They cling to her neck, they climb on her knee,  
They rehearse all the sports of the day;  
And their childish troubles they pour in her ear,  
Sure that mother will charm them away.

Ah! what are the songs and blossoms of life  
But its garlands of girls and boys?  
And no hours are barren, no homes unblest,  
That number these priceless joys.  
Refreshed she stoops for her burden again,  
And lo! it has grown light;  
It rose like the lark that spurneth the earth,  
And, singing, soars from our sight.

She stood again by that casement brown,  
As the setting sun gilded the eaves,  
And the farmer, a weary come toiling home,  
With his fragrant, burdened sheaves;  
But in the glow of her radiant face,  
All forgotten were hours of care;  
For he said, "Toll is sweet, when those we love  
The fruits of our labor share."

### Fancy Work.

[Written for the RURAL PRESS by NORMA ROBINSON.]

Few subjects are of more absorbing interest to womankind in general than fancy work. It is only exceeded by the all powerful topic of dress, which, being of more ancient origin, is naturally entitled to the first consideration by the daughters of Eve.

Now, I have no intention of enumerating and giving directions for making all sorts of beautiful and useless articles for the decoration of home and person, with absolutely no "expense at all," and a "very small amount of time." On the contrary, my ideas will be very abstract indeed.

Who first invented fancy work is, and will ever be a mystery, and fortunately that fact is not essential to our happiness. Certain it is, however, that it came into fashion at a very early time, since the oldest histories, both sacred and profane, mention embroidery. We can scarcely call it a relic of barbarism, though more extensively practiced during the Dark Ages than at any later period. Women were even less cultured than men, and having no intellectual resources, were obliged to find congenial occupation during their lords' absences, in those rude and warlike times. The amount of hand-wrought tapestry done was truly wonderful. In some cases, nearly a lifetime was spent in the execution of a single design. It is evident that many artistic minds drudged away contentedly at this work, showing in the only way they knew the historical events of the times, scenes in sacred history as well as in ancient mythology and allegorical representations. Besides this, elegant laces of intricate and elaborate patterns were made. Under the circumstances, it was the best thing they could do. We feel like pitying them, though they were doubtless as happy as we, with our enlarged opportunities for intellectual pursuits.

But there are women to-day who emulate their industry in doing fancy work; who tie their souls down to the thousand and one ways of this killing time, and with whom a chair tidy, made of a coffee bag and red yarn, is a thing of beauty and worth hours of devotion; while the throbs of a nation's pulse and the welfare or woe of humanity is unheeded, though the knowledge is brought daily to our doors by the postman. Indeed, they have no time for such thoughts when useless and expensive trifles are to be fabricated.

I think we all know the woman of one idea, and that one fancy work. Her chief aim is to be continually learning something new in that line, even to the extent of annoying all her acquaintances for the loan of patterns. Her house is so decorated with articles for every unimaginable purpose, that it looks perfectly ragged, and everybody is made uncomfortable lest something should be disarranged. We may be sure that where so much time is devoted to trifles, other things more important are woefully neglected.

On the other hand, there is the modern Mrs. Jellyby, who eschews fancy work as a vice, and devotes herself to charitable societies or the rights of women. Thus we see that extreme ideas are entertained upon this, as well as upon the less important topics of religion, politics, etc. Still there must be a pleasing medium. When brain or body need relief from study or household cares, there is, perhaps, no relaxation so charming as fancy work; and if the work be useful and ornamental, we can feel that time so occupied is not misspent. As a compliment to its votaries, I will say in conclusion, that the

women who employ their leisure in this way, do not clamor for the right of suffrage or decry the injustice of "taxation without representation." So if it keeps us out of mischief, let us indulge such a taste by all manner of means.  
San Francisco, Sept. 30th, 1879.

### "Out-door Schools."

EDITORS PRESS:—A San Francisco daily (*Bulletin*) published on September 17th an editorial under the above heading. This fact alone speaks volumes, and to read the article is wonderfully refreshing and invigorating after so much literary "spice" which is constantly being dealt out with a liberal hand to a morally dyspeptic community. This is presumption, doubtless, but what is the inference when the San Francisco papers, with but few exceptions, vie with each other in the display of the muscular ability they manifest in wielding the muck rake of society, spending brains, energy and money in accumulating from all parts of the world those items which are devoured only too eagerly by old and young.

The wish has before been expressed that the RURAL PRESS would devote more space to the topics of the day, and thus be more than ever welcome in the home circles of California. Not in any way to encroach upon its chief aim, which is in the interests of agriculture generally, but, say, to enlarge the column of "News in Brief" or give an editorial on any great social or political question which may be agitating the public mind. All honor to the RURAL for its manly and outspoken "Lay Sermon," of August 30th, on the De Young-Kalloch episode. An article of this kind appearing in a periodical which ever retains its high standard of moral excellence cannot fail to have weight.

To return to our subject. Says the *Bulletin*: "The first form of this new movement was in the establishment of classes of persons, settled widely apart, who, being interested in the same kind of work or investigation (as, for instance, botany, or ceramics, or antiquities, or entomology), would be willing to appoint a secretary and help each other by correspondence." There's the idea, isn't it worth carrying out, at least as an experiment? To quote again from the same—this will strike home: "The fundamental idea of the summer-school plan is to have a number of people, old and young, camp out in some beautiful spot for their summer holiday, and" [the italics are not in the original], "instead of passing all their time in idling, flirting and making atrocious puns (which is the failing of campers generally), to have them devote some hours each day to study, research, listening to lectures by competent persons, and reading according to some prearranged course." This is pertinent, and may perhaps be considered impertinent also, but is it not true?

Let us suppose a reporter were within earshot of one of these camping parties. Would a verbatim report of a day's conversation be particularly edifying, or the reverse? Even the balmy zephyrs of California cannot be sufficiently stimulating to draw a never-ending stream of witticisms, or even "atrocious puns." All we desire is that there may be some variety in recreation, that some campers—they need not of necessity be graduates or University students—will next summer break through the orthodox round of amusement and organize a summer school for the study of some branch of natural history, or, if their tastes were so inclined, for the study of any of the arts and sciences, or of the literature of some particular people or period.

What is more pitiable than to see or hear a number of persons torturing themselves in the endeavor to outdo each other in being funny? As a diversion it is well enough, and, indeed, necessary, but the pleasurable excitement of making a pun, or laughing at a pun somebody else has made, is ephemeral. While to carry out some of the suggestions in the article alluded to would be a source of lasting pleasure, the remembrance of which would remain with us as long as memory itself.  
LEONARD COATES.  
Yountville, Napa Co., Sept. 22d, 1879.

ABOUT BELLS.—In making large bells, loudness rather than pitch is the object, as the sound can be conveyed to a much further extent. This accounts for the enormous weight of some of the largest bells. St. Paul's, London, weighs 13,000 pounds, the bell of Antwerp, 16,000 pounds; Oxford, 17,000 pounds; the bell at Rome, 19,000 pounds; Mechlin, 20,000 pounds; Bruges, 23,000 pounds; York, 24,000 pounds; Cologne, 25,000 pounds; Montreal, 29,000 pounds; Erfurt, 30,000 pounds; "Big Ben," at the House of Parliament, 31,000 pounds; Sens, 34,000 pounds; Vienna, 40,000 pounds; Novgorod, 69,000 pounds; Pekin, 139,000 pounds; Moscow, 141,000 pounds. But, as yet, the greatest bell ever known is another famous Moscow bell, which was never rung. It was cast by the order of the Empress Anne in 1653. It lies broken on the ground, and is estimated to weigh 443,772 pounds. It is 19 feet high and measures around the margin 64 feet.

THE temperance men are opposed to the use of kerosene oil on railways, because it makes the locomotive's head-light.

### The Forgetful Husband.

"Oh, dear! what shall I do? The hoop has burst off my wash-tub, and my suds are all over the floor!" said Mrs. Alden, in a tone of despondency, to her husband, as he came in to wash his hands at the sink, after oiling his new horse-rake.

"That is bad, Jennie. You will have to let your washing go till to-morrow; then you can borrow Mrs. Selden's tub."

"But this will all fall to pieces if it stands; and we are expecting company to-morrow."

"I can't help it; I can't stop the work to go off with it now. You must make hay when the sun shines if you do at all. Can't you tie it up, so that it will do to-day? I should think you might."

"Perhaps so, if you will help me. What can I take?"

"Oh, any thing for this time; but really I ought not to stop a minute. Where is your clothes-line?"

"The colored clothes are on it, to dry."

"Hang them on the fence and let's have it quick."

So Mrs. Alden trotted out and moved her clothes and took the line down, while Mr. Alden stood in the door and whistled impatiently.

"Do mop up this water, Jennie. How can you stand in such a puddle? There, I forgot to get you a new mop-handle, but you can make it go to-day, can't you?"

"I suppose I shall have to. You promised to get one three weeks ago, when you broke this."

"I know I did, but I never think of it—a man has so many things to see to. There, that will go this week; it doesn't leak much. I don't know what made it break."

"The hoop rusted out. The old tub has done good service; it has been in use fifteen years."

"There! what did you leave the washboard there for? I have broken it all to pieces."

"It is worn out and rotten. I wish you would get me a new one. I can never tinker it up again."

"Rub your clothes with your hands; my mother always did, and she never had a washboard in her life."

Alden marched off to the hay-field, before he met another catastrophe to take up his time.

He was hardly out of sight before a tin peddler's cart stopped at the door, containing a collection of all articles used in a family, from wash-tubs down to brooms, mops and pins.

"Anything in the way of trade, Mrs. Alden, to-day?" asked the man.

"No, I think not. My husband does not like to buy of peddlers. He says I always get cheated."

"Have you not as good a right to have suitable apparatus to work with as he has? He has a new horse-rake and a hay-tedder, and his wife is washing in a tub tied up with a rope, and a wash-board that looks as if Noah's wife brought it out of the ark, and a leaky water-pail; a dipper without a handle; a broken mop-handle—bless me! Mrs. Alden! What is the use? You had more money when you married than he had, and I would have tools to work with that were comfortable, to say the least. He never stops to think what a thing costs, if he needs it, or if it will make his work easier. It tires you more to get along with these things than it does to do your work."

Mrs. Alden sat down and looked the property over. It was ridiculous to get along in this way. The peddler was right; she had more money than her husband when they started life, and she had worked harder than ever he had. She had managed every way to get along and he never thought she needed anything new or convenient. Her setting out was almost worn out and nothing was ever replaced. "You must make it do; it costs everything to live!"—and so she had dragged along year after year, and things wore out and were not replaced. A big lump rose in her throat as she sat there thinking.

"What do you ask for your wash-tubs?" she inquired at length.

"Two dollars for the large ones; a dollar and a quarter for the next size. Mop-handles for a quarter, wash-boards a quarter, dippers 20 cents, brooms 30."

"Hand me down two wash-tubs, if you please—one of each size; a zinc wash-board, too."

"Yes; and a pail and dipper, too? I would have them."

And she did have them, and sundry other necessary things, amounting in all to the little sum of \$12. She paid in hatter, such as feathers, rags, eggs, dried apples and hutter, and went to work with renewed courage; but she knew that her husband would growl at the outlay and expect a regular tempest at dinner.

She was not disappointed. But she had got the things and was glad of it and couldn't feel very bad. Alden opened his eyes in astonishment.

"You paid twice what the things are worth. I could have bought them cheaper. We could have got along a while longer."

"I suppose I have as good a right to judge of what I need to do my work as you have to get things to make your work easy; and I made up my mind to-day that when I needed anything I should have it hereafter. You know that every article I bought to-day was actually needed in the house. You have said time and again you would get them, but you never remember it. It is a hard place for a woman to be placed

in, to have to do her work and nothing convenient to do it with. It is like the ancient Israelites, compelled to make bricks without straw, and I am not going to do it any longer."

"All owing to the hoop bursting off the wash-tub to-day."

"Yes, that was the last feather that broke the camel's back; that and the new horse-rake came too near together. I could not avoid contrasting your conveniences with mine; and you can see yourself how it stood. You have every new machine that is intended to make farm work easy, and I have nothing at all."

Mr. Alden said no more, but ate his dinner in silence, and the hired men exchanged significant glances at each other. They had thought and spoken of the patience which the little woman had shown in working at such a disadvantage, and always trying to make the best of what she had, and they were heartily glad that she had at last made a protest against the injustice.

After the day's work was done, Alden drove his team down to the village, and when he came back he brought a new stove for the kitchen, a new pump for the cistern, and a butter-worker for the dairy; and his wife has, since that washing-day, found that her rough places have been smoothed in a most satisfactory manner. Her good man had never thought about it. He did not mean to be unjust,—but he didn't think!

### How Two Girls Tried Farming.

The unexpected success of two valiant damsels, the one a housemaid in a country family, and the other a teacher in a district school, in a bold attempt to carry on a farm for themselves, is related in a lively story by Dorothea and Alice Shepherd, published by D. Lothrop & Co.

It is said to be a literal narrative of facts, and these facts are summarized by the reviewer of the New York *Tribune*. Ever since they were tiny school-girls they had built many Spanish castles in common, in which they lived for the most part when together, as they neither of them had any other home which could be called their own. But the time came when, instead of spinning out aerial romances, they spent their leisure hours in scolding over their lot. They were neither communists nor destructives; they claimed no right to other people's property; but they did want a home; wanted to be their own mistresses; wanted some means of living that should not depend on the caprices of others. As good luck would have it, a maiden sister of Louise, one of the fair malcontents, died just in the nick of time, leaving her the sum of nearly a \$1,000. This she insisted on sharing with her friend, and the two romantic spirits at once formed the "idyllic, pastoral, holiday, picnic plan" of purchasing a piece of land in the West. They selected for the experiment a scraggy lot of 35 acres in Michigan, which they were able to obtain of the non-resident owner at a moderate price, and soon set about making the necessary improvements. It was a wild and unpromising bit of unfriendly ground. The skeleton of a fence enclosed the narrow, hilly acres. The surface presented a forbidding show of stubble-ground and rough turf, while the distant hill-tops were covered with a somber growth of fall mulleins. There was not a sprig of clover on the place, not an orchard tree, nor a reminiscence of a garden, only an old brown house and barn. But the prophetic eye of faith beheld the desert converted into a paradise. Every stone picked up, every fence-corner cleared, every piece of thorough plowing, every rod of fence built, every foot of trellis, every rose-bush and grapevine and shade-tree planted, which appeared in the dim perspective of the future, served to complete the fair idyllic picture of the early hope. Awaiting the fulfillment of the blissful vision, the two maidens took service in the families of well-to-do farmers in the neighborhood, as a sort of apprenticeship to their future task. They would not stay in the house, but insisted on taking part in the field labors with the men. In the following spring they went to work with a will on their own land. Their wages in the winter had furnished them with money beforehand, which enabled them to stock the little farm with several head of poultry, a pretty pair of Poland pigs, a good-looking horse, and a motherly cow, together with a supply of clover-seed, and a few tools for daily use on the farm. The housekeeping was on the smallest scale. A great rug, which the writer had braided was the only carpet for four years. The window-shades were of newspapers, scalloped, adorned with much elaborate scissors-work. There were three antiquated chairs, presented by a neighbor, cushioned and draped with some old gown skirts, and a light stand in place of a table. The service consisted of three plates and a platter, as many knives and forks, cups and saucers. The only other in-door possessions were some odd kettles, a score of shining new milk-pans, a couple of new cedar pails, a broom, a small pile of books in blue and gold, a trunk-full of old but precious magazines, an etching of Evangeline, and a splendid engraving of Longfellow sitting in a rocking-chair. The first evening was a strange experience. After everything was done, and the two girls sat down together, the silence was oppressive. One laughed and the other cried. They resolved, however, to subscribe for a newspaper, and after that everything began to do well. Their friendly neighbor plowed the fields they had devoted to clover, which they harrowed over and over again, and then profusely sowed with clover and timothy, red-top, blue grass and



orchard grass. The liberal seeding was richly rewarded. The pretty trefoil came up everywhere like wheat, or a lettuce bed; the grasses were fine, thick and sweet; and the big farmers of a hundred acres came to marvel at the clover in the little meadows, and cut samples of the orchard grass to take away for show. Even the big hill, whose barren sandy top everybody said could not be seeded down, was covered to the top with tenderest grasses and the sweetest clovers, and often on a summer morning the good horse could be seen standing there, high against the clear northern sky, "serene with his satisfaction over his dewy breakfast," a statue to the enterprise and spunk of the two young ladies. While waiting for the month of May and corn planting, they shouldered their axes and dinner pails, and went over to their bit of forest to get up the year's wood, after the manner of the model householder. The summer's work of the bucolic maidens succeeded to a charm. Nor was the tasks of winter without an ample recompense. The sense of independence, which comes as the lot of thrift and industry, was in itself the highest enjoyment. They had avoided all debt save that which in due time the well-fattened Polands would cancel. The meek cow, feeding through the autumn on golden pumpkins, enabled them with her fragrant butter to fill the winter flour barrel. A surplus of potatoes purchases a store of groceries. Eggs week by week supply an abundance of little items. A "lovely day's work" in picking apples on shares in the orchard of a neighbor had filled the tiny bin with choice fruit. During their brief leisure various pieces of sewing provide hay for their sturdy roan, who would have turned out, we are sorry to say, a decidedly vicious beast, but for the skill and pluck of the younger maiden. Spring finds them not in debt, and more hopeful than ever of their plans. Thus, year after year the brave girls lived on, "tugging away at great labors," but always cheerful in the thought that they have lived comfortably so long, "cooing away to themselves that they are not in debt, and that their plans hid fair of success." Indeed the time had already come. The once despised little farm is now a green, grassy, leafy nest, with its gardens and its fruit-yards, its rosy clover meadows, and its rich upland pastures. The success of the farm is almost surpassed by the charm of the record. It shows a touch of refinement, and a degree of literary skill no less uncommon than the enterprise which has converted a bleak hill-top of Michigan into a smiling garden.

### Chaff.

IF YOU desire to make a friend of her for life, pretend to mistake her for her daughter.

THE latest case of singularity of conduct reported is that of a man in Lowell, who "died" for the benefit of his "hairs."

"How doth the little busy bee?" Very indifferently we should imagine, seeing how often it is to be found in the cells.

AN INGENIOUS quack is trying to prove that Absalom must have used some of his "restorative," else he could not have had such long hair.

THAT father understood human nature who said: "If you want your boy to stay home don't bear too hard on the grindstone when he turns the crank."

WHENEVER I see a real handsum woman engaged in the wimmen's rights bizzness, I am a going to take off mi hat and jine the procession. See if I don't.

TONGUE cannot tell the words or express the astonishment of the crippled soldier in Connecticut who awoke to find that his wife was using his wooden leg to pound the beefsteak for breakfast.

"No, I CAN'T stay," replied a gentleman who was invited to stay all night at the house of a friend; "before morning my wife would be out with a lantern, like Diogenes, hunting for an honest man."

A LITTLE DISCOVERY.—Observing boy: "Ma, Aunt Dora has been eating the honey." Astonished mother: "How do you know, my dear?" Son: "Cause I heard Mr. Smith say he wanted to sip the honey from her lips."

"MOTHER, why does pa call you honey?" "Because, my dear, he loves me." "No, ma, that isn't it." "What is it, then?" "I know." "Well, what is it?" "Why, it's because you have so much comb in your head, that's why."

"My dear," said a smiling spouse to her other half a morning or two since, "I'm going a-shopping; I want a little change." "Pooh!" responded the ungallant man, "that would be no change at all; you go shopping every day."

A NOBLEMAN ventured, in a moment of conviviality at the Duke of Wellington's table, to put this question to him: "Allow me to ask, as we are all friends here, if you were not surprised at Waterloo?" To which the Duke replied: "No; but I am now."

A PARISIAN father-in-law was complaining that his daughter's husband knew nothing about gambling, when a friend interrupted him, saying: "Why, that's not a fault. It is a virtue." "But, you see," said the father-in-law, "he gambles all the same."

INSTRUCTION IN ASTRONOMY.—"And now, young gentlemen, which of you can tell me the name of the greatest of the planets—the champion planet, so to speak—of our solar system?" Student—"I can, sir. It's Saturn." "And how's that, pray?" "Why, because he carries the belt."

## Young Folks' Column.

### Our Puzzle Box.

#### Numerical Enigma.

I am composed of thirteen letters.  
My 2, 6 is printing type confusedly mixed.  
My 7, 1, 1 is an industrious little insect.  
My 9, 4, 13 is the aggregate amount.  
My 5, 8, 11 is to proceed rapidly.  
My 7, 12, 11 is a cake.  
My 2, 10, 11 is a witty saying.  
My 2, 10, 3, 3 is to draw.  
My 2, 6, 11 is a small pointed instrument.  
My 9, 1, 1 is to behold.  
My 7, 6, 11 is a receptacle for grain and other articles.  
My whole is the Latin motto of a great nation.

PHOENIX.

#### Letter Changes.

1. Change the final of to silence and get to strip.
2. Change the final of a kind of tea and get a plant.
3. Change the final of a peculiar mode of expression and get a fool.
4. Change the final of a flower and get a tree.
5. Change the final of to clamor and get a bird.
6. Change the final of to push and get a set down.

A. E. D.

#### Letter Arithmetic.

The answer is a botanical name.

NOTIRM

ACUD

NOTIRM

OURMAIM

RNADIRM

DUTACNM

RRUNCCUNRM

VERONK.

#### Poetical Jumble.

Down stepping, the twilight purple,  
The day is weary closing out;  
Gold and crimson which came in gown,  
"Gray in somber hut steals away."

Twilight mystical! twilight beautiful!  
Sway her subtle holds but short;  
Twilight beautiful! mystical twilight!  
Part day of all the holiest.

UNCLE CLAUDE.

#### Hidden Poets.

1. All good men agree that W. O. P. Raed deserves the election.
2. Your attention is taken up by the Spanish Elle, your ideal.
3. Drink weakens ideas of the mind as well as strength of the body.
4. Goshen's tone of voice was distinctly audible.
5. God speed! we must the wall erect.
6. "Hem!" answered farmer Brown.

M. A. L.

#### Answers to Last Puzzles.

NUMERICAL ENIGMA.—"All the world is a stage, and men and women merely players."

HIDDEN PLANTS AND TREES.—1, Moss; 2, Ash; 3, Oak; 4, Pine; 5, Apple; 6, Pear; 7, Maple; 8, Pink.

DIAMOND PUZZLE—

F  
FEE  
FEARS  
ERR  
S

CHARADE.—Poultry (Poll-tray).

METAGRAM.—Cah, dab, gab, kah, lab, Mab, nab, rab, tab

### The Story of Chub.

Everybody about the depot knew Chub, the basket boy, for he was always limping through the rooms crying, "Apples! Apples!—peanuts—10 cents a quart! Apples—two for a penny! Right this way, Mister, for your fresh-baked peanuts and ripe red apples!"

Where Chub came from, or to whom he belonged, was a mystery. He was always at his post from early morning till nine at night. Then he would disappear, but only to return punctually the next day.

He wasn't at all communicative and said but little to anyone in the way of conversation. Yet everybody liked him; his pale face and withered limb were sure to appeal to their sympathies. I used to like him myself, and it always pleased me to see him get a good day's custom.

But it's over a year now since Chub sold apples and peanuts at our depot, and I miss him yet. There is a real lonesome place over in the corner; here he used to sit and eat his lunch at noontime. It was his favorite seat, and it never seems filled now.

I often hear our agents and Simons remark, when they glance in that direction: "It seems kind of lonesome not to see Chub around."

I remember, as if it were but yesterday, the lady coming in leading that little witch with a blue silk bonnet crowning her curls. It was the sweetest baby I ever saw. As she ran about the depot laughing and singing, she happened to spy Chub limping his rounds. She ran up to him, and putting out her tiny hand touched his crutch.

"Oh, oo poor 'ame boy," she cooed, "I've dot a tiss for oo."

Chub's face fairly glowed with delight as he bent his head to receive the kiss from the rosebud lips. He reached her a handful of peanuts, which she took and placed in her little sack pocket.

"I've love oo, poor 'ame boy," she said, softly, "tause oo was dood to me."

"Come here, Birdie," called the lady.

"No, mamma, no! I've doing with poor 'ame boy," she said, resolutely, sticking close to Chub.

But the lady came and took her away, and Chub hobbled into the other room.

The lady was busy with her book, and didn't notice her child slip out, but I did, and every now and then caught stray glimpses of the little figure as she ran up and down the platform.

By and by I heard a whistle. 'Twas the fast

mail going up, but it don't stop. I thought of the baby, and so did her mother.

"Birdie," she called out, but no Birdie answered. Just then I glanced out, and there stood the little one in the silk bonnet right upon the track.

I fairly stopped breathing from very terror. The mother ran forward, shrieking, "Will no one save her? Will no one save her?"

"Yes," shouted a voice. I saw Chub limp wildly out and snatch the little form from its perilous position, and throw it on one side just as the train thundered by.

The baby was saved; but on the track was a crushed and mangled form. They lifted him sadly, and laying him down upon one of the seats, went for help.

It was too late, for he only opened his eyes once and whispered, "Is she safe?"

They brought her to him, but he did not heed. She stroked the still, white face with her tiny hand, and cooed in sweet baby fashion as she looked around upon the crowd:

"Poor 'ame boy done fast seep! done fast seep!"

## GOOD HEALTH.

RENEWING THE EYE.—From recent experiments made by M. Philipeaux, a French oculist, it appears that the optic organ has the same capabilities of reconstruction as the bones. M. Philipeaux undertook to discover whether on completely emptying the eyes of young rabbits and guinea-pigs, the vitreous humor would be reorganized and whether even the crystalline would be reproduced. With this view he conducted his operations, always, of course, taking care not to touch the crystalline capsule, for experience has shown that in order for an organ to regenerate, a part of it must be left in its place. It seems that a month after the mutilation was made, M. Philipeaux was able to state that the eyes which had been emptied, were filled afresh, and that the crystalline was reconstituted. He operated on 24 animals, and in every case the mutilated eye revived. How far similar results would be obtainable with the human eye does not appear. If the same regenerating power is found to be general, a decided improvement may be possible in the treatment of certain injuries and diseases of the eye.

RAISINS AS A RECUPERATOR.—It is an old story that of the Frenchman who declined to eat raisins or grapes, because he disliked taking his wine in the form of pills; but now comes Sir William Gull, Queen Victoria's physician, who declares it better, in case of fatigue from overwork, to eat raisins than resort to alcohol. In his testimony before the Lord's Commission in London, a few months ago, he affirmed "that instead of flying to alcohol, as many people do when exhausted, they might very well drink water, or they might very well take food; and they would be very much better without the alcohol." He added, as to the form of food he himself resorts to, "in case of fatigue from overwork, I would say that if I am thus fatigued, my food is very simple; I eat the raisins instead of taking the wine. For 30 years I have had large experience in this practice. I have recommended it to my personal friends. It is a limited experience, but I believe it is very good and true experience."

ANTIDOTE TO POISON IVY.—Dr. J. M. Ward, in the *Medical Record*, makes another addition to the already extensive list of remedies for poisoning by *Rhus radicans*, or "poison ivy." He recommends the profession to use, in all cases of poisoning by this plant, Labarraque's solution of chloride of soda. "The acid poison," he remarks, "requires an alkaline antidote, and this solution meets the indication fully. When the skin is unbroken, it may be used clear three or four times a day; or, in other cases, diluted with from three to six parts of water. After giving this remedy a trial, no one will be disposed to try anything else. It is one of the most valuable external agents known to the profession, and yet seldom appreciated and but rarely employed. It will sustain its reputation as a local application in erysipelas, burns and scalds."

A NEW WAY TO TREAT DIPHTHERIA.—Quite a discovery in the treatment of diphtheria has been made here. A young man, whose arm had been amputated, was attacked with diphtheria before healing took place, and instead of the matter incident to that disease being deposited in the throat, the greater portion appeared on the wounded arm, and the diphtheria was very light and easily managed. Dr. Davis, of Marquette, profited by this, and in his next case of diphtheria blistered his patient's chest, and on this blistered part the chief deposits appeared. This was also an easy case of the disease. The theory of Dr. Davis is that diphtheria usually appears in the throat because of the thinner lining of the throat. Hence, when the blister breaks the skin upon any other part of the body, the disease appears there.—*Minnesota Letter*.

A CAUSE OF YELLOW FEVER IN MEMPHIS.—It has been suggested that one of the causes of yellow fever in Memphis is its wood pavements. There are many miles of it in a state of decay—indeed, so rotten and honey-combed as to make them cesspools for the retention of street filth, and where noxious gases are generated that keep the air foul in hot weather by night and by day.

## DOMESTIC ECONOMY.

HINTS.—"Another boarding-house busted up, I see," sighed a venerable Detroit landlady, as she laid down her paper. "Well it must have been extravagance on the table. That's what bankrupts seven out of ten, and even then the boarders are crying 'hash!' and complaining of poor meals. Now I run a boarding-house for 22 years, and I made money and heard no complaints. How did I do it? Why, its all in planning. For instance, a neck piece of mutton can be cut to look like a rib roast, and a little extra fire makes it just as tender. Lawd save you? I've been complimented a thousand times in my selection of choice spring lamb when the meat was mutton four years old, and the toughest part at that! The idea of spring chicken on a boarding-house table is absurd—aye! almost wicked. In my palmy days I could take a tough old hen, pound the body with the potato-masher for 10 minutes, and set before my boarders a feast to make every heart glad. Now I'll venture that there aren't 10 landladies in this city who can bake a pig's head and slice off the meat in a manner to make everybody believe that he has the choicest cut in a pig's body, and its a wonder to me that there aren't more failures. Lots of landladies buy nice, fresh butter, and thus tempt a man to eat five or six biscuits or half a loaf of bread. What economy! I always had my nice butter on the table at breakfast, when we had little but toast, and the boarders got along on old butter the other two meals. It is all in the planning—all in the planning. I used to have beefsteak every morning. Three mornings in the week I bought sirloin, which is very nice, you know, and the other four mornings I bought neck pieces, and rubbed the case-knives over the grindstone. Give a boarder a sharp knife and a tough steak, and he'll never make a complaint—never. He'll put the blame on his teeth, and the more steak he leaves on his plate the more rabbit pie you have for dinner."—*Detroit Free Press*.

BAKED LIVER.—Calves' or beef liver, laid in cold water for half an hour, dried on a towel, skinned and the sinews pulled out as far as possible; then cut in thin slices, about one-half inch thick; give them a slight dusting with flour all around, bake on a griddle in hissing, hot browned butter, on both sides, not longer than five minutes; then salt and season with spice. Liver becomes hard and indigestible if salted before baking; also, if baked over a slow fire. If no butter can be had, small-cut pieces of fresh bacon, sprinkled between the slices of liver, will supply the necessary fat, and, roasted to a light brown, be an agreeable addition to the liver. Those who like onion, can lay some sliced onion between and roast slightly. Never put a cover over liver, as it will become hard. It ought to be dish on a heated plate, and eaten immediately after baking.

WASHING SILK HANDKERCHIEFS.—The *Detroit Free Press* says that "in order to properly wash colored silk handkerchiefs, make good suds in lukewarm water, in which a little bit of carbonate of ammonia has been dissolved; rub the handkerchiefs lightly in the hands till all the spots have disappeared. Then rinse them in lukewarm water, and squeeze them as dry as possible. Take hold of the two corners and shake and snap each one for a few minutes. Roll in a soft towel, lightly, laying the handkerchief flat on the towel at first, squeeze tightly, and iron at once."

HAM BALLS.—Beat six eggs until very light, and add flour gradually until you have a batter stiff enough to admit of being made into balls. Prepare some cold boiled ham, fat and lean mixed, by chopping it up very fine; then flour it, and mix with the batter. Drop the balls into melted lard that is boiling hot; fry, and then drain them on a sieve till free from the adhesion of any grease. This is a nice way to use ham after it has been sent to table several days and a good deal has been cut from joint, so that it no longer makes a very sightly dish.

INFLUENCES OF THE SHAFTER PREMIUMS.—The *Marin Journal* says: By the way does any one ever calculate the amount of good that Judge Shafter is doing by his cooking prizes in inspiring girls to learn cooking. One little girl of Marin county, 12 years old, makes all the bread for her mother's family, and has ever since last year.

LEMON JUMBLES.—One pound of flour, one pound of sugar, five-eighths of a pound of butter, four eggs, the juice and grated rind of a lemon, and as little flour as will enable you to make the whole into small cakes with your hands. Bake quick.

FRUIT PUDDING.—One cup molasses, one cup sweet milk, one of suet, chopped fine, or a half cup butter, one of raisins, half cup currants, two and a half cups flour, half teaspoon soda; mix well and spice to taste, and steam two hours.

SPICED CORN BEEF.—To ten pounds beef take two cups salt, two cups molasses, two table-spoons of pulverized saltpeter, one tablespoon ground pepper, one of cloves; rub well into the beef; turn every day; will be ready for use in ten days.





DEWEY &amp; CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 202 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line..... .25 .80 \$2.00 \$ 6.00  
Half inch (1 square).....\$1.00 \$3.00 7.50 24.00  
One inch.....2.00 5.00 14.00 40.00

The Scientific Press Patent Agency.

DEWEY &amp; CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, October 11, 1879.

## TABLE OF CONTENTS.

**EDITORIALS.**—Woolen Refuse as Manure; Season and Soil; Burying Grapes Alive; Poland-China Swine, 225. The Week; Our Amusements; The Swine Plague, 232. A Visit to Baden Farm; The Miwok Indians, 233.

**ILLUSTRATIONS.**—Model Herd of Fine Bred Poland-China Swine of the Black Beauty Strain, 225. Acorn Granaries of the Miwok Indians, 233.

**CORRESPONDENCE.**—Irrigation Appliances at Stockton Fair; Seed not True to Name; Pyrethrum Cineraria Folium; Agriculture in Western Nevada, 226-227. Hard Times and High Rates of Interest—No. 3, 228.

**ENTOMOLOGICAL.**—The Matter of Diet and Diabrotica; An Aphid on Chrysanthemums, 232.

**THE FIELD.**—Sorghum Sugar, 227.

**THE APIARY.**—Honey Sage as Bee Forage in Dry Climates; Los Angeles Notes, 227-234.

**PATRONS OF HUSBANDRY.**—Meeting of the State Grange, 228.

**AGRICULTURAL NOTES** from the various counties of California, 228-229.

**NEWS IN BRIEF** on page 229 and other pages.

**HOME CIRCLE.**—The Dinner of Herbs Where Love Is (poetry); Fancy Work; "Out-door School"; About Bells; The Forgetful Husband; How Two Girls Tried Farming; Cheff, 230-231.

**YOUNG FOLKS' COLUMN.**—Our Puzzle Box; The Story of Chub, 231.

**GOOD HEALTH.**—Renewing the Eye; Raisins as a Recuperator; Antidote to Poison Ivy; A New Way to Treat Diphtheria; A Cause of Yellow Fever in Memphis, 231.

**DOMESTIC ECONOMY.**—Hints; Baked Liver; Washing Silk Handkerchiefs; Ham Balls; Influence of the Shafter Premiums; Lemon Jumbles; Fruit Pudding; Spiced Corn Beef, 231.

**PISCICULTURE.**—Poisonous Fishes, 234.

**THE STABLE.**—Longevity of the Percheron-Normans, 234.

**MISCELLANEOUS.**—To the Pole in Balloons; Testing Machines for Fabrics; The Sensitive Plant Under Anesthetics; Tehuantepec Canal; Prickly-Pear Fibers for Matting, Etc.; Giving a New Edge to Razors, 234. Sonoma and Marin District Fair; Premiums Awarded at Contra Costa, Monterey and Mendocino County Fairs, 236.

## Business Announcements.

Riding Saw Machine, W. W. Bostwick & Co., Cincinnati, O.  
Plants Grown, J. S. Collins, Moorestown, N. J.

## The Week.

The wild geese and other weather prophets who have been foretelling early rains have hit the mark—at least so far as the first showers go, for there has been a general rain, varying from a few hundredths up to an inch, according to locality. The storm began in the most approved style—that is, the sands of Arizona and the rich soils of the southern coast counties were first moistened; after that the storm crept upward until it drenched the region around the bay, laid the dust in the interior valleys, and then did active work in the northern tier of counties. On the mountains there was a flurry of snow; and, all in all, the manifestation may be taken as a promise of winter.

So far as we have heard, the downpour was not heavy enough to do much damage either to exposed fruit or grain. The dry soil drank the libation, and the dry air which has followed the storm has wiped the drops which fell in unwelcome places, as on grapes and grain sacks. The fall was heavy enough to wash the dust from late apples and pears, and to dash sand on the strawberries and tomatoes—but these are balancing benefits and evils. Altogether, the State feels better for the storm. The face of nature is brighter, and the touch of winter may admonish the farmer to be up and doing, in preparation for the season of growth and work which begins again almost ere it closed—such is the portion of the diligent in California.

**THE CAMELS ARE GOING.**—The latest note concerning the camel breeding industry of the West is contained in an account in the *Territorial Enterprise* on Arizona, which states that many camels are running wild along the banks of the Gila. They are a great source of annoyance to teamsters, as they sometimes make their appearance on the highway and frighten mules and horses. It is said that arrangements are being made to collect the camels together and take them to Colorado, where, it is thought, they can be sold at good prices.

## Our Amusements.

When on a bright Sunday afternoon two men, in their zeal to delight the populace, lose their lives by daring deeds, it is time to inquire into the character of our popular amusements. It is the preacher's prerogative to delineate the shades of sabbath-breaking which can be traced in the excursions and concourses which while away the sacred hours for thousands of our citizens. Ours it is, rather, to approach the theme from the side of secularity and common sense, which will fortify pulpit positions and teach that reverence for sacred institutions is the fullest truth to humanity. But this too is the preacher's ground, and we must draw still further from the desk and seek our audience among those who never hear the preacher's voice and never think religious thoughts. Let us then take stand against the supreme senselessness of many sensations which are nowadays arranged to excite the weary, and point out the hollow artificiality which characterizes them.

We shall speak of events which transpired last Sunday, because Sunday is the day generally given to cessation from ordinary duties, but the remarks will apply as well to other days, and not to days alone, but to evening hours which follow days of toil. Thousands of people have been wonted to gather from Sunday to Sunday at Woodward's Gardens to witness the balloon ascensions. While waiting for the supreme event of the day they look with half an eye at the really interesting and instructive features of this popular resort, but derive no benefit from the beauties of plant or bird or animal, for the sensation of the day is to be a daring of danger and death, and in anticipation of it matre eyes and minds are turned away from wholesome, recreative sights and thoughts, and children would forget their innocent amusements in longing for the sight which would send a shiver through their frames. Thus early do they learn to yearn for the morbid sensation born of intense excitement. In ministering to this unhealthy thirst for excitement two men last Sunday rose from the earth, dangled a few moments in mid-air, and then fell, crushed and lifeless, upon the pavement. They lost their lives through devotion to the public demand for amusement. Rarely are lives sacrificed upon a more unholy altar. Nor is it the fault alone of those who fell a sacrifice to popular appetite for morbid sensation. They but served, and served to the death. The greater blame should rest upon the public conscience for demanding such a sacrifice. And who of the thousands who officiated at this slaughter was the better for it? Did they not return to their homes with their minds devoid of peace and their bodies impaired by the torture of this unrest? If they were not hardened by long acquaintance with morbid scenes and thoughts, the evening meal was neglected; the old passed half the night in recounting the details of the sensation, rolling them beneath their tongues like a sweet morsel, and the children woke from tiring slumbers with cries of fright. How does such a scene rank as a picture of sabbath evening in the home?

But last Sunday saw another sight. Gathered beneath the largest roof in the city were thousands of people spending the hours in the close atmosphere and amid the paraphernalia of that premium device of him who always finds employment for idle hands—the "walking match." Of all the foolish and lifeless sensations patronized by sane people this is the peerless one. It has been called a "craze," and such it is. It would be difficult to array the giant physical strength in more morbid garments. Here, night and day, taxing nature until joints creak and eyes sink and stomachs refuse to replenish force thus foolishly wasted, these silly walkers pound the floor, while still more silly people sit with heavy eyes and wage their substance that this or that one is best fortified by nature to play the fool. Oh, ye shades of athletes, laurel-crowned at old Olympia, how your bile must rise at such mockery of physical exercise! And ye men of Caledonia who upon the green turf and in full possession of vivifying air and sunshine performed your feats of solid strength, which inspired a nation to secure a wonderful physical development, how lifeless must seem these modern abuses of the body mid dust and gas-heated air and thirst for sordid gains?

Is not the lesson plain from the descriptions of events? Need it be said that the sensations which now fill the popular mind are hollow and fit to engender all thoughts and desires which are demoralizing and deadly rather than restorative. What can be predicted of a popular taste which longs for such amusements? As they are devoid of every wholesome, ennobling influence, as they are so far from nature as to be wholly unnatural, both in their practice and results, what must be their effect upon the minds and souls of those who seek for them? There can be but one answer. A people which is drawing farther and farther away from an appreciation of the intrinsic worth of a world's beauties, both in works of nature and of mind, may so far proceed toward the evil and away from the true that even a rejected earth may have no room for it. And away from the world, whither? Let the preacher take up the strain.

NEARLY \$8,000,000 was paid out of the Treasury at Washington during September on account of pension arrears.

## The Swine Plague.

General Le Duc, Commissioner of Agriculture, Washington, D. C., has just issued a report upon the diseases of swine, etc., which every swine-breeder should procure. One hundred thousand copies were printed at Government expense, and we presume application to the Congressmen in the different districts will secure the report for the applicant. The document is one of great value, the matter it contains being chiefly drawn from the investigations of able veterinarians employed by the Commissioner to pursue the study in different parts of the country.

In order to call general attention to the report, and perhaps to give leading items of information to those of our readers who may not obtain it, we shall summarize some of the conclusions reached by the months of patient investigation and experiment. It may be premised that the disease among Eastern hogs which has generally been called "hog cholera" is not "cholera" at all, but is a fever. Whether this disease has ever been demonstrated to exist in this State or not we are not sure, but it is a plain fact that it does not occur in the wide-reaching form which has robbed swine-growers in the prairie and Eastern States to the amount of about \$10,000,000 in a single year. Our hogs are comparatively very healthy, and this is doubtless owing, in part at least, to the out-door life of the animal in this State, and its freedom from the congregation in reeking pens which prevails in the Eastern States, and the subsistence upon a filthy diet which is a concomitant of confinement in close quarters. The California hog is generally a partaker of clean mud and pure air; hence his health.

Concerning the symptoms of "swine plague" or "swine fever," the report remarks as follows: "As symptoms of special diagnostic value, which are scarcely ever absent in any case, the following are mentioned: Drooping of the ears and of the head; more or less coughing; dull look of the eyes; staring appearance of the coat of hair; partial or total want of appetite for food; vitiated appetite for excrements; rapid emaciation; great debility; weak and undecided, and frequently staggering, gait; great indifference to surroundings; tendency to lie down in a dark corner, and to hide the nose and even the whole head in the bedding; the specific offensive smell, and the peculiar color of the excrements. This last symptom is always present, at least in an advanced stage of the disease, no matter whether constipation or diarrhoea is existing. Among other characteristic symptoms, which are not present in every animal, may be mentioned frequent sneezing; bleeding from the nose; swelling of the eyelids; accumulation of mucus in the inner canthi of the eyes; attempts to vomit, or real vomiting; accelerated and difficult breathing; thumping or spasmodic contraction of the abdominal muscles (flanks), and a peculiar, faint, and hoarse voice in the last stages of the disease."

The investigation by the different veterinarians showed clearly that the maladies reported from different States were not contradictory in symptoms nor *post-mortem* appearances, and they pronounce the affection a general disorder. The disease can have its seat in many different organs or parts of the body, and therefore produces a great variety of morbid changes. This accounts for its different aspect in different animals. In some cases the principal seat of the disease may be in the organs of respiration and circulation, and in others in the intestinal canal and organs of digestion. Death may therefore be the result of different causes in different cases. In some cases it results from a cessation of the functions of the heart, the lungs, etc., and in other cases it is in consequence of the inability of entirely different organs to perform their allotted functions. This being the case, the *post-mortem* appearances would necessarily greatly vary, but in all animals similarly affected the lesions and morbid changes were found identical.

Perhaps the most important point to be determined by the investigation was the contagious or non-contagious character of the disease. In order to do this a series of experiments were instituted and conducted solely with this end in view, by Dr. Detmers, of Illinois, and Dr. Law, of Cornell University, New York. These experiments resulted in determining the fact that the disease is both infectious and contagious, and that it is not confined alone to swine, but that other animals may contract it in a mild form and retransmit it to swine in its most virulent and malignant character.

The report is of interest both to scientific and practical readers. The commission pursued their investigation with the microscope and the scalpel, but they did not devote less time to the study of influences exerted by the environment of the animal, and thus many points on the feeding and care of swine are brought forward. These will interest all swine-growers.

**APPLES FOR CHINA.**—I. R. Jewell, of Petaluma last Monday shipped to San Francisco, fifty boxes of apples to fill an order for China. The *Argus* says that the varieties selected are the Spitzenburgs and Rhode Island Greenings. Each apple is wrapped in paper, and carefully picked and handled, and will, without doubt reach their destination in perfect condition, and if so, Mr. Jewell is promised other and larger orders.

## ENTOMOLOGICAL.

## The Matter of Diet and Diabrotica.

**EDITOR'S PRESS.**—I am obliged for your answer to my inquiry relative to the beetle that is so destructive to the various orchard productions in this locality. On referring to the issues of the *RURAL PRESS* of dates 14th and 25th of June, I observe no suggestions of any methods to prevent or at least abate the scourge. Insectivorous life increases and abounds when the conditions are favorable thereto, to wit: abundance of the means of existence. I have already noticed the various sorts of beans, the China in particular, also beets, etc., seem to be their favorite food, and in orchards when such crops are usually planted for inter-cultures, they so abound on them that on the destruction of their favorite food they take to the trees and fruits. The prevention and abatement of the evil seems that those who have valuable orchards should plant such crops as they the beetles are not specially fond of. The use of caustic powders, oil soap, etc., are only temporary in their effects. The owners of valuable orchards must strike at the root of the evil.

The *Diabrotica 12-punctata* has been more or less abundant in this section for a number of years, and have only appeared in vast numbers since beans and beets have been grown as orchard crops. It is the case on the place I live, and I suppose it will hold good on other places. If these suggestions are of any consideration, they are respectfully submitted.—A. E. Haywards, Cal.

This is an interesting subject for general inquiry and should be pursued. Can other readers trace connection between the crops mentioned and the insects? Can the abundance of the insect in other counties, for example in parts of San Joaquin, Colusa and other localities be accounted for by the Haywards hypothesis? So far as our observation goes the insect will thrive and multiply wonderfully on quite a varied diet. In our garden the insect has a sharp appetite for rose buds and opening plums, for cauna and dahlia leaves, for balsam leaves and flowers, and many other green and colored growths. It is a fact, however, that the first indication of a general scourge from the insect was observed in central and lower Alameda county, and thence it has spread in several directions. Prof. Hilgard in his experiments with California grown insect powder, as described in another column, found that the dust had little effect on the insect unless he was buried in it, and the infusion applied in drops failed to enter the spiracles, but the spray was very effective upon the diabrotica as upon other insects. This fact may prove of some benefit hereafter in garden and perhaps in orchard work.

## An Aphid on Chrysanthemums.

**EDITOR'S PRESS.**—Enclosed find specimens of an insect which attacks chrysanthemums solely, and plays the mischief with them. It is always found near the flower buds, as per sample sent. This insect is a stranger. I do not recollect of having met with it before. I think it is a foreigner of late importation. It is of great interest to the denizens of this State to know something of the possibilities, capabilities and future influences of all enemies of any species of vegetable product. In furtherance of this end these specimens are herewith submitted.—A. Kamp, San Jose, Cal.

The insect is an aphid, although different in color from the aphides or plant lice, with which we are most familiar in our gardens, grain-fields and orchards. This species is of a dark red or reddish-brown color. The entomological works which we have at hand say that the aphides are of several colors, but we do not find in them descriptions of species except those we are well acquainted with on our roses, grain, apple and peach trees. The insect is, however, of this genus, and it can be overcome with whale-oil soap suds, or the other alkaline washes which are effective to remove the other species.

## What It Might Cost to Drown Phylloxera.

We read in a foreign exchange that the Austrians have on hand a pretty extensive job of pumping, for the benefit or otherwise of the phylloxera. The means to be adopted for the extirpation of the insect in the Panscovae vineyards are now under the consideration of the Minister of Agriculture and Commerce. The project which appears to meet with most favor is the total submersion of some 10,000 or 15,000 jock of vineyards (14,000 to 21,000 acres), so as to insure the complete destruction of the insect. As there is no stream in the immediate neighborhood of the infested district whence water could be conducted on to it by sluices or trenches, it is proposed to obtain the desired supply from the Temes by means of suction pumps. According to the calculation of the Inspector of the Szegediner pumping station, about 50,000,000 cubic meters of water would be required to inundate the whole 15,000 jock (21,000 acres) of vineyard, and the work could be accomplished in 50 days by the aid of 54 pumps and 18 steam-engines. The cost is estimated at 700,000 florins, or about \$340,000.

**SHODDY.**—On Wednesday evening there was a reception given to Gen. Grant by a wealthy citizen which is reported to have cost said citizen \$40,000. Such lavish expenditure of money for loud display is looked upon by society generally as the prerogative of shoddy. We have no doubt Gen. Grant knows this as well as any one, and would have felt more pleased and honored by the quietness and grace which characterize receptions given by those of higher culture. Anything obtrusive and loud is vulgar and pertains to those who carry their brains in a coin sack. Wealth is a trust confided to a man to be used wisely and for the public benefit. Squandering money for idle show and mock royalty in these times when so many are suffering for the plain necessities of life, is a relic of paganism and reflects no credit upon our State.

**ON FILE.**—"Mountain Top Letters," J.; "Boulden Island," J. D. S.; "Sense of Duty," M. B. L.



## A Visit to Baden Farm.

On Friday of last week we visited Baden farm in company with Mr. Dwinelle and Messrs. Cowell, Colby and Webber, students at the College of Agriculture, who were conducted thither to obtain a few object lessons in dairying and stock breeding. We were all cordially received by the Baden farmer, Robert Ashburner, and most of the day was passed in instructive examination of the establishment—always excepting the hour during which Mrs. Ashburner keeps her guests busily engaged in the vain attempt to do justice to her hospitality. It is rather more than three years since we visited Baden farm before, but during the interval our readers have, from time to time, obtained hints of what Mr. Ashburner is thinking and doing, in the articles on dairy and stock topics which we have had from his pen.

It is pretty well known that the Short Horns form the leading attraction at Baden farm, and beginning at the youngest, our first introduction was to a pen of five hull calves, varying in age from three to six weeks. Three of them are by imported Kirklevington Duke 2d; one by imported Grand Prince of Lightburne, and one by Baden Duke. The last named calf, Baden Minstrel, is undoubtedly the plum of the lot and is indeed a promising calf, with finely sprung ribs, a square even form throughout well covered with soft hair. Other noticeable features are his great breadth between the eyes, clean-cut face, wide, open nostrils, and large, prominent and yet mild eyes. His is a picture of perfection in a calf. His sire and dam are both Kirklevington Duke 2d, the dam being Minstrel Gwynne last out of imported Oxford Minstrel 2d, which we noticed rather favorably on our last visit to Baden farm. She is also the dam of a most promising young bull, Minstrel Prince by Grand Prince of Lightburne. Mr. Ashburner at present thinks so highly of this young bull, which has just passed his 12th month, that he intends using him for a while in his own herd. He is long, level and deep, with a great growth of flesh, well and evenly laid on, and is one of the best handlers we ever touched, and it was a pleasure to hurry one's hand in the loose folds of his soft skin and hair. His is a hide with plenty of substance covered with a long coat of soft silky hair. This family of Short Horns, the Gwynne branch of the Princess tribe, appears to have held its own in money value even better than any others, judging from the fact that at Lord Skelmersdale's sale last month (in England), seven Gwynnes sold for an average of \$626 each. As a yearling bull Baden Duke is a very promising young sire, and if Baden Minstrel, the calf first mentioned is an indication of what his other progeny is to be, he will prove himself valuable to his owner.

Besides the above there are five excellent young bulls, three reds and two roans, well-fleshed and in fine condition, from five to eight months old, that are destined to make their marks in other herds hereafter. The calf of eight months old was bred by Messrs. Jones & Hagan, and having been purchased by Mr. Ashburner at their sale in April last, and is the oldest young bull now purchasable. He is a fine, showy red calf, with good length of body and fine carriage. He looks as if he might be the first to go off, though there is a five months roan calf by Kirklevington Duke 2d, which some might prefer, provided they are not overpartial to red.

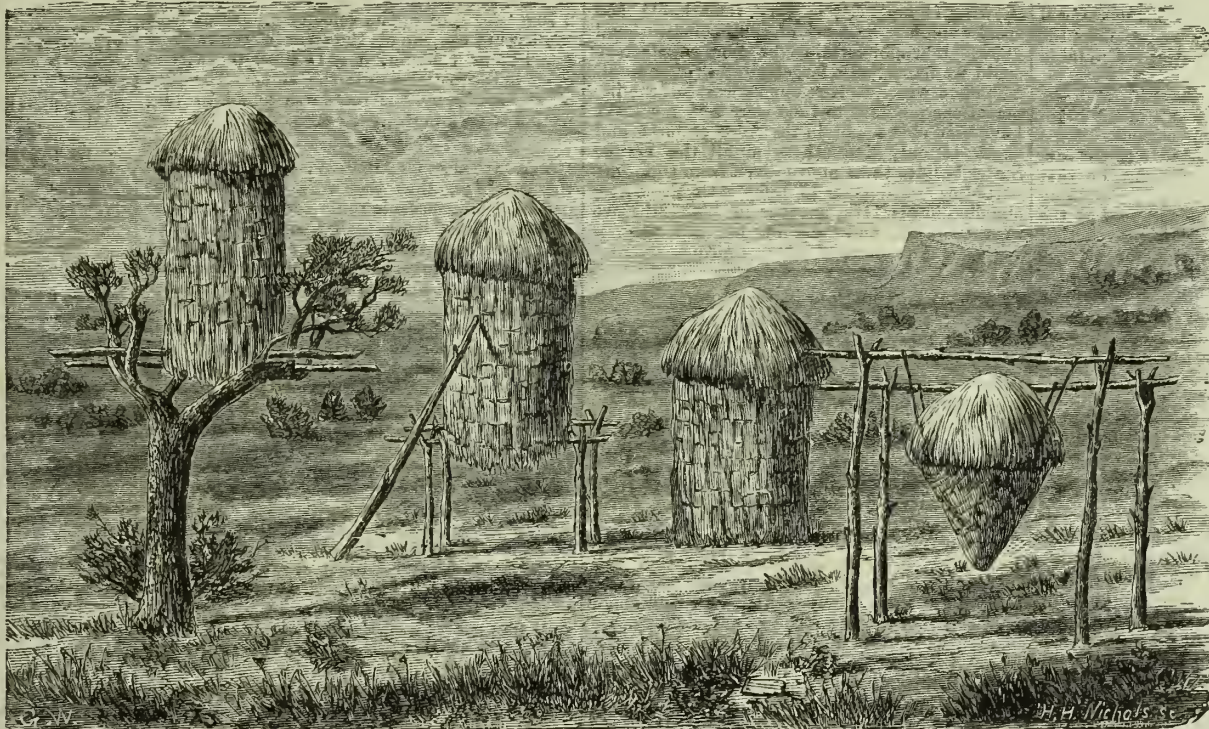
As to the herd in general there is greater uniformity throughout, both in size and quality than at our last visit, three years ago. This we do not wonder at considering the high class sires that have always been used in the herd, also, accounting the fact that about 100 head of cows and heifers have been sold out of the herd during that time. The cows and heifers now number 130 head, upwards of 50 of which are pure bred Short Horns; the remainder being high grades with from two to five crosses of Short Horn blood.

After we had carefully inspected the animals on Baden farm, attention naturally turned to items of their maintenance. Mr. Ashburner never allows his calves to suck the cows at all. He teaches them to drink from a bucket, and breaks them at once to the neck-ropes by keeping them tied to the sides of their comfortable quarters a part of the time. For one month they are kept on new sweet milk. After that they are given a ration of bran and oil cake, which, with the fodder they soon learn to eat, keeps them growing finely. He is now feeding wheat hay grown upon the ranch, and which he cuts when in blossom, thus obtaining much nutritive matter in the stem. This affords a

sweet and easily-digested hay. He secures a fine yield of hay by sowing the wheat upon land from which beets have been lifted. This beet ground is in a fine state of tilth, and is not plowed again for the wheat, but the seed is harrowed in. The soil is naturally light, and the culture for beets leaves it fully as mellow as is desirable for wheat growing. It is heavily manured for the beets, so that its fertility is assured. The fact that Mr. Ashburner cut this year 27 tons of wheat hay from five acres shows that the conditions must all be favorable for growth.

In preparing rations for his animals, Mr. Ashburner cuts the hay with a cutter driven by horse power, cutting about one and a half tons in two hours. With this cut hay he mixes bran, millfeed and bean meal, equal weights of each, and soaks the mass in a large vat for several hours before feeding. He would use oil meal freely were it not found to be largely adulterated with cocoanut-cake meal, which he does not consider desirable.

For extra green feed, he has grown this year, as usual, a large field of mangolds, which are now carted and thrown to the cows in the field, in connection with the hay, which is given them when the pastures are in their present condition. Mr. Ashburner has also a field of prickly comfrey (*Symphytum aspernum*), of which he has a high opinion as summer feed for dairy cows. He has no trouble in getting his cows to eat the comfrey, if it is given to them when green and succulent, before the "prickles" become firm and sharp. He cuts the comfrey with a reaping hook when the lower leaves begin to turn yellow. The leaves are then about 18 inches in length. The plant is of quick growth on the coast ranches, for when we saw them they were but ten days from the cutting, and the new leaves were about as many inches high.



ACORN GRANARIES OF THE MIWOK INDIANS.

This is without irrigation. The comfrey root cuttings are planted two and a half to three feet apart each way, and this allows of cultivation each way. He likes the comfrey so well that he will double his planting this winter. We noticed that the gophers are quite partial to the plant.

Baden farm is fortunate in having a never-failing stream of water running through it. This stream has cut its channel so that it flows 30 or 40 feet below the surface in some of the fields. The water is raised with a windmill and a six-inch force-pump, out of its bed, and forced into a reservoir on the crest of a rise of ground, from which it is conducted to the fields and buildings. As winds are plenty, a liberal supply of water is thus gained for irrigation. This, with the constant saving of manure, enables Mr. Ashburner to produce abundant summer and winter feed for his stock, and it is plain that his system is constantly increasing the fertility and value of the property, which is an important phase of successful farming.

A DEER-PROOF FENCE.—If any one should doubt the game resources of this State and should not be convinced by the purchase of venison in the market as cheap as beefsteak, he can find other evidences in the fact that some of our vine growers are compelled to build deer-proof fences. The St. Helena Star says that it saw Fred Metzner Tuesday loading fence lumber for his vineyard in Conn valley. He says it is to keep the deer out, which ravage it in such numbers as to destroy the vines—by eating them. They prefer the Berger, and have killed 3,000 or 4,000 vines for him. He will build a high board fence, and surmount it with barbed wire.

CHURCH services, which were suspended by the State Board of Health, have been resumed in Memphis.

## The Mi-wok Indians.

The Mi-wok is the largest Indian nation in California, both in population and extent of territory. Their ancient dominion extended from the snow-line of the Sierra Nevada to the San Joaquin river, and from the Cosumnes to the Fresno. The mountain valleys were thickly peopled as far east as Yosemite; the great and fertile San Joaquin plains, and the banks of the long fish-full streams of the Mokelumne, the Stanislaus, the Tuolumne, the Merced, the Chowchilla and the San Joaquin were anciently crowded with multitudes of these Indians. Even the islands of the San Joaquin were made to sustain their quota, for on Feather Island there are said to be the remains of a populous village. The rich alluvial lands along the lower Stanislaus, Tuolumne and Merced contained the heart of the nation, and were probably the seat of the densest population of ancient California.

The language of the nation was more homogeneous than many others, not half so widely ramified. From the upper end of the Yosemite, traveling 150 miles with the sun, and from the Cosumnes southward to Fresno, there was scarcely a change of a syllable. There are, as always, many abrupt dialectic departures, but the root remains and is quickly caught by the Indian of a different dialect. They were nothing more than the different local pronunciations, such as are apparent in the English language, seemingly entirely different to a foreigner, but only an unimportant, well understood variation to a native.

North of the Stanislaus these people called

cover with earth in the winter; in summer they move into mere brushwood shelters. Higher up in the mountains they make a summer lodge of puncheons in the shape of a sharp cone, with one side open, and a bivouac-fire in front of it.

The only special points to be noted in their physiognomy are the smallness of their heads, and the flatness of the sinciput, caused by their lying on the hard baby-basket when infants.

Major Stephen Powers, in Powell's Contributions to North American Ethnology, from which this sketch is taken, says: "I felt the heads of a rancheria near Chinese Camp, and was surprised at the diminutive balls which lurked within the masses of hair. The Chief, Captain John, was at least 70 years old, yet his head was still perceptibly flattened on the back, and I could almost encircle it with my hands."

For food they depend principally on acorns. They had, in common with many tribes both in the Sierra and in the Coast range, a kind of granary to store them in for winter. When the crop was good and they harvested more than they wished to carry to camp just then, with a forethought not common among barbarians they laid by the remainder on the spot. Selecting a tree which presented a couple of forks a few feet from the ground, but above the reach of wild animals, they laid a pole across, and on that as a foundation, wove a cylinder-shaped granary of willow wicker-work, three or four feet in diameter and twice as high, which they filled with acorns and covered with thatch. There they remained safe. As these were often miles from a village, the circumstance denotes that they reposed no small confidence in each other's honesty. It goes near to refute altogether the frequent allegations that they are a nation of thieves. Now-a-days, they make most of their granaries close to camp, either

right on the ground or elevated on top of some posts.

They are very fond of hare, and make comfortable robes of their skins. These are cut into narrow slits, dried in the sun, and then made into a wide warp by tying or sewing strings across at intervals of a few inches. Soap-root is used in the manufacture of a kind of glue, and the squaws make brushes of the fibrous matter encasing the bulb, with which they sweep out their wigwams. With millions of tall straight pines in the mountains the Mi-wok had no means of crossing rivers, except logs or clumsy rafts. All their bows and arrows were bought of the upper mountaineers. White shell buttons, pierced in the center and strung together were used as money, rated at \$5 a yard; periwinkles at \$1 a yard.

Their chieftainship, such as it is, is hereditary when there is a son or brother of commanding influence, which is seldom; otherwise, he is thrust aside for another. The Chief is simply a master of ceremonies. When he decides to hold a dance in his village, he dis-

patches messengers to the neighboring rancherias, each bearing a string whereon is tied a number of knots. Every morning thereafter the invited Chief unties one of the knots, and when the last one is reached, men, women and children joyfully set forth for the dance.

Scarification and prolonged suction with the mouth are the staple methods of cure among their shamans or physicians, some of whom are women. In case of colds and rheumatism they apply California Balm of Gilead (*Picea grandis*) externally and internally. Stomachic affections are treated with a plaster of hot ashes and moist earth. The shaman's prerogative is that he must be paid in advance, usually fresh slain deer or so many yards of shell money; the patient's prerogative is that if he dies his friends may kill the shaman.

Their favorite dance is the acorn dance, in which the whole company join hands and dance in a circle. Instead of a dance for the dead, there is an annual mourning (*nut-yu*) in which loud and demonstrative wailings and tearing of hair are indulged in by one or more villages assembled in a circle.

Cremation very generally prevailed among the Mi-wok, but was not universal. The Indians high up in the mountains buried their dead, while those about Chinese Camp always burned. They have a legend that man was created by a coyote, probably the modification of the tradition of some Indian tribes that their nations sprung from the remains of a coyote, in strict accordance with the modern cultured doctrine of evolution.

BERKSHIRES FOR EXPORT.—We learn from the *Berkshire Bulletin* that John Rider, of Sacramento, lately sold two recorded Berkshires to N. B. Sheakles, of Corinto, Nicaragua, Central America. This is well. California should supply all the Pacific countries with thoroughbred stock, and will do so ere long we doubt not.

themselves *mi-wok* ("men"); south to the Merced, *mi-wa*; on the Fresno, *mi-wi*. On the upper Merced the word "river" is *wa-kal-la*; on the upper Tuolumne, *wa-kal-u-mi*; on the Stanislaus and Mokelumne, *wa-kal-u-ma-tuh*. This is undoubtedly the origin of the word "Mokelumne," which is locally pronounced "mo-kal-u-my" (accent on second syllable).

So also *kos-sum*, *kos-sum-mi* (salmon) is probably the origin of the word "Cosumnes," which is pronounced *koz-u-my* (accent on first syllable). Although the largest, this is probably the lowest nation in California, presenting one of the most hopeless and saddening spectacles of heathen races.

They eat all creatures that swim in the waters, all that fly through the air, and all that creep, crawl, or walk upon the earth, with a dozen or so exceptions. They have the most degraded and superstitious beliefs in wood-spirits, who produce those disastrous conflagrations to which California is subject; in water-spirits, who inhabit the rivers, consume the fish, and in feticistic spirits, who assume the forms of owls and other birds, to render their lives a terror by night and by day.

In occasional specimens of noble physical stature they were not lacking, especially in Yosemite and other mountain valleys; but the utter weakness, puerility, and imbecility of their conceptions, and the unspeakable obscenity of some of their legends, almost surpass belief.

A majority of all who have any well defined ideas whatever on the subject, believe in the annihilation of the soul after death. He was referred to as *itth*, representing the memory of a being that once was. While other tribes mitigated the final terror by an assured belief in a Happy Western Land, the Mi-wok go down with a grim and stolid sullenness to the death of a dog that will live no more.

For houses the Mi-wok construct very rude affairs of poles and brushwood, which they



[CONTINUED FROM PAGE 237.]

his sanctum, that either the bee men or the fruit growers would have to give way in Los Angeles county: that it was proven that the two could not exist in juxtaposition, and was very wordy as to what the coming legislature was going to do with the bee nuisance. Well, to the legislature let it go. There is just where we bee men want it to go. Then let us have a law on the whole subject; and should the legislature say that to poison and trap bees is right and legal, and a step further on the road of progress, so mote it be.

Nietos.

GEO. KAY MILLER.

## PISCICULTURE.

### Poisonous Fishes.

The *Scientific American* in alluding to cases of poisoning by eating certain kinds of fishes, says: Grave and even fatal accidents of this nature have usually occurred in the less civilized portions of the globe; and the phenomenon itself is very complex. There are a large number of suspected species; and in some of these certain individuals alone seem to be possessed of the toxic property, and even in these the danger resulting from using them as food disappears at certain seasons of the year. Finally, ichthyology is such a difficult study that few physicians are well enough acquainted with the subject to accurately determine the genera or species of the poisonous fishes that they meet with in their travels.

The *Annales d'Hygiene Publique* says that fish poisoning is one of the maladies that afflict Europeans living in Japan. The salmon is the most common toxic fish of Japan. From the spring onward this fish is out of season, and if eaten after that period of the year occasions the same accidents as follow the eating of tainted meat.

The eating of the *katsuo* (honita) and the maguro occasions severe congestion of the brain and face, in some cases very serious. Some writers believe that it is a morbid element developed in the fish at certain seasons, or that the idiosyncrasies of the patient have something to do with it. This cannot be accepted as the true explanation, for it has been proved that certain fishes, the *Lethrinus nambo*, for instance—can be eaten with impunity until it attains a certain size, say a length of five to five and a half inches, after which it becomes poisonous. The age of the fish, then, would seem to have something to do with its toxic qualities.

Fishes of very diverse genera have been the occasion of grave and even fatal accidents, and they are found in all parts of the globe, but more especially in the torrid zone. Pappenheim gives a list of more than 40 poisonous species. Among these we find mackerels, perches, herrings, sea pikes, and a large number of species belonging to the order *Plectognathes*. The latter order contains five genera that are poisonous. The most common genus of the order in Japan is the *tetrodon* or swell fish, the species of which are all known by the general name of *fugu*, and are considered the most dangerous of the poisonous fishes, so much so, in fact, that their sale at certain seasons is forbidden by law. Dr. Goertz, of Yokohama, in a memoir read before the German Asiatic Society of Japan, has given a description of the symptoms observed in these cases of poisoning by the *fugu*. One of these was rapidly fatal, the other two were more alarming, but recovered under prompt treatment. At the beginning of the attack there were violent headache and nausea, quickly followed by great muscular weakness; the pulse, the respiration, and temperature all fell at the same instant, thus denoting the very energetic action of the poison upon the nervous centers with special effect upon the pneumogastric. Dr. Houghton, of Savannah (*Lancet*, 1876, page 939), mentions 13 cases of poisoning by the *Tetrodon Hystrix*—one of the Japanese *fugus*—in which the results were identical with those reported by Dr. Goertz. It is somewhat remarkable that in the three cases given by the latter, and in the 13 of Dr. Houghton, the subjects are stated to have eaten the eggs of the fish.

Congers, pikes, and barhels have long been recognized in Europe as poisonous at certain seasons, and the eggs of the barbel as especially so.

In Japan the liver of the *fugu*, immediately after the spawning season, is considered the most dangerous part of the fish. A few cases of death caused by eating the liver of the fish have also been reported from the Cape of Good Hope, the poison having proved fatal in some instances in less than 17 minutes.

**INTELLIGENCE OF ANTS.**—Sir John Lubbock, in studying the habits and instincts of ants with a view to determine their means of recognizing their fellows, says he took pupæ from a nest and divided them, giving part to the nest of a neighbor of the same species and part to the nest of a stranger of the same species. When grown the returned of the pupæ from the neighbor were all welcomed. The returned from the stranger were none welcomed, all being attacked and driven. Sir John says that there must be some reason why 100,000 ants in the same nest, who cannot possibly know one another as individuals, are never at war, while should a stranger approach he is at once slain. He concludes that they recognize each other by some smell or other sense quite unknown to us.

## THE STABLE.

### Longevity of the Percheron-Normans.

Our attention was called a few days ago to a statement made by a correspondent of the *Western Rural*, to the effect that the Percheron-Norman horses were notoriously lacking in "constitution," and that they were consequently a short-lived race. Without having given this aspect of the question any especial thought, we had been under the impression that the horses imported from France to this country had, as a rule, been remarkable for longevity; and if this impression is correct, it certainly furnishes the most complete refutation of the charge that they are lacking in "constitution," by which term is meant that structural and organic vitality and vigor which gives to a great extent immunity from disease, and which enables the individual to successfully resist attacks under which others less favorably organized would succumb.

Turning to the first volume of the Percheron-Norman Stud Book for data upon which to satisfy ourselves as to the facts in the case, we found that, of the six importations made to Ohio prior to 1860, the average term of life had been 24 years, with one still living. The earliest age at which any of them died was in the case of Rollin (418 of the Stud Book), foaled 1852, imported 1856, who died in June, 1869, aged 17 years. Old Louis Napoleon (No. 281 of the Stud Book), foaled 1848, imported 1851, died August, 1871, in his 24th year. All the others lived to be over 24, and one, a mare, is yet living, in her 28th year.

When it is considered that these French-draft horses are almost universally kept in a state of obesity, peculiarly unfavorable to health, this showing of longevity is very remarkable, and speaks volumes in favor of their constitutional vigor. It would certainly be more satisfactory could we have had a larger number of individuals upon which to base our figures, but the importations previous to 1860 were very few. We have been able to obtain the dates of birth and death of only five others in all the United States, besides those above given from Ohio, imported or foaled prior to 1860. Of these five, one died in his 11th, another in his 12th, two in their 21st, and one in his 22d year.—*National Live Stock Journal, Chicago.*

### To the Pole in Balloons.

The determination to arrive at the North Pole and solve that mysterious portion of the earth's surface which has heretofore refused to be explored, has now taken the shape of an expedition in balloons, on the plan recommended by Commander Cheyne, R. N. The expedition is to go by ship as far north as possible, and then take flight in aerial means of conveyance from winter quarters during the first week in June.

The average temperature in the early part of June is about 25° Fah. The balloons are named Enterprise, Resolute and Discovery; each will be capable of lifting a ton in weight, the three carrying a sledge party intact, with stores and provisions for 51 days. The ascent will be made on a curve of a roughly ascertained wind circle, a continuation of which curve will carry them to the Pole; but should the said curve deflect, then the required current of air can again be struck by rising to the requisite altitude, as proved by experiments that different currents of air exist according to altitude; this fact Commander Cheyne himself observed when, in charge of the government balloons in his last expedition, he sent up four at the same moment to different altitudes; being differently weighted, they took four different directions to the four quarters of the compass, giving him his first practical idea of ballooning in the Arctic regions. Captain Temple's experiments with the war balloons from Woolwich Arsenal have fully confirmed this important desideratum in aerostation.

About 30 hours would suffice to float our aeronauts from the ship to the Pole, should all go well.

Condensed gas would be taken in steel cylinders, hills would be floated over by expansion and contraction of the balloons, and in the event of any accident occurring, we always have our sledge party, with sledge, boat, stores and provisions for 50 days, intact and ready for service. Scotland has taken up this novelty in Arctic exploration with avidity, and England, though more cautious in the matter, has at last given her adhesion to the project being carried out. Canada is likely to join, and Commander Cheyne has received an invitation from the Canadian Minister of Finance, Sir Samuel Tilly, K. C. B., to deliver his lectures in Canada, with the promise of a warm reception.

**TESTING MACHINES FOR FABRICS.**—The custom of testing iron, wood, and other building materials, and testing wire, ropes, cables, etc., and using these tests as a measure of the commercial value of the materials, has proved to be so advantageous that the same idea is being applied to woven fabrics of all kinds. For testing the strength of fabrics, a new machine has been introduced, designed to report pulling strains from half a kilo. up to 250 kilos. The machine consists of an upright standard, supporting a horizontal hollow beam of iron, containing scale levers with a brass weighing scale having a sliding weight and a graduated scale. Suspended from the weighing apparatus is a

### The Sensitive Plant Under Anæsthetics.

The idea of subjecting this remarkable plant to the action of anæsthetics was natural, and several experiments of the kind are recorded, the plant having been placed in vapors of ether or chloroform. Recently, M. Arloing has made some interesting observations of the effects of chloral, chloroform and ether presented for absorption by the roots. The pots were sprinkled with aqueous solutions of these substances, then covered with care to prevent escape of the vapors. After absorption of chloroform or ether, one notes primary and secondary effects; the former are phenomena of excitation similar to those arising from mechanical irritation, and comparable to those in animals when anæsthetized. They occur successively from the bottom to the top of the stem. In 30 to 60 minutes the common petioles (or leaf stems) straighten, and the leaflets separate, beginning from the top of the stem; but the plant is now found to have lost its sensibility. The secondary effects consist of elimination of the anæsthetic. The sensibility often does not return for one and one-half or two hours. Chloral does not act anæsthetically on the sensitive plant. These observations afforded M. Arloing an opportunity of ascertaining the velocity of liquids in the stem and branches of plants under strictly physiological conditions, whereas, past experiments on the subject have been made with withered or mutilated plants. If the leaves are in a good state the common petioles bend down suddenly and successively from below upward in the plant as the absorbed chloroform reaches them. Hence, knowing the dimensions of the plant, the velocity of the chloroformized water in the stem and primary petioles can be easily calculated. Within the stem the velocity is modified by the state of the tissues and foliage, the temperature, etc.; it was found in different cases at the rate of 0.90 meters, 2.22m., 2.40m., 2.76m. per hour. The velocity increases from the base to the top of the stem in the ratio of 1 to 1.25 or 1.50, and it is 1½ times to twice as great in the petioles as in the stem. The time of absorption by the roots was found to vary from 2 to 6½ minutes.—*London Times.*

**TEHUANTEPEC CANAL.**—We are informed, by the *Iron Age*, that the work of opening the proposed inter-oceanic route across the Isthmus of Tehuantepec has actually begun. Word has just been received by the syndicate in New York who are engaged in this grand undertaking, that a corps of engineers have commenced dredging, building wharves, surveying, etc., at the mouth of the Goatzacoalcos river, which forms the harbor at the Gulf terminus of the proposed railroad. This enterprise, it will be remembered, is under the authority of a grant or concession recently obtained from the Mexican government by Mr. Edward Larned, of Pittsfield, Mass. No time has been lost in organizing for work and providing the requisite means. By the 15th of October, steel rails, a powerful steam dredge, and every necessary appliance, will be on the ground. About two months will be required to give an entrance for vessels through the bar of 24-feet draft. The grant referred to gives Mr. Larned three years in which to build, the company being bound to construct yearly a section of not less than 63 kilometers, or about 39 miles. The railroad is to start from the mouth of the Goatzacoalcos river and extend to the upper lagoon, near the Pacific ocean, whence a canal must be excavated to the western extremity of the route. The lagoon, or lake, will form a harbor, to be equipped with wharves, lighthouses, etc. The concession from the Mexican government comprises a land grant of alternate sections three miles square, and control of the harbor at the mouth of the Goatzacoalcos for 99 years; also of the lakes on the Pacific side. At the expiration of this period the road must be surrendered to the Government, the latter taking the rolling stock at one-half its appraised valuation and the track at \$13,000 per mile.

**PRICKLY-PEAR FIBERS FOR MATTING, ETC.**—During the recent scarcity, the people at Kunjura, in the Punjab, were driven to obtain a livelihood by the preparation of fiber from the prickly pear. The process adopted by them was to first cut off the blades at the stem, to separate each into thin strips with the hand, to tie these strips up into bundles and immerse them in water for ten days or so. This is said to be a most disagreeable task, as the effluvia given off is horrible, and the juice of the plants is so acrid that it is difficult to protect the hands and legs from it. The fibers are of a yellowish-white color, as coarse as horse hair; the material is very strong, and makes excellent ropes and matting; but, owing to its coarseness, it is with great difficulty that it can be converted into paper. White ants do not attack matting made of this fiber.

**GIVING A NEW EDGE TO RAZORS.**—It is sometimes said that dipping a razor in hot water injures its edge, but the contrary is effected. A fine edge is given to steel blades by tempering, and experiment has shown that 212° of heat, or that of boiling water is the point at which razor edges are admirably tempered. Hence, by dipping a razor into boiling water it has the effect of re-tempering it, or giving it a new edge.

THE Italian government is about to construct a large observatory on Mt. Etna. A site has been selected at a height of 9,652 feet above the level of the sea, near the Casa degl'Inglesi.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

### CATTLE.

PETER SAKS & SON, 520 Bush St. S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

### SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

### POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Ducks, etc. Eggs for hatching. Send for price list.

### SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Poland-China Swine and Black Cochon Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of fogs are all recorded in the American Berkshire Record.

### BEES.

JOS. E. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## Seedsmen.

### SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEEDS; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON, Importer and Dealer in Seeds, 425 Washington Street, - San Francisco

EXOTIC F. A. MILLER & CO., Mission St. GARDENS. opposite Woodward's Gardens. Send for Catalogue and Price List.

# Pianos

## LARGEST MUSIC HOUSE

On the Pacific Coast.

WHOLESALE AND RETAIL.

Lowest Prices and Best Goods.

Write for Information concerning any Musical Instrument, and terms of sale. It will be given with pleasure.

ESTABLISHED IN 1850.

KOHLER & CHASE,

137 and 139 Post Street, San Francisco.

## The New Beekeepers' Text Book.

By N. H. and H. A. Kins. The latest work on the Apian, embodying accounts of all the newest methods and appliances. Fully illustrated. Sent by mail, postpaid, for \$1. DEWEY & CO., 202 Sansome Street, S. F.

WELL AUGER. One is guaranteed to be the cheapest and best in the world. Also nothing can beat our SAWING MACHINE. It saws off a 2-foot log in 2 minutes. Pictorial books free. W. GILES, Chicago, Ill.

P. Saxe, 520 Bush street, General Agent for Pacific Coast. 50 Pertumed, Snowflake, Chromo, MottoCards, name in gold and jet 10c. G. A. SPRING, E. Wallingford, Ct.



## Lands for Sale and to Let.

## FARMS FOR SALE.

IN THE FERTILE AND HEALTHFUL

## San Pasqual Valley,

San Diego County, Cal.

## TITLES PERFECT.

The owner (an architect) having recovered his health by a residence of four years in this Valley, is desirous of returning to the city, and so offers the following farms for sale

## At a Great Sacrifice:

The Home Farm of 200 acres is well fenced and subdivided. There is beside 600 yards of movable panels,

## 50 Acres in Alfalfa,

Yielding five and six crops a year. There is an abundance of water on the place for stock, besides running water for garden, orchard, etc., and a one-sixth interest in the S. P. V. Ditch Co. House 28x36, enclosed in a lot 200x180, barn and stable, 54x35, two sheds 24x14 and 18x14, smoke-house, 20x14, with an adobe cellar under it, and every convenience as regards large tanks, etc., for making bacon. The implements are of the best, nearly all new, and in good order. They consist of two farm wagons, 10-foot header, header beds, hay rack, mower, gang plow, single do, harrow, 10-foot seeder and cultivator, small do, sulky rake, two sets of strong harness, together with a lot of other tools, hay, grain seed, etc.

Price for the whole, \$4,000; one-half cash, balance on time at 1 percent.

## For Sale Also,

A farm under cultivation of 116 acres, adjoining the above, suitable for grain, corn or alfalfa, with a one-sixth interest in the Ditch Co., and about one and one-quarter miles of fencing, no other improvements. Price, \$1,200; one-third cash, balance on easy terms.

## For Sale Also,

A farm of 120 acres, one-quarter mile from the above ranches, mostly damp land, suitable for a nursery, alfalfa, corn, etc. There is a small house, etc., and a ditch running along its upper side. Price, \$900; one-third cash, balance on easy terms.

The neighborhood is exceedingly healthful and growing. Two schools are in the valley, one within one-quarter mile, and the postoffice within one mile, neighbors with families are all round.

My stock consists of superior brood mares, colts, hogs etc., and they may be taken at a valuation if wanted.

For particulars apply to W. B. STEWART, San Pasqual Valley, San Diego Co., Cal.

## Farm For Sale.

Yields an Income of \$4,000 a Year.

Price, \$10,500.



My Farm and Poultry Business yield over \$4,000 a year. The place—116 acres—with orchard, vineyard and improvements, has cost me \$15,000. The good will of the business is worth fully \$6,000. I will sell the business and farm for \$10,500, half cash, or exchange for San Francisco property. It is a bargain such as is seldom offered.

M. EYRE, Napa, Cal.

Law Office in San Francisco, No. 636 Clay St., Room 25. I am in Napa each Saturday and Sunday; other days in San Francisco.

## FOR SALE.

700 Acres. The Finest Stock and Grain Farm in Northern California.

Price, \$25,000, including Farming implements. The whole under fence.

The stock upon this farm, all thoroughbred and graded, embracing some of the finest in the State, will be sold at private sale. Among the stock is some that has been awarded different premiums at State and County Fairs.

This is one of the finest opportunities for a man of means in the State. For full particulars apply to

D. B. HAYS,

Real Estate Agent, Oroville, Cal.

**C. C. RODGERS,**  
CALIFORNIA LAND AGENCY,  
Office, 276 First St., San Jose, Cal.

GENERAL LAND, REAL ESTATE, U. S. PENSION AND BOUNTY AGENT.

Will buy and sell Land Warrants; Locate and Survey Public Government Land, Pre-emption Homesteads, Soldier's and Sailor's Homesteads, Timber and Wood Lands, Desert Lands, Etc.

## FARMING LAND

For Sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

ALMOND, RAISIN,

— AND —

## Orange Land for Sale

In lots to suit. On the line of Clear Lake Water Works Ditch. Address

D. C. RUMSEY,

Head Capay Valley, Yolo county, Cal.

50 Perfumed, gilt edge & chromo Cards, elegant case, name in gold, 10c. ATLANTIC CARD CO., E. Wallingford, Ct

Photo Relief  
and Wood  
Engraving

The use of Photography in producing stereotype and electrotype plates for artistic and common printing, forms, comparatively, a new method, in which we are making continual improvements and executing different kinds of work, superior to any before issued. It also enables us to produce certain kinds of work at greatly reduced prices.

Designing and Wood Engraving of every variety in the best style of the art, continued as usual. All orders executed promptly and on the most reasonable terms. We guarantee satisfaction. For the credit of our own journals, our customers can rely upon first-class work of the styles desired.

SCIENTIFIC PRESS ENGRAVING CO.,

No. 202 Sansome St., S. F.

## Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$2,500,000,  
In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

## OFFICERS:

PRESIDENT.....G. W. COLBY.

MANAGER AND CASHIER,

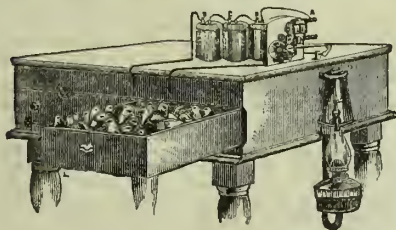
ALBERT MONTEPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

## MONEY in CHICKENS



If You Want to Make Money

By raising any number of Chickens at any season of the year without setting hens, procure an

## ECLIPSE INCUBATOR

(E. A. SAMUEL'S Patent).

In both public and private trials on this coast as elsewhere, the "ECLIPSE" has proved itself a perfect and successful Egg Hatcher. It may be examined and its merits proven to customers before they make purchases. Write for particulars and circulars to

G. G. WICKSON, 319 Market Street, S. F.

Agent for the Pacific Coast.

## A New Forage Plant.

## THE GREEN VALLEY GRASS.

The WONDER of the NINETEENTH CENTURY, yields 10 to 14 tons of hay per acre, and from 3,000 to 4,000 bushels of roots, which far excels artichokes as feed for hogs.

Grows without Irrigation.

For price list of seed and roots, address

ARTHUR TAYLOR,

Watson, Atchison Co., Mo.

## MONEY TO LOAN

AT LOWEST RATES

On Country Real Estate and Grain in Warehouse.

McAFEE BROTHERS,

202 Sansome Street, San Francisco.



## LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price, \$2 per gallon. For directions and testimonials, apply to FALKNER, BELL & CO., Sole Agents, 430 California Street, S. F.

## Educational.

HEALD'S  
BUSINESS  
COLLEGE,  
24 Post Street  
Near Kenney,  
San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

W. E. CHAMBERLAIN, JR.

THOS. A. ROBINSON

PACIFIC  
Business College,  
320 POST ST.  
SAN FRANCISCO.

SEND FOR CIRCULAR



Single samples will be mailed from this office for 50 cents, postpaid. Wholesale and retail agents wanted.

THE BEST FILEHOLDER.—After having used Dewey's patent elastic hinge fileholder for over a year past, the News cheerfully indorses it as the best newspaper fileholder in existence, possessing important advantages over any and all others in use. The holders are neat, light and convenient, and the newspapers are placed in them with the utmost facility and least possible time and exertion. They are the simplest, handiest and cheapest of all. Anybody keeping files of papers in reading rooms, offices or at home, should send at once to the proprietor, A. T. Dewey, San Francisco, and get the only proper fileholder. Samples by mail fifty cents.—Gold Hill News.

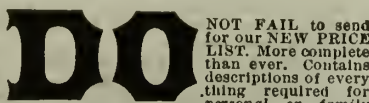
## STEAM ENGINE.

For sale, a second hand engine in perfect order, mounted on good wagon. Suitable for a shingle mill or a portable saw mill, or for mining purposes. It is the LARGEST PORTABLE ENGINE IN THE STATE, too large for threshing. Will be sold very cheap, with reasonable time for payment if properly secured. Call and see it at

RICE'S ENGINE WORKS.

58 Bluxome Street.

Near C. P. & S. P. R. R. Offices.



NOT FAIL to send for our NEW PRICE LIST. More complete than ever. Contains descriptions of every thing required for personal or family use, with over 1000 Illustrations. Send nine cents for it. (Stamps will do.) We sell all goods at wholesale prices in quantities to suit the purchaser. The only institution in America who make this their special business. Address, MONTGOMERY WARD & CO., 227 & 229 Wabash Ave., Chicago, Ills.

## PHOSPHATE SOAP



THE BEST soap for toilet use ever manufactured. BEST because it contains all the excellencies of the most expensive foreign or American soaps without their defects. BEST because it combines strength with delicacy in such a way that its strong detergent qualities do not injure the skin. BEST because it is the result of years of study and experiment in the soap manufacturing business, assisted by modern chemical discoveries. BEST because it contains ingredients beneficial to the skin, which unite chemically with the soap in such a manner as to increase its saponaceous qualities. Every chemist familiar with soap manufacture knows that some ingredients which are in themselves beneficial to the skin cannot be saponified; some are partially neutralized, while others injure the quality of the soap. There are soaps in the market which are to some extent beneficial to the skin, but they are inferior articles for toilet use. PHOSPHATE SOAP is the ONLY article offered to the public which combines all the best elements of toilet soap with medical ingredients beneficial to the skin.

If your wife is in the habit of using cosmetics of any kind, advise her to give up the pernicious practice, as the most harmless face powders obstruct the pores of the skin and sooner or later injure the complexion, while PHOSPHATE SOAP removes all impurities and assists nature in developing a natural, healthy and beautiful skin.

It is an old proverb that an ounce of preventive is better than a pound of cure. Twenty-five cents invested in a cake of PHOSPHATE SOAP will save hundreds of dollars in doctors' bills. It acts as a constant disinfectant, preventing Salt Rheum and other skin diseases.

If your wife will persist in the use of cosmetics, buy her a cake of PHOSPHATE SOAP and tell her to use it every night before retiring. In that way much of the harm will be avoided, as the skin will thereby be able to retain much of its natural vigor and beauty.

No salve or ointment can heal a wound or sore of any kind. Every educated physician will tell you that nature alone can do this. PHOSPHATE SOAP, by its cleansing, soothing and purifying qualities, gives nature a chance to act freely.

Natural beauty surpasses anything which can be imparted by artificial means. PHOSPHATE SOAP gives health to the skin simply by removing impurities and eradicating the poisons which give rise to skin diseases.

Not only for daily use on the face and hands, but for bathing the entire body, there is nothing equal to PHOSPHATE SOAP. It is a thorough disinfectant and removes offensive odors of every kind.

Ladies who have injured the skin by the constant use of cosmetics may do much to restore their faces to that beauty which nature alone can give by constantly using PHOSPHATE SOAP.

For all diseases of the skin use PHOSPHATE SOAP. There is nothing like it for removing impurities and giving the skin a healthy and natural vigor.

Cheap toilet soaps manufactured from rancid and refuse grease injure the skin and are really more expensive than PHOSPHATE SOAP, which retails for 25 cents per cake.

Thousands of articles are palmed off on the public which have no genuine merit, but PHOSPHATE SOAP is the result of modern discoveries of celebrated chemists.

PHOSPHATE SOAP costs no more than other good toilet soaps, while its medicinal qualities make it worth ten times its price to every man, woman and child.

If you want a nice article of Toilet Soap and something that is beneficial to the skin, buy PHOSPHATE SOAP.



## Sonoma and Marin District Fair.

[Written for the RURAL PRESS, by H. E. HALLETT.]

The fair at Petaluma during the week just past was an unqualified success, both in point of attendance and in a large variety of exhibits in the various departments. Marin and Sonoma are two of the oldest settled counties in the State, and rank high in agricultural development, with vast possibilities to be realized in the future. Petaluma is one of the "solid" towns of the coast. Its advantages are not to be ignored, but are steadily bringing it nearer to the full measure of success. There is no wildcat speculation here—its prosperity rests on the broad basis of productive industry. Its tributary country of choice hill and valley lands, with famous flocks and herds, orchards and vineyards, shall continue to yield wealth and challenge attention and admiration from abroad. Petaluma is a well-built city of some 5,000 inhabitants, with many handsome residences with tasteful surroundings. Its hotels are numerous and well kept. In our stay of a few days we formed a high opinion of the people of Petaluma. Though there are many of wealth here, we saw less of empty show and ostentation than is usually met with, and so much of social feeling and refinement, that a residence in this county would be far from unpleasant.

The fair grounds are about a half mile west of the business center of the town, next to the hills, and are extensively fitted up with stands, sheds and stalls. The pavilion is inside the grounds. It is a large, substantial building, with a wing on each side, and conveniently arranged for the display of exhibits. In the middle of the building is a rockery, with ferns growing from the clefts, and showered by a fountain in the center.

The display of fruit was the finest we ever saw. One of the best displays was that of Morris Brothers, consisting of a large table covered with 47 varieties of foreign grapes. In the middle was a horn of plenty, fashioned of willow, and filled with a rich profusion of choice fruits, while running diagonally over the table were arches hung with handsome clusters. Near by was another table (Mr. Talbot's, we think), that vied with this, and belonging to another exhibitor. Over this table hung the crown of a large vine, sawed off, with bearing vines, dependent on which grew a fabulous weight of large purple bunches. The show of apples was extraordinary, and we saw nearly all the leading varieties that grow from the Atlantic to the Mississippi—succeeding there only in certain localities, while here all seemed to be perfect specimens of their kind. There were, besides, fine specimens of pears and peaches, and enormous quinces 18 inches in circumference, and a nice display of semi-tropical fruits by L. P. Rixford, of Sonoma. Mr. Butts, of fruit-drier fame, showed 68 cases of superior dried fruits and vegetables, and a fruit-drier on the grounds. The display of vegetables was good.

Thursday morning, following the annual address by Prof. E. S. Lippitt, which by the way was an excellent one, was the award of the Shafter premiums by J. McM. Shafter, and a speech by the Judge in his usual happy style. He paid some handsome compliments to the worth of true womanhood, and gave much valuable advice and information relative to domestic arts. The recipients of prizes were as follows: Best bread and cakes, Miss Mary M. Moore, of Suscol, Napa county; best soups, Miss L. R. Mills; best salads, Miss Florence Towne, of Petaluma; best pork and beans, Miss Minnie Shafer, of San Rafael. The cookery was of the choicest, and should be practiced in *extenso* throughout the State. There are no premiums so well bestowed as these, and the reward does not cease with the honor and value of the premiums.

The display in the ladies department, of needle and fancy work, was meager. One of the most admirable things was a crocheted mohair shawl. There was a very good display in the art gallery, prominent among which were paintings in the tropics, by Bush—admirable in coloring, and suggestive of tropical warmth and quiet, with a dreamy, subtle languor hovering over the scene; Armstrong's view of the Yosemite, bold and handsome; and some pretty landscapes in oil, by Miss Fannie Miller, of San Rafael.

The display of California products by the S. F. Journal of Commerce was among the most instructive and interesting at the fair, and attracted much attention. In the collection were specimens of all our cereals and samples for comparison of grains from other portions of the United States, also samples of jute, tobacco, cotton, teas, sugars, syrups, beans, peas and a great variety of native woods.

The space allotted to manufacturers was well filled. D. M. Osborne & Co. made the largest display of agricultural machinery, their self-binding harvester No. 10, and self-binding harvester and header No. 11 attracting much attention.

The stock exhibit was a large one, and for the most part local. The citizens of this district evidently take a great pride in their equine stock and placed about 100 on exhibition, comprising thoroughbreds, roadsters, horses of all work and draft horses. Young Geo. M. Patchen and family of six colts shown by Joel

Merchant were admired by those who favor the horse of all work; they were large, handsome, clean built and serviceable. The thoroughbred stallion Hubbard, by Planet, and own brother to Katie Pease, owned by E. R. Rockwood, was one of the finest of that class. Of roadsters Gen. McClellan, owned by J. R. Rose was one of the best, and P. J. Shafter's horse Sunbeam was admired by lovers of fine buggy horses. Among others who made a good display were Robert Crane, Geo. Pacbeco, and T. W. Walker. The visitor at Petaluma will observe as one of the noticeable features the large number of fine horses and vehicles that are commonly seen on the streets, considerably above the average of what is seen in other parts of the State.

Of horned stock, Page Bros., of the Cotate ranch, made the largest display, consisting of Durhams and their grades—ten thoroughbreds and nine grades—receiving first premiums. The cow Nonie Richardson, Kirkland Prince, 2-year-old bull, and El Medico (an old bull) were fine specimens of this noted breed. There was also a handsome flock of Spanish Merino sheep shown from this ranch. P. J. Shafter's Alderney bull Surprise, a premium winner and for sale, was shown together with two other bulls and four cows, making a fine herd. P. Ward was a competitor with five Jerseys. J. R. Rose has one of the best herds of Devons in the State, perhaps the best. He showed eight thoroughbred Devons—seven cows and one bull. The Devon though small is a rich milker and a good dairy breed. Of other stock we saw a Holstein bull six year old, Duke of Holstein, owned by M. D. Hopkins; some fine Cotswold, Spanish Merino and South-down sheep. In the poultry department we saw nearly all the leading kinds of fowls, making a very attractive feature of the fair.

The attendance at the fair Thursday was estimated at 6,000. The races were a leading feature and very good. The track, a good half mile course was in fine condition, and the horses that were anxious and able to split time into seconds were numerous, and have been already reported in the daily papers.

## Premiums at Contra Costa County Fair.

## Stock.

Thoroughbred Horses.—W. A. J. Gift, mare, 4 yrs, Kate Gift, \$15, suck colt, Idler, \$5; R. Hetke, stallion, 4 yrs, Wildside, \$15; E. A. Garrido, suck colt, New Constitution, \$25; E. Murray, stallion, 4 yrs, Overland, \$7.50.

Roadsters.—J. Samuel, mare, 4 yrs, Jenny Lind, \$10, mare, 1 yr, Maud Muller, \$3.50; J. M. Shuey, matched car horses, Enigrant Sisters, \$10; S. J. Tennent, car horse, Telegraph, \$2.50, stallion, 5 yrs, Pinole Patchen, \$10; N. Graver, mare, 5 yrs, Cypsy Huntington, \$10, stallion, 5 yrs, Ygnacio Chief, \$5; E. Murray, mare, 4 yrs, \$5; H. Wells, mare, 3 yrs, Kitty, \$5, mare, 2 yrs, Josephine, \$7; J. Hardy, mare, 5 yrs, Kate, \$5, suck colt, Nelly Bly, \$2.50; W. L. McDonald, mare, 2 yrs, Maggie, \$3.50; W. & E. Shuey, car horse, Collector, \$5.

Draft Horses.—A. B. More, mare, 7 yrs, Dolly, \$5; H. S. Raven, stallion, 4 yrs, Cardinal, \$10, mare, 4 yrs, Kate, \$10, suck colt, Daisy, \$5; F. S. Swartz, stallion, 1 yr, \$3.50; G. Wood, stallion, 1 yr, Honest Tom, \$7; G. More, mare, 1 yr, Mouday, no comp, prem recm; W. W. Beauchamp, suck colt, Minnie Myrtle, \$2.50; W. & E. Shuey, stallion, 7 yrs, Paris Boy, \$5.

Sweepstakes.—H. Wells, pr wk horses, Bell and Jim, \$10; J. E. Martin, 2d do, George and Prince, 2d prem, \$5; R. O. Baldwin, stallion, 5 yrs, Gold Hill, \$10; T. Z. Wittem, mare, 4 yrs, Belle, \$10; N. Jones, mare, 4 yrs, Belmont, \$5; J. T. Walker, colt, 3 yrs, Rosa, \$7; J. H. Andrews, colt, 3 yrs, Prince, \$3.50; R. Duncan, colt, 2 yrs, Dick, \$7; J. H. Andrews, colt, 2 yrs, Tony, \$3.50; N. Jones, colt, 1 yr, Marcus, \$7; A. W. More, colt, 1 yr, Orion, \$3.50; R. Duncan, suck colt, Johnnie, \$5; A. Carpenter, 2d do, John, \$2.50; W. & E. Shuey, family of horses, Paris Boy and colts, \$10; A. L. Stone, stallion, 5 yrs, John, \$5.

## Cattle.

Durhams, Etc.—W. Prince, bull, 4 yrs, Sixth Duke of Monterey, no comp, prem recm; W. Meese, bull, 2 yrs, Milpitas, no comp, prem recm; C. Clark, herd of Durhams, \$25; W. Meese, cow and calf, Ruby and calf, \$15; R. O. Baldwin, cow and calf, Myrtle and Dick, \$7.50, colt, 4 yrs, Village Bud, \$10; Y. Soto, cow, 4 yrs, Shoo Fly, \$5; W. Meese, heifer, 2 yrs, Ruby, \$10; R. O. Baldwin, heifer, 2 yrs, Rose, \$5; W. Prince, suck calf, Cottonwood, \$3; R. O. Baldwin, suck calf, Dick, \$1.50.

Jerseys.—W. Z. Stone, hull, 4 yrs, Joe Bowlers, no comp, prem recm.

Graded Cattle.—W. Z. Stone, heifer, 2 yrs, Bed Bug, Jersey grade, \$3; W. C. Prince, cow, 5 yrs, Maggie, Durham grade, \$10, heifer, 2 yrs, Cherry, Durham grade, \$3, heifer, 2 yrs, Star, Durham grade, \$3, suck calf, Zach, Durham grade, prem recm, heifer, 1 yr, Spot, Durham grade, \$4, suck calf, Tip, Durham grade, \$2.

## Swine.

B. F. Beebe, Berkshire sow, no comp, prem recm; S. L. More, Poland-China sow and sow, no comp, prem recm.

## Dairy Products.

R. H. Wight, fresh butter, \$5; W. Renwick, fresh butter, \$2.50; R. H. Wight, packed butter, no comp, prem recm.

## Poultry.

W. Renwick, poultry, \$5; J. More, ducks, \$2; A. Samuel, turkeys, \$2; H. Steele, fowls, \$2.

## Farm and Orchard.

W. Renwick, corn, 6 acres, \$5; T. Simpson, corn, 6 acres, \$2.50; W. L. McDonald, wheat, 10 acres, no comp, prem recm; A. W. Stone, 6 varieties pears, \$1, almonds, \$1; M. Gregory, quinces, \$1; W. Renwick, apples, \$5; Mrs. J. M. Shuey, dried fruit, no comp, worthy of prem; Mrs. C. Sherman, canned fruit, \$5; Mrs. J. M. Shuey, canned fruit, \$2.50; Mrs. C. Sherman, preserves, \$5; Mrs. J. M. Shuey, 2d, preserves, \$2.50; W. L. McDonald, ssr pork, no comp, prem recm, hams and bacon, no comp, prem recm; Mrs. C. Sherman, pickles, \$2.50.

## Domestic.

Mrs. B. F. Beebe, wheat bread, pies, etc., \$10; Miss J. Fish, wheat bread, pies, etc., \$5; Miss C. Cutler, domestic bread, \$5; Mrs. J. M. Shuey, domestic bread, \$2.50.

## Manufactured Articles.

J. S. Huntington, 1-horse buggy, no comp, prem recm; M. Kirsch, 2-horse wagon, \$10; S. Robin, \$5; Mrs. W. Wells, home-made carpet, \$2.

## Needlework, Painting, Etc.

Mrs. S. Cutler, useful needlework, \$15; Mrs. M. L. Bent, useful needlework, \$10; Miss J. Fish, useful needlework, \$5; Mrs. S. Cutler, child's dress, \$5; Mrs. L. A. Steel, quilt, \$5; Mrs. C. Sherman, quilt, prem recm; Mrs. C. Louck's, lady's dress, \$5; Miss J. Fish, braid work, \$5; Mrs. T. A. Brown, silk embroidery, \$5; Mrs. W. Freilgrath, wrstd embdy, \$5; Mrs. A. B. More, embdy, \$15; Miss J. Fish, embdy, \$5; Carrie Cutler, fancy and needle wk, by Miss under 15 years, no comp, prem recm; Mrs. S.

Cutler, tatting, \$5; Mrs. S. Lyle, embdy, \$10; Mrs. A. B. More, cotton embdy, \$5, transfer wk, \$5; Mrs. L. Steele, knitting wk, \$5; Mrs. H. Niner, crocheted wk, \$5.

## Arts and Penmanship.

R. Hall, floral design, \$2; Mrs. B. F. Beebe, vase boqts, \$2; W. G. Given, sign and ornmt painting, \$2.50; Miss C. Wittenmyer, pencil drawings, \$2.50, drawing, \$2.50; Miss H. Potwin, oil paintings, no comp, prem recm; Miss N. Shirley, photographs, no comp, prem; Mrs. T. A. Brown, wax flowers, \$2.50; Miss J. Fish, minerals, \$2.50, petrifications, \$2.50.

Public School Department.—C. Curry, age 16, penmanship, \$5; Martha Rodgers, age 15, penmanship, \$2.50; Fannie Smith, age 13, penmanship, \$5; Mattie Allison, age 13, \$2.50; Callie Clayton, age 16, pencil drawings, \$5; Mattie Donner, age 17, pencil drawing, \$2.50; Mattie Allison, age 13, pencil drawings, \$5; Willie Givens, age 14, pencil drawings, \$2.50.

## Premiums at Monterey County Fair.

## Stock.

Roadsters.—J. D. Carr, stallion, Vermont; J. G. Sanchez, 3 yrs stallion, Billy Mathews; E. J. Swift, mare 4 yrs, May Queen; P. G. Anzar, mare 3 yrs, Lalla Rookh; J. D. Carr, horse for all purposes, Young Defiance; P. G. Anzar, stallion, 2 yrs, J. Splann; M. Lynn, sucking colt, Brigham Young.

Horses for all Purposes.—B. V. Sargent, mare, 3 yrs, Monterey Damsel; C. Z. Canetti, gelding, 3 yrs, Billy Boyce; H. Corey, gelding, 2 yrs, Vermont; J. R. Hebborn, mare, 4 yrs with colt, Susannah; W. W. McCoy, mare, 3 yrs, Lady Griffin; W. Vanderhurst, mare, 1 yr, Mamie; P. Kelly, stallion, 1 yr, Sam.

Draft Horses.—Wm. B. Ford, stallion, 3 yrs, Fullon; W. W. McCoy, stallion, 2 yrs, Boston Jim; Joe. Withs, mare, 3 yrs, Becca; E. V. Sargent, carriage horses, Monterey, Damsel and Silver Winner; J. C. Storn, buggy horses, Dolly and Nellie; Wm. Robson, buggy horse, Curley.

Sweepstakes.—J. D. Carr, stallion, with 4 colts, Membrino; J. R. Hebborn, mare, with 4 colts, Susannah; W. B. Ford, stallion, Fullon; J. G. Sanchez, 2d stallion, Billy Mathews; Jud Parsons, mare of any breed, Fannie; E. V. Sargent, 2d do, Monterey Damsel; J. D. Carr, best thorbred ever shown in the county, Jessie D.; J. A. Hurd, gelding, Billy Boyce; Ed Harris, colt, Membrino.

## Cattle.

Durham Cattle.—D. M. Clough, bull, 17th Duke of Manchester; W. Robson, bull calf, Jim, cow 4 yrs, Rosebud; D. M. Clough, cow, 1 yr, Miranda 13.

Graded Cattle.—G. Graves, cow, 3 yrs, Sallie Bell; W. W. McCoy, cow, 2 yrs, Lady; Jas. Thompson, cow, 1 yr, Daisy; G. Graves, heifer calf, New Constitution, bull calf, Davy Crockett.

## Swine.

J. H. Campbell, boar of any breed, Berkshire; H. Corey, sow, Berkshire.

## Poultry.

H. Corey, Plymouth Rock fowls.

## Farm Products.

C. W. Cox, buckwheat, \$2.50; M. Williams, wheat, \$2.50; W. W. McCoy, hams, \$2.50, bacon, \$2.50, lard, \$2.50, salt pork, \$2.50, corned beef, \$2.50; Hudson & Holloway, flour, dip; Wm. Brumwell, garden seeds, \$5; H. Corey, potatoes, \$1; C. W. Cox, beans, \$1; H. Corey, tomatoes, \$1; P. M. Jacks, apples, \$7.50; J. Waters, pears, 17 var, \$5, plums, \$2, quinces, \$1; C. W. Cox, fruit in glass, \$5, pickles, \$1.50, sweet pickles, \$1.50, preserves, \$2.50, jellies, \$2.50; H. Corey, butter, \$5; E. K. Abbott, bees, \$1; H. Corey, sorghum, \$2.50; M. Riordan, almonds and figs, hon men; R. J. Adcock, honey, \$2.50; J. H. Campbell, Egypt corn, hon men; Pinkerton & Jackson, broom corn, \$1, maize, \$1; A. McAdams, beans, \$1.

## Manufactured Articles.

Iverson Bros., family car, \$7.50; F. Gates, gunsmith work, \$5; M. Hughes, harness and saddlery, \$7.50, team harness, \$5, buggy harness, single, \$5, do double, \$5, lady's saddle, \$3, gent's saddle, \$3; Vanderhurst, S. & Co., parlor furn, \$5, chamber furn, \$5; F. J. Hoppe, wardrobe, spec prem.

Domestic Manufactures.—Mrs. W. W. McCoy, crocheted quilt, \$3; C. W. Cox, Cal wool socks, \$1; Mrs. L. Harrison, cotton stockings, \$1; Mrs. C. Hoffman, rag carpet, \$3; Mrs. J. B. Smith, quilt, \$3; Mrs. Hamilton, cotton quilt, \$3; Jennie and Mary Graves, pin cushion, dip; Annie Beaven, cambric embdy, \$1.50, silk embdy, dip; Mrs. Jacob Lurz, knit tidy, dip; Mrs. L. Dean, embd handkf, dip; Mrs. L. Hansen, lace skirt, \$1.50; V. Zanetti, bead wk, dip; Mrs. C. Franks, canvas wk, dip; V. Zanetti, worsted wk, \$1.50; Mrs. W. L. Carpenter, embd sofa cushion, dip; Mrs. J. B. Smith, embd lady's collar, dip; Mrs. L. Hansen, knit shawl, dip; Mrs. Ware, tufted rug, dip.

## Miscellaneous.

Fred Dunham, sign painting, \$5, carriage painting, \$5; Mrs. C. W. Cox, knit mach, \$5, can buckleberries 5 yrs old, hon men; J. R. Hodson, photography, dip and silver cup and saucer; Boyesen & Struckmann, photography, 2d prem, dip and silver cup; J. S. Taylor & Co., baking powder, dip; Mrs. J. B. Smith, silk quilt, \$2.50; Master W. Beaven, pencil drawing, dip; Mrs. L. H. Garrigus, silk quilt, hon men; Hudson & Holloway, corn and oat meal, crushed and pressed wheat, \$2; A. McAdams, meat hook, \$1.

## Mendocino County Fair Premium Awards.

In many cases second premiums have been awarded where none were offered by the society; these are simply named in the following list. They were understood to be recommendations for special premiums, which have not yet been acted on by the Board.

## Horses.

Grade Horses.—H. Standley's 4 yrs stallion Pilot, dip; A. O. Carpenter's brood mare Dolly, 4 yrs, dip, suckg horse colt Selim, \$3; J. K. P. Shelton, 2d, brood mare, yrly horse colt, \$4; G. W. Heald, 2d, horse colt, not over one yr.—B. G. Mast, yrly mare colt, \$4, 2 yrs horse colt, \$3, 3 yrs horse colt, \$10.

Horses of all Work.—J. L. Hughes, matched span; H. L. Norton, stallion and fam of 5 colts, —, 4 yrs mare, dip, 3 yrs mare, \$3, 2 yrs mare, \$6.

Draft.—Jos. Spotswood, suck horse colt, \$3; B. G. Mast, 2d suck horse colt, mare, 4 yrs, dip; J. L. Hughes, pr draft horses, prem.

Carriage and Saddle.—G. W. Heald, buggy horse, \$5; M. C. Briggs, 2d buggy horse, J. Felton, matched car tm, dip.

## Cattle.

Thoroughbred.—J. M. Standley, Durham cow, dip; De Camp Bros., Alderney bull, \$10.

Graded Stock.—J. C. Thompson, yk oxen, spec prem; A. C. Sherwood, 2d yk oxen; P. T. Muir, bull calf, \$3; J. M. Standley, 2 yrs heifer, \$6.

## Sheep.

Thoroughbred Sheep.—Upp & Whiteborn, Spanish merino buck 2 yrs, dip, 2 yrs and 1 yr Spanish merino ewes.

## Goats.

Angora Goats.—A. E. Sherwood, goat, dip, 2 bucks, ewe and grades.

## Swine.

W. V. Powell, Poland-China sow, \$5; Poland-China boar, dip, 5 Poland-China pigs, \$5; B. G. Mast, graded sow \$5.

## Poultry.

B. G. Mast, 4 Light Brahmas, \$5; J. Haehl, turkeys, Mrs. H. Standley, Golden Spangled Polands.

## Vegetables.

N. Wagenseller, pie plant, \$1; P. L. Hall, 1 var potatoes, \$2, commd display, 4 var; P. T. Muir, muskmelon,

\$1; W. T. Rowllson, corn on stock, \$1; J. Haehl, squashes, \$2; E. Burgess, sugar beets, \$1, carrots, \$1.

## Fruits.

N. Wagenseller, collection from 1 orchard, silver medal, apples, \$2, 6 var apples, \$2, collect pears, \$2.50, 6 var pears, \$1.50, quinces, \$1, spec prem recm for peaches and plums; Mrs. C. Coats, pears, \$1, 2d collect from 1 orchard, dip.

## Jellies, Etc.

Miss S. Upp, jelly, dip, pickles, dip; T. McCowen, Mission raisins, \$3; G. Scott, fresh butter, silver medal, packed butter, dip; J. W. Bell, 2d packed butter, \$5; John P. Peters, white wine, \$2.50; Mrs. R. E. Madden, honey in comb, dip.

## Manufactures.

R. W. Colson, boots and shoes, silver medal; T. McCowen, brooms and wisps, dip; W. S. Rowllson, model steam engine, silver medal; A. O. Parsons, harness, \$10, saddlery, dip; J. Van Nader, moss and shell work, napkin ring; Mrs. D. Tuttle, agriclrl wreath, napkin ring; A. O. Carpenter, collect photographs, dip; Mrs. A. McCowen, feather wk, dip; Mrs. H. M. Carpenter, water color, \$5; Miss G. Carpenter, collect paintings, \$10, portrait in oil, \$5; pencil sketch fm nature, \$2.50; pencil drawing, \$2.50; Mrs. J. S. Holmon, oil painting, \$5; Mrs. D. Tuttle, collect minerals, \$10; Miss N. Wagenseller, bead wk, nap ring; Mrs. J. L. Wilson, wax statuary, \$3; Mrs. M. E. Cook, silk embdy, dip, hand sewing, \$10; wrstd embdy, \$3, prem recm for mach sew; Mrs. M. Anderson, embd skirt, nap ring; Mrs. D. Tuttle, silk quilt, \$5; Mrs. H. M. Carpenter, Spanish lace, \$2; Mrs. A. McCowen, worsted wk, \$2; Mrs. J. W. Bell, hearth rug, dip; Mrs. R. E. Madden, rag carpet, dip; Mrs. D. L. Sawyer, rugs, nap ring; Mrs. Jos. Sheppard, yarn socks, nap ring, yarn stockings, nap ring, stockg yarn, \$2; Mrs. M. P. Buck, log cabin quilt, dip; Mrs. J. Tatham, crocheted wk, \$2; D. W. Burchard, mach sewg, \$5; Mrs. H. E. McAllister, silk quilt, spec prem; Mrs. D. Tuttle, washg and ironing, dip; Mrs. B. Mast, wheat bread, dip, sponge cake, nap ring; Mrs. W. Cunningham, fruit cake, nap ring; Mrs. D. Tuttle, collect plants and shrubs, silver medal, pelargoniums, 2.50, begonias, \$2.50; Mrs. B. F. Coates, fuchias, \$2.50, bouquets, dried grasses and flowers, \$2; J. C. Thompson, oleanders, \$2.50.

## Children's Department.

Miss Ora Morgan, crocheted wk, \$2, shell and moss wk, \$2; wrstd embdy, nap ring; Laura A. Tuttle, transfer wk, \$2, silk picture, nap ring; Addie Lambert, hand-made shirt, dip; Florence, McElhany, hand sewg, nap ring; Dolly Vincent, feather flowers, \$2; Clara Wheeler, wax wreath, \$2; Florence Flagler, pencil drawing, nap ring; Recm of spec prem to Ocean, Bridgeport, Calito, Big River and Williams Valley district schools for pencil drawings; W. Mullen, penmanship, dip; W. S. Rowllson, mechan skill and wkmshp, silver medal.

## Sweepstakes.

D. M. Osborn & Co., self-dumping rake, dip, mower, dip, combined mower and reaper, dip, reaper and binder, with header attachmt, dip, mower, dip; Furst & Bradley (J. Kraker, agent), gang plow, dip, Clipper plows, dip; Fish Bros., (J. Kraker, agent), two-horse wagon, dip; Baker & Hamilton (B. G. Mast, agent), Winnebago seeder and broadcast sower, dip; D. M. Osborn & Co., display agricultrl impts, dip; Amer sew mach for all work, dip; sew mach for fancy work, dip; spec prem recm to Mrs. R. E. Madden, lace wk; Mrs. J. Tatham, human hair wk; Mrs. H. E. McAllister, scrap book and antiquarian curiosities.

## List of U. S. Patents Issued to Pacific Coast Inventors.

[From Official Reports for the "Mining and Scientific Press," Dewey & Co., Publishers and U. S. and Foreign Patent Agents.]

FOR THE WEEK ENDING SEPT. 30TH, 1899.

220,076.—WAKKIN—Andrew Jackson, S. F.  
220,180.—DREDDING MACHINE—S. W. Shaw, S. F.  
220,102.—HAND WEEDING TOOL—H. White, Quincy, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

## OUR AGENTS.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. L. THARP—San Francisco.  
B. W. CROWELL—California.  
A. C. KNOX—Pacific Coast.  
S. V. BLAKELEY—State of Nevada.  
G. W. McGRAW—Santa Clara county.  
MILTON KENNEDY—Kern and Fresno counties.  
J. B. BACHELDER, Shasta County, Cal.  
H. H. MESSENGER—Arizona.

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographical. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

PACIFIC RURAL HANDBOOK.— \* \* \* \* The little work before us could not have been treated of by a more competent authority. The book manifests throughout the author's ardent love for the beautiful in nature, and is well calculated to inflame and stimulate the same sentiment in its readers.—*Rural New Yorker*.

The book is written in a very pleasing manner by one who thoroughly understands his subject. In laying out private grounds or gardens, or in the cultivation of flowers and plants, to one who is inexperienced in such matters, a copy of this book will be found valuable.—*San Jose Mercury*.

The "PACIFIC RURAL HANDBOOK," written by Chas. H. Shinn for the publishers of the PACIFIC RURAL PRESS, will be sent, post-paid, in substantial cloth binding for \$1; in full leather, \$1.50; in cloth, interleaved with fine ruled paper for memoranda, \$1.50. Address

DEWEY & CO., PUBLISHERS,  
No. 202 Sansome Street, San Francisco.

How to STOP THIS PAPER.—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate the copy sent.

EXTRA COPIES can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.

THOMAS DUNSDON will oblige us by sending his P. O. address to this office.







## Agricultural Articles.

## The Famous "Enterprise."

PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in habbitted boxes.

Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs.

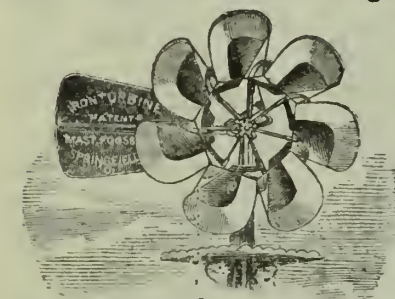
All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

**HORTON & KENNEDY,**

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

## Iron Turbine Wind Engine



## AND BUCKEYE FORCE PUMP.

This machine made of iron, wheel, vanes, etc., made of No. 24 sheet iron, bound and braced with best quality of wrought bar iron, gives more power than any other wheel of same diameter. No wood to swell, shrink, rattle or be destroyed by the wind. The most durable and the best Windmill ever invented. For particulars, price lists, etc., address

**D. E. GOLDSMITH, State Agent,**  
419 Sansome street, San Francisco.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

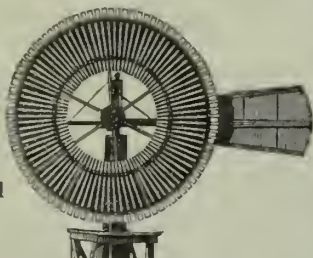
**MATTESON & WILLIAMSON,**  
STOCKTON, CAL.

**\$50.**

The New  
**Worthington**

Windmill

Manufactured  
by



**W. D. PARSON,**

1364 San Pablo Avenue, Oakland, Cal.

Also, maker of the "Colorado Wind Engine," Wind Grist Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern of Deep Well and Artesian Lift Pump Cylinders. Circulars free.

## The Boss Pruner.

Patented Jan. 8, 1878.

**ENTIRELY NEW!**

Works on a cog principle. Smallest size cuts one inch, and largest size two inches in diameter. Has been thoroughly tested, and given perfect satisfaction. Sold by

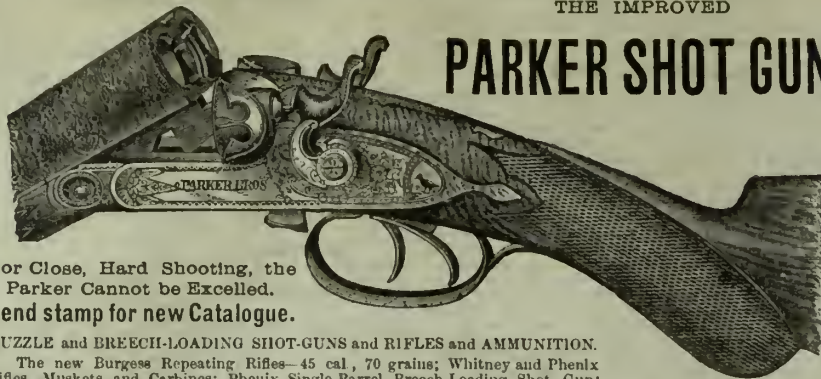
**GEORGE LARKIN,**  
Newcastle, Placer County, Cal.

**WANTED.** A man fully competent to manage the sale of Dr. NAPHY'S FAMILY MEDICAL Work and take charge of territory. Must be a good organizer and able to hire and control men; also willing to go into the field and learn how to sell the book and then teach others. Will pay a man who can do this business from \$1,000 to \$3,000 a year after a fair trial. Give age, experience, and send this.

**W. J. HOLLAND & CO., Chicago, Ill.**

THE IMPROVED

## PARKER SHOT GUN.



For Close, Hard Shooting, the  
Parker Cannot be Excelled.

Send stamp for new Catalogue.

MUZZLE and BREECH-LOADING SHOT-GUNS and RIFLES and AMMUNITION.

The new Burgess Repeating Rifles—45 cal., 70 grains; Whitney and Phenix Rifles, Muskets and Carbines; Phenix Single-Barrel Breech-Loading Shot Gun; Allen Rifles, 22, 32, 38 and 44 caliber, rim fire, very cheap; Lovell & Sons Revolvers, the best and the cheapest.

**E. T. ALLEN, Agent for Pacific Coast,**

NO. 515 MARKET STREET, - - - - - SAN FRANCISCO, CAL.

In consequence of spurious imitations of  
**LEA AND PERRINS' SAUCE,**  
which are calculated to deceive the Public, Lea and Perrins  
have adopted A NEW LABEL, bearing their Signature  
thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE  
SAUCE, and without which none is genuine.  
Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper.  
Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London,  
&c., &c.; and by Grocers and Oilmen throughout the World.

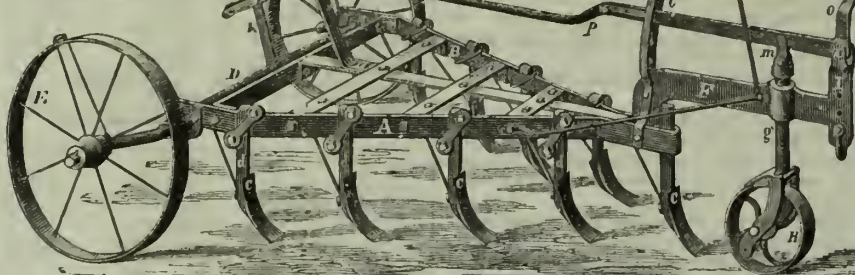
To be obtained of CROSS & CO., San Francisco.

## HOLLY &amp; MAGOON'S CULTIVATOR.

Manufactured by Holly & Magoon, Stony Point, and E. J. Holly, Lakeville, Sonoma Co.

Jones' Patent, May  
29th, 1877.

Holly & Jones' Pat-  
ent April 8th, 1879.

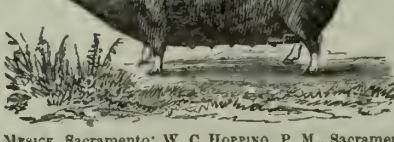


For further particulars address the Manufacturers, or M. C. HAWLEY & CO., Agents, San Francisco and Sacramento, Cal.

## A BARGAIN IN BERKSHIRES.

The undersigned offers for sale for the next 30 days a limited number of Pure Bred Berkshires, aged from 3 to 18 months. These pigs are all bred by myself from stock imported from some of the most noted breeders in the United States, and include several Boars fit for service, and a few choice Sows in farrow, to imported Boars. These pigs are not culls, but the choice pigs of their respective litters.

PRICE LOW FOR CASH.



A perfect and complete pedigree, and a written guarantee they are as represented sent with each animal sold. Correspondence solicited. Among purchasers of my stock are the following gentlemen well known as men of careful discrimination: Dr. G. A. SHURTLEFF, Superintendent State Insane Asylum; GRANT I. TAGGART, Oakland; J. D. SMITH, Prof. Livermore College; LELAND STANFORD, by R. H. COVEY; Col. PATER Saxe, San Francisco; L. U. SHIFFER, President S. J. V. Ag. Society; W. MERRICK, Sacramento; W. C. HOPPING, P. M., Sacramento.

**Bellota, San Joaquin Co., Cal.**

**ALFRED PARKER,**

## American Exchange,

Corner of Sansome and Halleck Streets,

Opposite Wells, Fargo & Co.'s Express.

SAN FRANCISCO

FURNISHED WITH ALL MODERN IMPROVEMENTS.

Board and Room from \$1.25 to \$2 per day; Board, \$6 per week—\$25 per month; Rooms, \$3.50 to \$7 per week.

Free Coach to the House from all Boats and Trains. Street Cars pass the Door.

**THOS. BRYAN, Proprietor.**

## MISSION ROCK DOCK AND GRAIN WAREHOUSES.

SAN FRANCISCO, CAL.

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

GRAIN consigned to us by water insured in open policy at Special Rates. Wheat shipped by railroads via Stockton, care of the CALIFORNIA STEAM NAVIGATION CO. will be received by them at Stockton and delivered at Mission Rock Warehouse at same rate of freight as to Oakland Wharf. Freight paid, Fire Insurance and Loans effected and proceeds forwarded free of commission. Money advanced at bottom rates, interest payable at end of loan. Fire Insurance 1% per annum. Short Rates of Storage—First month, 30 cents per ton, or 40 cents per ton if delivered. Each month thereafter 20 cents per ton. Weighing in, free. Weighing out, 10 cents per ton.

**CHAS. H. SINCLAIR, Superintendent,**

Or to the California Dry Dock Co., Office, No. 318 California Street, San Francisco.

Engraving done at this office, Dewey & Co. { 202 Sansome St. } Patent Ag'ts.

## Stock Notices.

## BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

**JOHN RIDER,**

13th and A Streets, Sacramento City, Cal.

## ANGORAS AT THE FAIRS.

The undersigned would announce to those interested in ANGORA GOATS, and the public generally, that he will have a lot of

## Choice Angora Bucks

On Exhibition at the State and District Fairs

This fall, namely: At the State Fair at Sacramento, the Golden Gate Fair at Oakland, the Nevada State Fair at Reno, and the Oregon State Fair at Salem.

These Bucks will be sold at fair rates.

**JOHN S. HARRIS,**

Hollister, San Benito Co., Cal.

## JOHN ROGERS &amp; SONS,

## GENERAL STOCK AND SALE YARD,

Corner Market and 9th Sts., San Francisco.

HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN. Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

## HERRMANN'S HATS

ARE THE BEST!



Try one and you will Wear no other.

## Spring and Summer Styles,

— AT —

336 Kearny St., bet. Bush and Pine,

— AND —

910 Market St., above Stockton.

Send for Illustrated Spring Style Catalogue.

## ST. DAVID'S.

## A FIRST-CLASS LODGING HOUSE.

CONTAINS 113 ROOMS.

715 Howard St., near Third, San Francisco.

This House is especially designed as a comfortable home for gentlemen and ladies visiting the city from the interior. N. dark rooms. Gas and running water in each room. The floor are covered with body Brussels carpet, and all of the furniture is made of solid black walnut. Each bed has a spring mattress, with an additional hair top mattress, making them the most luxurious and healthy beds in the world. Ladies wishing to cook for themselves or families, are allowed the free use of a large public kitchen and dining room, with dishes. Servants wash the dishes and keep up a constant fire from 6 A. M. to 7 P. M. Hot and cold baths, a large parlor and reading room, containing a Grand Piano—all free to guests. Price single rooms per night, 50 cts.; per week, from \$2.50 upwards.

**R. HUGHES, Proprietor.**

At Market Street Ferry, take Omnibus line of street cars to corner Third and Howard.

## SEND FOR THE

**\$1.50**

## Homœopathic Medicine Case.

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address

**BOERICKE & TAFEL,**  
Homœopathic Pharmacy, San Francisco.

## A Card to Grangers and Farmers.

HAY, GRAIN, HORSES and CATTLE

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nos. 11 and 13 Bluxome St., San Francisco.

## AMERICAN MACHINE AND MODEL WORKS.

Experimental and Fine Special Machinery, Planing, Gear Cutting, Patterns, Models for Inventors, etc. Printing Press and General Machine Repairing. Punches, Dies, Taps, Reamers, etc., made and repaired.

**I. A. HEALD, Proprietor.**

514 Commercial Street, above Sansome, San Francisco.



H. J. HASKELL,



MANUFACTURER OF

CARRIAGES,  
BUGGIES,  
— AND —  
SPRING WAGONS,

At the Lowest Rates.

Corner of Alameda and White Streets,  
SAN JOSE, CAL.

THE SINGING CLASS SEASON.

Just out. THE TEMPLE. (\$9.00 per dozen), a splendid new Singing School, Convention and Choir Book; by Dr. W. O. PERKINS. As a Choir Book, equal to any of the largest ones. As a Singing School Book, better than the cheaper and smaller ones, since it has much more music; that is, 130 pages of new Songs and Glees, and 150 pages of the best Metrical Tunes and Anthems. Specimen copies mailed, post-free, for \$1.00.

Remember also THE VOICE OF WORSHIP (\$9.00 per dozen), recently advertised; JOHNSON'S NEW METHOD FOR SINGING CLASSES, an excellent book, (\$6.00 per dozen), and L. O. Emerson's ONWARD, (\$7.50 per dozen). Send for Specimens, Catalogues or Circulars.

Just out. STUDENTS' LIFE IN SONG. (\$1.50) with introduction by CHARLES DUDLEY WARNER; 115 of the loliest of College Songs. A capital book for social singing.

Just out. THE VOICE AS A MUSICAL INSTRUMENT, by C. H. S. DAVIS, M. D., (37 cts.) An invaluable treatise on the construction and management of the Vocal Organs. With plates.

Just out. The last number of THE MUSICAL RECORD. Send 6 cts for one number, \$2.00 for the year. "Wouldn't be without it for five times the price."

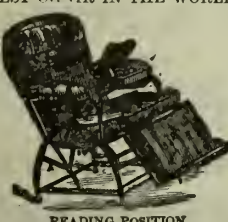
OLIVER DITSON & CO., BOSTON.  
C. H. Ditson & Co., 843 Broadway, N. Y

THE WILSON ADJUSTABLE CHAIR,

With 30 Changes of Position.

Patented in the United States and Foreign Countries.  
BEST CHAIR IN THE WORLD.

Parlor, Combining  
LIBRARY, Beauty,  
Invalid Chair, Lightness,  
Rocker, Strength,  
BED or Simplicity  
LOUNGE, and  
READING POSITION. Comfort.



Same Chair in Cane Seating, very desirable for summer. Manufactured of the best of wrought iron and rivets. Castors made purposely for the Chair. Everything to an exact science. **IT WILL LAST A LIFE-TIME.** Has been awarded Medals, Prizes and Diplomas for its superiority and merit wherever it has been exhibited. Orders by mail promptly attended to. Goods shipped to any address, C. O. D. Send for Illustrated Circular.

Address the WILSON ADJUSTABLE CHAIR MFG CO.,  
535 Washington St., Boston

J. P. JONES. J. THOMPSON.

JONES & THOMPSON,

Wholesale and Retail Dealers in

Hay, Grain and Feed.

Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,  
1535 Mission St., San Francisco.

M. COOKE. R. J. COOKE

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,  
AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREGORY.

Nathaniel Curry & Bro.,

113 Sansome Street, San Francisco,



Sole Agents for the


Sharps Rifle Co., of Bridgeport, Conn.

FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO.

Also Agents for W. W. GREENER'S Celebrated Wedgefast, Chokebore, Breech-loading DOUBLE GUNS; and all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America. AMMUNITION of all kinds in quantities to suit.

Week's Grape, Fruit and Flower Picker.

SIZE NO. 1.



Valentine's Patent, Aug. 1, 1865

These cuts represent one of the most useful articles of its kind yet invented, and supplies a want that has long been felt. Every one engaged in picking fruit knows the difficulty of detaching the fruit from the branch, and depositing it in the basket or other receptacle for receiving it, without bruising the fruit, and particularly with grapes, unless very great care is exercised, each bunch will be more or less injured. The tool is a pair of shears arranged with an elastic holdfast that cuts the stem and holds it, so that the fruit can be deposited in the receptacle for receiving it, without touching it with the hands.

It will take the smallest cherry, or hold a bunch of grapes weighing five pounds.

FOR PICKING ORANGES, where the branches are full of thorns, it will save many a hard word.

FOR LARGE PEARS AND CHOICE FRUIT of any kind, it is an invaluable assistant. Sent by mail on receipt of \$1.25.

FLOWER PICKER.

THE NO. 2, OR SMALLEST SIZE,

Is Particularly Adapted for

FLOWERS,

And will be found an invaluable assistant in the Garden or Hot-house.

THEY ARE MADE OF THE BEST MATERIAL, and finished in a workmanlike manner. Sent by mail on receipt of \$1.00.



FOR SALE BY

Dunham, Carrigan & Co.,

SAN FRANCISCO.

— OFFICE OF THE —

BLACK POINT PACKING AND SLAUGHTER HOUSE.

MERRY, FAULL & CO., Proprietors.

TO OWNERS OF LIVE STOCK!

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

SQUARE DEAL and FULL MARKET PRICES

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices.

Please address our  
Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.

WELLS, RICHARDSON & CO'S

PERFECTED BUTTER COLOR

Gives Butter the gilt-edge color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.

60 Elegant Perfumed Cards, Chromo, Motto, Lily, Etc., 15c. Gift with each pack. H. M. SMITH, Clintonville, Ct.

60 Chromo, perfumed, Snowflake & Lace cards, name on all 10c. Game Authors, 15c. Lyman & Co., Chiltonville, Ct.




TRADE MARK

BUHACH

G. N. MILCO'S

CALIFORNIA UNIVERSAL

INSECT EXTERMINATOR



Sibbons

Pyrethrum Cinerariæ Follum—A California Production.

THE MOST WONDERFUL DISCOVERY OF THE NINETEENTH CENTURY.

This wonderful Insect Powder will exterminate Flies, Weevils, Caterpillars, Mosquitoes, Midges, Crickets, Cockroaches, Spiders, Tarantulas, Scorpions, Ants, Hawk-bugs, Phylloxera, Plant Lice, Moths, Beetles, Grasshoppers, Locusts, Bed-bugs, Fleas, and every species of insects.

Remember that none is genuine unless my Trade-Mark is attached to every package.

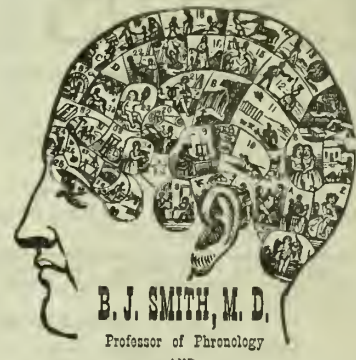
\$100 WILL BE PAID IF IT FAILS TO KILL ANY INSECT.

Endorsed by Prof. E. W. Hilgard, of the University of California, and by Prof. C. V. Riley, Chief Entomological Commissioner at Washington, D. C., and pronounced superior to any imported article, and perfectly harmless to man and beast.

G. N. MILCO.

Patentee and Sole Manufacturer, Stockton, Cal.

CHARLES LANGLEY & CO., Wholesale Druggists, Sole Agents, S. F.



B. J. SMITH, M. D.

Professor of Phrenology

— AND —

MENTAL HYGIENE.

Proprietor of the Hygienic Medical and Phrenological Institute, 633 California Street, above Kearny.

This Institute has of late been entirely refitted, and is now far more healthful and conveniently arranged for the reception of patients and boarders than ever before, and by combining medical hygiene with the various Water Cure treatments and the most powerful Electrized Horseshoe Magnet in the world, claims to cure speedily and permanently all forms of acute or chronic nervous derangements, Brain, Spinal and Heart diseases, St. Vitus Dance, Palsy, Epilepsy and all Rheumatic, Liver and Kidney troubles. The institution has for the past 20 years made a specialty of treating all forms of weaknesses and diseases peculiar to males and females. By the use of hygienic remedies and electro-motopathy the worst forms of impotency and seminal weakness in males and sterility in females are speedily and permanently overcome. Hygienic board, with or without rooms. Terms moderate. Electro-thermal, Russo-Turkish and Medicated Baths given daily.

Mrs. Dr. Smith as Matron has charge of the female bathing department.

DR. SMITH has practiced Phrenology the past 30 years, and during the last 20 years has been constantly using the science connected with Phrenology, in examining or diagnosing disease in this city, and claims to have made discoveries in the SCIENCE OF Phrenology that enables him, by an examination of the head, even blindfolded, to determine the disease to which the person is constitutionally subject, or whether the disease at the time afflicting the person, is the result of accident or hereditary weakness; whether CONSUMPTIVE, DYSPEPTIC, RHEUMATIC, GOUTY, NEURALGIC, LEUCORRHEAL, or SEMINAL. Especially does the form of the head indicate the strength of the uterine, genital or reproductive system. The head is also an index of the natural strength of the lungs, heart, stomach, liver, kidneys, spleen, back or vertebra, and it determines the power of the system in warding off and overcoming disease of all kinds.

Ladies or gentlemen, desiring of obtaining a thorough and correct Phrenological examinations with Fowler and Wells' charts, will meet with a respectful reception at his consulting rooms. Parties can depend upon a reliable delineation of the character of their intimate male or female friends, by presenting a clearly defined photograph.

Phrenological or Physiognomical examinations without charts, \$1.50; with charts, from \$2 to \$3.

INVITATION TO INVALIDS

And all persons who are in any way out of health, who desire to know the nature and causes of their disease, may avail themselves of an examination through phrenology in regard to health free of charge, between the hours of 9 A. M. and 3 P. M. Sundays from 9 A. M. to 12 M.

PLEASANT SUMMER READING.

THE NEW PENELOPE

— AND —

Stories of California Life.

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. Agents wanted for this popular work. Easy sales and large commissions. Address

MRS. F. F. VICTOR,  
721 Market St., S. F., Bancroft's Building, top floor.  
PRICE, \$2 00.

Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.



**Commission Merchants.**

DAVIS &amp; SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

References.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

BRYANT &amp; COOK,

Commission Merchants,

AND DEALERS IN

GRAIN, FLOUR, ETC.

No. 8 Davis St., near Market, San Francisco.

CHARLES NAUMAN.

FRANK NAUMAN.

C. &amp; F. NAUMAN &amp; CO.,

Wholesale Commission Merchants

— AND DEALERS IN —

GRAIN, POTATOES, FRUIT, BUTTER, POULTRY, EGGS, GAME, ETC.

227 &amp; 229 Washington St., San Francisco.

Consignments Solicited.

R. J. TRUMBULL &amp; CO.,

SUCCESSORS TO

R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock

EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

\*"Guide to the Vegetable and Flower Garden will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL &amp; CO.,

419 and 421 Sansome Street, S. F.

1,000,000!

Strawberry, Raspberry, Blackberry and Cranberry Plants.

STRAWBERRY PLANTS.—The Essex Beauty, Crescent, Cinderella, Forest Rose, Glendale, Jucunda, Monarch of West, Langforth Prolific, Triomphe d' Gand, Wilson Albany.

RASPBERRY PLANTS.—Cuthbert Early, Early Prolific, Reliance, Pride of the Hudson, Brandywine, Herstine, Philadelphia Red, Clark, Henrietta, Hornet, Belle de Fontenay, Delaware Bristol.

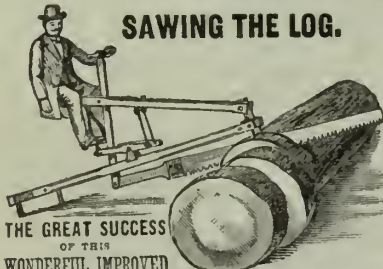
BLACKBERRY PLANTS.—Deering Seedling, Early and the most productive of all. I will give satisfactory proof that these Berries have realized \$750 per acre. It paid more than twice as much as the old varieties; also the Early Cluster, the Vins Seedling, Kittatiny, the Mammoth Cluster, Missouri Mammoth, Dorchester and Lawton.

CRANBERRY PLANTS.—The Cherry Cranberry Vines at \$10 per 1,000, by mail 64 cents more.

I will sell to responsible parties on time, part cash, 10-acre field of Cranberry vines under cultivation. Can be seen at the place. Send for Catalogue.

H. NYLAND,

Boulder Island, San Joaquin River.

**SAWING THE LOG.**

THE GREAT SUCCESS

OF THIS

WONDERFUL IMPROVED

LABOR SAVING

RIDING SAW MACHINE

is fully

demonstrated by the number in use and the present

demand for them. It saws Logs of any size. One

man can saw more logs or cord wood in one day

and easier than two men can the old way. It will

saw a two foot log in three minutes. Every Farmer

needs one. Township agents wanted. Send for

Illustrated Circular and Terms.

Address W. W. BOSTWICK &amp; CO.,

178 Elm St., Cincinnati, O.

**GOOD CROPS ALL SEASONS.**

Productive Farms for sale on easy terms in Santa Cruz and adjoining counties. State requirements and obtain suitable particulars from the Real Estate

EXCHANGE &amp; MART,

Santa Cruz, Cal

METRICK &amp; Co., Insurance and Money Brokers and Agents

**ALMOND HULLER.**

Will Hull One Ton Per Day.

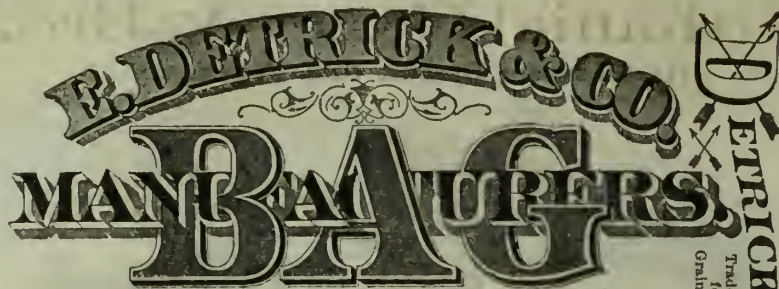
ONE OR TWO MEN CAN RUN IT.

Price, \$25. Address

A. O. RIX, Washington, Alameda Co., Cal.

Patents

OBTAINED IN U. S. AND FOREIGN COUNTRIES; trademarks, labels and copyrights registered through DEWEY & CO.'S MIXING AND SCIENTIFIC PRESS Patent Agency, San Francisco. Send for free circular



SOLE PROPRIETORS AND MANUFACTURERS

— OF THE —

**Celebrated Detrick "E W" 22x36 Grain Bag.**

CALCUTTA, DUNDEE and PACIFIC JUTE HAND-SEWED BAGS always on hand. OUR No. 1, No. 2 and No. 3 SECOND-HAND GRAIN BAGS selected and graded with care.

**TWINES.** 3, 4 and 5-ply for Grain Bags, 6 and 8-ply for Potato Gunies, 3-ply EXTRA FINE for Flour Bags, made expressly for our trade and QUALITY GUARANTEED.

FLOUR BAGS Printed to Order WITHOUT EXTRA CHARGE. POTATO GUNNIES, Wool, Bean, Ore and Salt and Seamless Cotton Bags.

**Tents, Awnings and Hydraulic Hose.**

ORDERS PROMPTLY FILLED AT LOWEST MARKET RATES.

119, 121 and 123 Clay St., and 118 and 120 Commercial St., San Francisco.

**Secure Patents and TRADEMARKS.**

Through Dewey &amp; Co.'s Scientific Press Patent Agency.

OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library containing official American and foreign reports, files of scientific and mechanical publications, etc. All worthy inventions patented through our Agency will have the benefit of an illustration or a description in the MINING AND SCIENTIFIC PRESS. We transact every branch of Patent business, and obtain Patents in all countries which grant protection to inventors. The large majority of U. S. and Foreign Patents issued to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most reliable advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free. DEWEY & CO., PATENT AGENTS.

A. T. DEWEY. W. B. EWER. GEO. H. STRONG.

**Geo. F. Silvester,**

IMPORTER, WHOLESALE AND RETAIL DEALER IN

**SEEDS,**

Fruit and Evergreen Trees, Plants, Etc.

ALFALFA, GRASS AND CLOVER SEEDS

In large Quantities and offered in Lots to suit Purchasers.

GREAT REDUCTION IN PRICES.

Seed Warehouse, 317 Washington Street, San Francisco.

**BUY LAND**

Where you can get a crop every year; where you will make something every season; where you are sure of having a crop when prices are high; where you have a healthy place to live; where you can raise semi-tropical as well as other fruits; where you can raise a diversity of grain and vegetables and get a good price for them. Go and see the old Reading Grant (in the upper Sacramento Valley), and you will find such land for sale in sub-divisions to suit purchasers—at reasonable rates and on easy terms. Send stamp for map and circular to EDWARD FRISBIE, proprietor, (on the Grant), Anderson, Shasta Co., Cal.

**STRAWBERRY PLANTS.**

E. P. ROE offers one of the LARGEST and FINEST stocks of Strawberry Plants ever grown in this country. Also Raspberry and Blackberry plants, currants and grapevines. Prices very reasonable. New Descriptive Catalogue free to all.

Address E. P. ROE, Cornwall-on-Hudson, N. Y.

**ROOMS TO RENT.**

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

**Baling Fencing Telegraph Telephone Galvanized**

**WIRE****Barbed Fence Wire.**

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the Trademark.



A. S. HALLIDIE

Wire Mills.

Office, No. 6 California St.

SAN FRANCISCO.

**WIRE ROPE and CORDAGE**

Of every kind on hand or Made to Order.

**PRINCIPLE'S****New Hybrid Wheats,****CHAMPLAIN**

— AND —

**DEFIANCE.**

Heads 6 in. long—128 bushels to the acre.

These two varieties which have succeeded so wonderfully as SPRING WHEATS, have been shown by experiments to be equally valuable when sown in the Fall for WINTER WHEAT. A trial the past season has proved them the most productive varieties in cultivation.

Illustrated circulars showing different methods of cultivation by which this and other wonderful yields were produced, mailed to all applicants. Price of each variety, \$2.00 per peck, \$7.00 per bushel. Bags containing two bushels, \$13.00. Prices for larger quantities on application. Trial packages by rail, 1 lb 40 cts, 3 lbs \$1.00.

Mold's Ennobled Red and White Winter Wheats.

Two new English varieties introduced last season which we are confident will prove valuable acquisitions to this country. See circular. Price of each variety, \$2.50 per peck, \$8.00 per bushel. Trial packages by rail, 1 lb 50 cts, 3 lbs \$1.25. Address

B. K. BLISS &amp; SONS,

P. O. Box 4129.

34 Barclay St., N. Y.

**Read This!**

New Hotel, Just Opened on the European Plan.

**ST. GEORGE HOTEL,**

812 Kearny Street, near Old City Hall.

Meals served in first-class hotel style, of great variety and good quality, at all hours of the day for 25 cents. Steak and coffee 15 cents; coffee and cakes 10 cents.

Rooms from 25 cents to \$1 per night, as per size and location.

Board (per week) - \$4.00

Room and Board - \$5.50 to \$7.00

Accommodations for families correspondingly low.

North Beach and Mission street cars pass the door.

TIMOTHY SARGENT - Manager

**CHEAPER YET!****Tension Sewing Machines!**

A large number of nearly new genuine SINGER, WHEELER & WILSON, HOWE, WOOD, WILSON, GROVER & BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

**NO TENSION MACHINE.**

Wilcox &amp; Gibbs' S. M. Co.,

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.

**WANTED.**

A partner to take part interest in a Nursery, or a young man, with a little capital, anxious to learn the business from an Agricultural graduate who has worked in a few of the largest Nurseries and most varied Fruit Orchards, etc., in this State. Address NURSEYMAN, Care Dewey & Co., S. F.

**PEPPER'S NURSERIES.**

(Established 1853.)

For sale at reduced prices, a general assortment of Fruit Trees and Small Fruits; also choice Ornamental Shrubs, Roses, etc. A limited supply of Cook's Seedling Apple, one and two years old. Catalogue and list of prices furnished on application. Address

W. H. PEPPER,

Petaluma, Sonoma Co., Cal.

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 120 Sutter St., S. F.

**ONE MILLION**  
WINTER-FLOWERING  
**Plants and Bulbs**

Apply by letter for "Special Low Priced List," in which will be found instructions for Culture.

*Peter Henderson & Co.*  
35 Cortlandt Street, New York.

**PLANTS CROWN**  
for transplanting, and Fruit for the market.  
100 Acres planted with Berries 100  
Varieties of Selected Fruits 100  
See New Catalogue for what sorts to plant. Sent free.  
JOHN S. COLLINS, Moorestown, N. Jersey.





### A Plea for Scratching in Grain.

The fact that wheat delights in a moderately firm seed bed, and that the much abused "scratching-in" process is the wisest possible treatment for some soils, has been noted before in these columns. The process itself and the condemnation of it are both apt to be carried too far. For the purpose of getting a little new land to the surface, a plowing and fallow, which will afterwards be compacted by the rains, will give the requisite firmness or compactness, where plowing after the rain and immediate seeding would leave the land too loose, even after the usual rolling. The behavior of different soils under different methods of treatment is a far more complicated subject than most critics are aware of, and many a practical farmer has had to laugh at his lecturer because his advice would lead to failure in his case, although in many other instances it would be the key to success. Therefore, whether we praise or condemn, exhort or advise, let there be a margin left for circumstances which alter cases, and let each, in the light of his own conditions, go to work earnestly to ascertain the correct practice.

We are reminded of these considerations by an account of wheat raising in Australia which we have just been reading. We condense as follows:

In the year 1840 we commenced growing wheat on the banks of the Sturt, a rich, black alluvial soil. We had plenty of strength of working cattle, and broke the ground seven or eight inches deep with a Scotch swing-plow. The wheat would look beautiful up to the end of September—great broad ribbon, an inch or so wide—but as soon as the dry weather set in there was no more growth in it, and often the ear would not get out of the husk. The best wheat we got used to come from the bottom of the furrows and the end of the lands, where the plow had merely scratched it. It grew so rank we frequently hand-reaped 700 or 800 sheaves to the acre, which in an average crop eight or ten sheaves should turn out a bushel, but I often had to thresh sixty sheaves for a bushel when it grew so rank. Getting passable wheat when the land was only scratched over, taught us that we were loosening the soil too much; so we got a scarifier, and the result of the first year's work was so successful, turning out something like four times the quantity of wheat we had grown before, that for seven years we used nothing but the scarifier, and never plowed an acre.

Let not this be an excuse for poor culture or shiftless farming, but where the soil yields the best crops by a certain method, let that be the one practiced irrespective of praise or blame.

**BARLEY ABROAD.**—The records of the export trade in grain since harvest, show that 314,700 centals of barley have been sent out by sea and 39,400 centals overland by rail, up to October 8th. This barley, which is chiefly our best brewing grades, has gone principally to Australia, England, Peru and New York. Just after harvest last year there was also quite a shipment of barley abroad, but not more than one-third as much was sent, up to this date, as has gone this year. Last year there was a scarcity of barley in Europe, and it appears from reports just at hand that this year's crop in England will be far below the average of good years, and English brewers are looking about for the best barley to import. England draws her foreign brewing barley chiefly from the "Saale basin," from Bohemia, Dantzic, Chile, Oderbrack, Egypt, Hungary and France. The regions able to ship most have quite fair crops this year, so it is probable that England can supply herself with beer more easily than with bread.

**PREMIUMS AWARDED.**—We have ready for publication the lists of awards at the recent fairs at Stockton, Chico and Petaluma, as well as the stock premiums at the Nevada State fair; but they are crowded out this week by other matter.

### A Suburban Residence.

The engravings on this page give designs for a spacious dwelling well suited for a rural or suburban situation. It would be an ornament to any of the hundred or more localities in this State where the march of improvement is now rapid because of the growing disposition of city people to invest in rural homesteads. Around the bay of San Francisco the situation is rapidly becoming that of *urbs in rure*, and new lines of travel by water and rail, both toward the north and south, are bringing the beautiful building sites of Alameda, Contra Costa, Sonoma, Marin, San Mateo, and perhaps Santa Clara, counties so near to business centers that he is decidedly behind the times who has not already secured a title to a rod or rood in some suburban locality.

All agree that it is now just the time to build if one can build at all. Contracts can now be let at exceedingly low figures. We thought when we erected our little cottage a year ago that surely prices were at the low notch, but we could have probably saved \$400 by waiting a year. There is now building in Berkeley one of the handsomest of cheap schoolhouses we ever saw. The cost is to be \$3,000. We are assured that a year and a half ago no builder would take the contract for a building from the same plans for \$5,000. Thus may be inferred the advantage of the present as a building season. It seems probable that the bottom in prices for labor and material has now been reached, for every one speaks of a revival in all lines of production and business, and this will enhance the values of real estate and improvements.

The house shown on this page is not as expensive one as one might think. We should

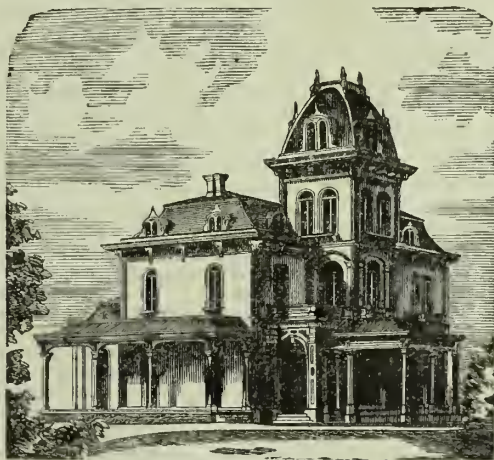
inches; 15 hall; 16 dressing-room, 9x13 feet 6 inches; 17 and 18 verandas; 19 chambers, 12 feet 6 inches by 16 feet 6 inches; 20 chamber, 17x18 feet; 21 bath-room; 22 bed-room; 23 bed-room.

### Cuzco Corn.

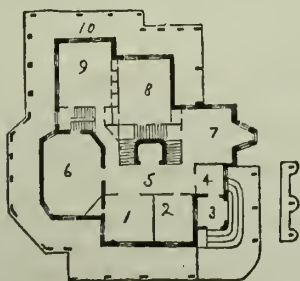
For many years past Tiburcio Parrott, of this city, has been endeavoring to obtain, through his correspondents in Peru, some of this wonderful and famous corn, for the purpose of introducing it in this State. His attempts have at last resulted in success, and by the last Panama steamer he received 1,500 pounds of it. It has attracted great attention and caused universal wonder, owing to its color, size and quality, each grain being very soft, crisp and full of meat or flour. The size of the grain is

from three to four times the size of ordinary corn, and it looks like small well-baked crackers. This corn is raised by the Indians in the province of Cuzco, Peru, from which it derives its name. Cuzco is situated about 450 miles from the sea, and has an elevation of over 11,000 feet. The climate in winter, which is very long, is very severe, with heavy snow and cold. The summer is short, being very cool and temperate. About eight months ago Mr. Parrott received

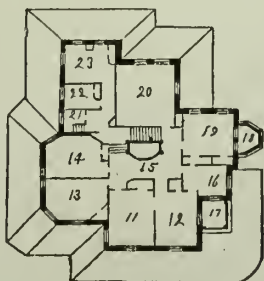
ed from a friend in Peru a half dozen grains of the corn, some of which were badly broken. A couple of the grains were planted in the garden, 620 Folsom street, late in the spring, say in May. It has grown well, the stalk being now between 14 and 15 feet high, and is bearing two ears, one about 12 inches long and the other 9. Fearing that this corn would not mature, it having been planted so late, and wishing to secure the seed, Mr. Parrott had the stalk enclosed in glass, and it is now maturing finely.



DESIGN FOR A RURAL HOME.



First Story.



Second Story.

estimate its cost in favorable situations at the present time, at about \$3,500, well finished. The designs, which are by Isaac H. Hobbs & Son, of Philadelphia, seem well laid, both for economy and comfort. It contains five large rooms, and halls both in the first and second stories, and has two comfortable rooms in the third story, all arranged and placed conveniently to each other. It will make a roomy and cheap house. The exterior, by its abundant piazza spaces, is well adapted to locations where the summer sun is quite warm.

The following is the key to the floor plans with sizes of rooms:

First story—1 "den" 12x16 feet; 2 library, 16x16 feet; 3 porch; 4 vestibule, 9 feet 6 inches by 10 feet; 6 parlor, 28 feet 6 inches by 18 feet 6 inches; 7 living-room, 16 feet 8 inches by 21 feet; 8 dining-room, 15 feet 6 inches by 23 feet 6 inches; 9 kitchen, 16x22 feet; 10 porch.

Second story—11 and 12 chambers, 14x16 feet; 13 and 14 chambers, 14x18 feet and 6

### The Isabella Regia.

Mr. J. P. Pierce favors us with a few clusters of a new grape originating on his grounds at Santa Clara. As described by our correspondent G. W. M., in his account of his visit to Mr. Pierce's place last summer, one of the features of the grounds is the amount of Isabella grapes grown on arbor trellises. The lower parts of the trellises are filled with Mission grapes trained horizontally. The Isabella vines are kept clear of branching until they reach the upper parts of the arbor, where they are permitted to spread out and bear fruit. Some time ago Mrs. Pierce noticed that the children were bringing in a peculiar grape which attracted their attention by its large berries and heavy clusters. Upon their pointing out the cane from which these were obtained, it was found that one of the branches of an Isabella vine was bearing this new style of fruit while other canes bore the usual Isabellas. The cane was marked, and buds taken therefrom were afterward inserted in other stock where they grew freely and fruited heavily, producing the same grape which had attracted attention at first. It was the fruit of one of these grafted vines that Mr. Pierce brought for our inspection. The new grape, which must, we believe, be set down as a sport from the Isabellas, retains the characteristic aroma, flavor and bloom of its parent, but instead of the medium-sized, oval berries of the Isabella, as it grows in this State, we have in the new grape, large, perfectly round berries, forming a much more compact and heavier cluster than the old Isabella. The variety having shown its fixedness by a number of propagations, Mr. Pierce deems it entitled to a name, and so called it "Isabella Regia"—a royal sort of an Isabella, which indeed it is. It is certainly a remarkable fruit, being much superior to the old Isabella as grown on the same grounds. It is fitted by its size of berry (and we measured several of the largest which were 15-16ths of an inch in diameter), to attain a leading place as a table fruit. We predict for it great popularity when it shall be grown in marketable quantities. Mr. Pierce will have scions enough this year to graft 100 vines. Having thus fortunately fallen in with a very good thing in the grape line, Mr. Pierce will keep it to his own grounds, at least for the present.

**THE PUBLIC LAND COMMISSION.**—The Government commission, to inquire into the revision of the land laws, the classification of public lands, etc., as described in our issue of Oct. 4th, has been in session in this city each day of the last week. The time has been employed in taking testimony of various individuals concerning the quality of the public lands, and the best ways of making them available so as to do the the greatest good to the largest number of our citizens. The testimony is very voluminous and reflects almost every shade of belief concerning the vexed question of the proper disposition of what remains of the public domain. It would be a hopeless task as yet to attempt to reduce the testimony to anything like a series of distinct propositions, but it is to be hoped that the commission will have sufficient acumen to deduce some sharp lines of truth from the mazes of interest and manias and honest observation which are served up before them.

**OLIVE OIL AS FOOD.**—We read that in favorable years the island of Cyprus, lately ceded to England, produces 1,000,000 oke of olive oil, nearly all of which is consumed at home. Now Cyprus has a population of about 200,000, and this would allot to each the eating of five oke of olive oil per year. The oke of Turkey contains 2.83 lbs. avoirdupois, and the dwellers in Cyprus therefore, eat on the average about 14 lbs. of olive oil per year. Now, if America would do as well, what an impetus would be given to California olive growing! But then what would become of our dairy interest? It is a fact, however, that there is still a large field for our olive growers in supplanting the imported article, if Americans will understand that pure olive oil is better than the cheap substitutes they now buy under foreign labels.

**CANARY SEED.**—We learn from the circular of John Shaw & Sons, seed merchants, London, England, that there is now an upward tendency in canary seed: "Stocks are light and the present demand is consumptive, therefore healthy."

**TEOSINTE.**—Growth at the rate of one foot in four days in Egypt is the latest item on this plant which is now being tried in an experimental way in this State.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

### Bouldin Island.

EDITORS PRESS:—An evening's chat on a river steamer with one of the proprietors of Bouldin island, recently, gave me opportunity to glean some facts supplemental to those obtained by personal observation, which may be of general interest to your readers. As you are probably aware, Bouldin island lies in the angle between the San Joaquin and Mokelumne rivers, at the mouth of the latter, and is cut off from the "main land" by Potato slough. Its area is 6,000 acres, and its soil is composed almost wholly of peat, with narrow threads of sedimentary soil on the borders of its interior sloughs and surrounding margins. The reclamation of this character of land has heavily taxed the ingenuity, patience and purse of all who have undertaken it. The instances where thorough success has been attained are few. The conditions are peculiar. The land, if such it may be called, is a quaking crust of light, decayed vegetation or peat, whose specific gravity, when dry, is less than that of the surrounding water, which it is necessary to keep out to effect a reclamation. To build barriers of this, therefore, is but a mockery, as the levees are constantly liable to float away when they get dry. Some heavier material must be sought. The levees of Bouldin island have been formed of fine, sedimentary soil, in some cases brought from long distances by barges and flat boats. They are six feet high, four feet wide on top, with slopes as great as proper economy would allow. The first cost of leveeing the island, two years ago, was \$10 an acre, and \$2 an acre has been spent for repairs each year since then. As the levees sink into the yielding peat, more material is added to them, and the proprietors calculate upon a constant expense of about this amount each season for years to come. Ultimately the levees will doubtless sink to the solid hardpan which underlies the island at a depth of 30 and 40 feet. When this occurs, subsidence will cease. Fresh material for levees is getting scarce in the neighborhood, and the owners now propose to buy a piece of worthless salt marsh land in Suisun bay and transport the sods stripped from its surface to the island. They estimate that the cost of putting this material upon their levees, including transportation, will not exceed 15 cents per cubic yard. It is said to be unsurpassed for levees.

The island is now wholly under cultivation, with the exception of about 50 acres. The crops raised are chiefly barley, beans and potatoes. There are also 60 acres of alfalfa, 15 to 20 acres of blackberries and 11 acres of cranberries on the island. Barley this year yielded 50 bushels per acre on an average; potatoes, 150 and 200 cents per acre. Potatoes are now so low that it pays to distill them into alcohol better than to market them. The owners of the island, the Pacific Distilling Co., of San Francisco, pay their tenants 15 cents a cental for the potatoes, and extract two gallons of alcohol per cental.

Experiments made the past year with wheat of different varieties confirm the experience of others in regard to the rust-defying qualities of the Odessa wheat and its peculiar adaptability to the reclaimed swamp lands. All other varieties failed entirely; the Odessa yielded well.

Of all plants yet tried on the island the blackberry shows the most prodigious growth. The canes reach an astonishing size and bear wonderfully. Last year one of the tenants put out 16 acres of young blackberry shoots. He was delayed in putting them out by floods until so late that it was feared they had all perished. They thrived well, however, and just a year from the day he set out his plants, he commenced picking ripe blackberries from them. They were early and the fruit large, so that he got good prices. His net profit from the 16 acres was over \$1,000. Next year he expects to get three times the yield of his first crop.

Alfalfa also grows luxuriantly and yields well.

The experiment of growing cranberries has not been in progress a sufficient length of time to form a judgment as to the probable result, except that a cranberry plantation is a very expensive one to start. On the 11-acre patch 175,000 choice young shoots from New Jersey were planted. They have nearly all lived, but have made very little growth—scarcely three inches the past season. It costs \$100 a month to keep the weeds down. Next year they may take a start and shade the ground, when that expense will be cut off. Some old vines set out two years ago grew vigorously; which leads to the hope that the whole plantation may yet prove a success. The experience gained here in cranberry culture will be of value and interest to the whole State.

#### Irrigation.

Strange as it may appear that lauds snatched from the dominion of the waters and lower than the mean level of the surrounding streams should require irrigation, it is yet true. Irrigation is a double necessity; it is needed not only to promote the growth of vegetation, but to prevent the peat from drying out and cracking. Any one who has had anything to do with attempting to check or fill up those mysterious

peat cracks knows how annoying and disagreeable they are to deal with. The facilities for irrigating the island are unsurpassed. It is only necessary to make a hole in the levee in any desired spot, and the water will pour in in any quantity required. The center of the island is a foot below the level of low tide, while at high tide the water stands half way up the levees, above the highest portion of the land. Small streams are kept running upon the alfalfa and potatoes almost constantly. These streams are run at distances of a few hundred feet apart, the intervening ground between the ditches absorbing the water by percolation. When it is desired to flood the surface larger streams are admitted, but it is impossible to hold the water in check levees as practiced in upland irrigation, as the material for making checks is too light.

As cultivation of the soil proceeds it becomes more compact and firm, and of course the whole surface is settling slowly. When they first began plowing the horses had to be shod with large "tule-shoes," and even with these would frequently get bogged. Now one may take a barefooted team, and with a narrow-tired buggy drive at a trot all over the island, on a springy elastic turf. The permanent and successful reclamation of this fertile tract seems in a very fair way of accomplishment, and it may afford lessons for the proper methods of treating other similar tracts, equally fertile, but now swampy wastes of tules and flags. J. D. S.

Sacramento, Oct. 4th, 1879.

### Carson Valley.

EDITORS PRESS:—Of all the agricultural regions we visited in Nevada, we judge that Carson valley, Douglas county, on the whole, really the first. It is the largest in extent, somewhat the best supplied with water, equally free from frost, and more varied in its productions. Its length must be 50 miles, of which 30 are cultivated, and its width 10 miles, from one to six being cultivated. On the west the Sierra ranges rise abruptly from 2,000 to 5,000 feet, forest covered, and very steep. On the east, dry, desolate, lofty mountains, shut in the prospect. Far away north and south are spurs and peaks of varied appearance, rising one above the other into the distant clouds. Here, smiling in beauty, lies this fine rich valley, checkered by its various colored ripening crops, crossed by long roads and straight dividing fences, dotted with many pleasant residences and farmers' buildings.

The Carson river carries a large amount of water, much more in the freshest season than can possibly be used for irrigation, at least according to present systems, but in the drier season of the year there is not sufficient to supply real wants. Hence, the farmers in the upper part of the valley are building large reservoirs to be filled in the times of overflow, then in the dry months, the water is let out for irrigating the fields; but portions of this water must find its way into the main channel of the river, and thus enlarge the natural current during the dry season.

In every manner this must prove helpful to all cultivating the valleys the whole distance to the sink, 90 miles to the northeast, for the water is taken into the reservoirs only in the season of freshets when over-abundant, to be used in the dry season, just the time when all need it. Hence every encouragement should be given to those building the reservoirs, though we have heard of some who feared it would diminish their natural supply of water, though, in fact, it must decidedly increase their available supply.

Alfalfa, with wild grasses and timothy for hay, are their principal productions, yet large crops of barley, oats, wheat, rye, potatoes, and even a little corn are raised, in fair comparison with crops in California. Fruit trees of all kinds grow well, but only once in five or six years do they escape the frosts so as to yield any amount. The region is one of great health, easily accessible to market, and altogether one to be chosen for permanent homes. Genoa and Sheridan are its two centers of business on the west side, but on the east the locality now known as the 12-Mile House, with a new post-office, is gathering around it the main business, and is evidently to become a good town. All the farms in that part are those which have been reclaimed from the dry sagebrush and being irrigated become the most productive land.

The earliest pioneer, largest owner of land, the most vigorous and enterprising in real useful improvements, is Mr. H. F. Danberg, with his brother, both with families in permanent homes. But others worthy of mention as active farmers are Allerman, Hootman, Bering, Crippen, Foster, Taylor, Walker, Elger, Ezell—indeed, the list is too long to be given in full, and space forbids the enumeration.

In early days this valley was not thought worth a gift; now it is the first in importance in the State. Other portions of Nevada, even yet thought worthless, are sure to prove of very great value, when there shall come to be a recognized need for their development. To a large extent this must result from the building of reservoirs in the mountains and foothills, storing up water in the wet season, to be used in irrigation during the warm, dry growing months. Few realize how extensively is this practicable, and how

successful it can prove. Also, the vast regions of dry, level, sagebrush land have an abundance of water at a depth of 8, 12 and 18 feet, which can easily be reached by wells, and the water raised by windmills or mule power. This is no impracticable measure, when, as shown in our last, an acre of land may be made to yield, by merely good, common cultivation, \$2,000 a year, gross. Take one-half of this yield, and this is easily within possible attainment, and the return is immense. One good well can irrigate from two to six acres, and one man with his family can easily cultivate a garden of this size, while another can haul the produce to market.

The time is coming when Nevada, with its untold mineral wealth, is to be dotted with gardens and green fields, the most beautiful in all countries possessing similar climate. The great healthfulness of the State also gives it attractiveness to those who can appreciate this quality of a climate. What we here say is designed for all parts of the State except its mountainous portion. Already the wheat yield of Nevada is assuming large proportions. The State should gather its statistics on this as well as other points. When we were at Elko, in the excellent flouring mill of Mr. Davis, we were informed that only three days before a farmer from Ruha valley, southeast of there 60 miles, had been in and contracted to have 30,000 bushels of wheat ground, all the yield of his one ranch.

Nevada is not the desolate, inhospitable, worthless State it once was thought to be. Its resources in mines have scarcely begun to be developed, while its capabilities for pasturage and agricultural cultivation are very great, and these may prove even richer than its mines.

S. V. B.

## HORTICULTURE.

### Cinchona in California.

We have received a copy of a letter written by E. A. Carman, Acting Commissioner of Agriculture, to Horace J. Smith, of Philadelphia, who proposed to devote a few months to the study of California conditions as favorable or otherwise to the growth of the cinchona tree. Mr. Carman's letter contains only what has been previously made known in the reports of the Agricultural Department and reported in the PRESS. It may be said in addition that cinchona trees are being started in the University propagating houses at Berkeley, and will doubtless be planted out in different parts of the State.

Mr. Carman writes: We have received your note of August 9th, respecting the value of cinchona-growing on the Pacific coast. We can only respond to your request for information and advice upon this subject, by remarking that in former years the Department has distributed cinchona plants in southern California as well as in some of the Southern States, particularly Florida, and that the results of experiments made with these plants has in all cases been unfavorable, owing to adverse climatic conditions, showing that the plant will not stand the slightest degree of frost without injury. San Diego, California, is the only locality in the United States which affords any promise of success, and even there all attempts at establishing its production among us have hitherto failed.

The only mode of ascertaining the possibility of cinchona culture is to plant a piece of ground and watch the progress of the plants. There is no other mode within your power, that we are aware of, by which you can satisfactorily solve the question, or add anything to our present knowledge on the subject. It is obvious, however, that years rather than months will be required in the test.

### Pruning Orange Trees.

P. S. Russell, of Riverside, is an earnest advocate of pruning orange trees. On page 181 of the RURAL PRESS we gave his description of the appearance of unpruned trees now to be seen in Riverside. This was written for the PRESS, a wide-awake Riverside paper. We notice now that Mr. Russell pursues the subject farther, and draws a picture which Riverside groves would present two years hence if his system of pruning should be practiced. He says:

Here and there will be some orchards with trees uniform in size, height and form, with beautifully rounded or cone-shaped tops, covered with their golden fruit; trees all self-sustaining, not a stake nor a pole to be seen. The trees are more healthy looking, better irrigated and with less water, better cultivated because there are no poles in the way, better and larger fruit, because not so much on the trees. This is the result of a system of judicious pruning from the time the trees were planted until they were old enough to bear fruit.

Let the people of Riverside choose between. But to properly prune an orange orchard is no child's play. It requires constant labor and thought and good judgment to rear them, where and how to prune; but all may learn, if they will but see the necessity of its being done at all, and it is only a question of time when they

will all see it, but many of their orchards will be almost ruined before that time arrives.

I will now give my views as to how pruning should be done. At the time of planting, the trees should be topped well back, and side branches shortened. Nothing is required in the way of pruning during the first summer, except to cut off the suckers which may come on the trunks of the trees close to the ground. The first winter after planting is the time to commence the system of pruning one wishes to follow, always keeping in mind the form you wish your trees to assume. At this time prune off all the limbs on the trunk of the trees up to about two feet high. Don't be too hasty to get tall trees—this will all come in due time. Shorten the branches all around, and cut back their tops. This causes the trees to grow more compact in form, and stiffens the limbs and makes them more self-sustaining. This course may be pursued each winter or early spring, until the trees commence to bear fruit. Always after the first summer cut off all the suckers up to the first limbs. Each year the trees may be raised a little by cutting off some of the lower limbs, and also raised at the top, so that by the time the trees are old enough to bear fruit they will be high enough to the first limbs for prosperous cultivation, and the tops large enough to contain all the fruit the trees are able to sustain. Always keep them self-supporting. If at any time too much or too little has been cut off, change a little until you get them about right.

After orange trees come into bearing they will require thinning out on the outside, and perhaps this may be required a year or two before. From this time on the outside branches will not require so much pruning to keep them in the desired shape, as they will not grow so long now as they did before, as the tree's strength is taken up in supporting its fruit.

Some object to this way of pruning, because they say it keeps the trees from bearing fruit so soon. This does not necessarily follow. It can make no possible difference in the time of bearing to fruit trees which produce their fruit on the last year's growth, as does the orange tree.

THE MANDARIN ORANGE.—A. I. Bidwell, in a Florida paper, writes concerning the Mandarin or Tangerine orange: It appears, from a work published under the support and patronage of the French government, on the "History and Culture of the Orange," that this variety originated in Mandarin—an island off the north coast of Java—finding its way into China at an early day. It was introduced into Europe in 1828, and is now a general favorite in all the orange-growing districts in the world. There is nothing to mark the distinction of the so-called Tangerine from the Mandarin, and it is undoubtedly the same variety, to which this name Tangerine has attached itself in connection with its introduction and cultivation at Tangiers, in Morocco. The description given in the work mentioned above—tree dwarfish, 12 tree being about the largest size, leaves small acuminate, fruit flattened on poles, thin skinned, with very little adhesion to the pulp, which is of a beautiful yellow and divided into ten or eleven sections, easily separated, answers perfectly to that known to us as the willow-leaved Mandarin or Tangerine, as also to the two varieties Tangerine and St. Michael's Tangerine, sent out by Mr. Thomas Rivers, of England, who has cultivated the orange for thirty years and enjoys an enviable reputation as a nurseryman and pomologist, confirms the supposition that Mandarin or Tangerine is one and the same.

## THE DAIRY.

### Sweet Corn as Dairy Feed.

The use of sweet corn as summer food for dairy cows is now being agitated afresh in Eastern journals. The *American Dairyman* contains an article reviewing the subject, and citing the experience of different dairymen. One man tested sweet corn in comparison with roots, pumpkins, cabbage and Indian corn. The free use of roots increased the flow of milk but tended to weaken the animal. There was an unfavorable diuretic effect, which had to be checked by a change of food. Potatoes were less objectionable in this respect than turnips. Cabbage was also somewhat objectionable, though good for a large yield of milk. But sweet corn was good in all respects. The milk yield was heavy, the quality superior, and the animal gained in flesh and strength.

The comparative cost of sweet corn is in its favor. The plan pursued in this experiment was to plant in drills, on rich ground, alternating every other row with potatoes or beans. The rows were three feet apart, making the corn rows six feet. In the drills the corn was aimed to stand four inches apart. In this way there was, say an average of 18 ears to every four feet. The potatoes and beans did as well as if planted alone, so that the product was almost fabulous, as any one will see by a little figuring. The feeding was commenced by cutting the corn as soon as in roasting ears. Stalks and corn were highly relished by both cows and hogs, with no waste. When the stalks became too dry for full-fed hogs, the ears were plucked, and the stalks fed to cows, or stored for winter. Experiments in a small way have been continued in this vicinity.

But Asa C. Bowen, of Sand Spring, has



demonstrated the problem on a more extensive scale as a field crop, and through his experiments its use has become quite generally known, and extensively used. By a gradual increase he worked it up in 1878 so as to carry his cows through the last half of July, August and September. He has a dairy of 30 cows, and keeps something over 100 head of hogs. He kept up the flow of milk through the heated period, and into the late fall, and his cows were strong and fleshy to enter the winter. The hogs fattened finely on it, and even his herd of brood sows were pushed forward after weaning with such rapidity that their average was fully up to herd of barrows that had been fed all the season on good old corn. This result was obtained from 12 acres. His mode of planting was in drills, planted with a machine three feet eight inches one way, and about 18 inches the other, with about six stalks to the hill. A part of the crop was planted in check rows, with equally good results. The 12 acres lasted till the new crop of Indian corn was matured, and the finishing feed was quickly and cheaply accomplished with the results given above. He saved about 50 bushels for seed, which was not sufficient for the demand the following spring. There was no sign of disease among either cattle or hogs. This experiment alone is sufficient to prove the value and economy of sweet corn in the dairy. A case is mentioned to show its value for young pigs. A litter of pigs dropped August 13th were treated with sweet corn. When about a week old the kernels were shelled, and placed on a board to which they had access. They soon learned to eat, and made their pound a day from the start. The sow was fed the same, and in six weeks was shipped in fine order.

Young calves also are very fond of it, and make rapid growth. It is also valuable for horses, old ones in particular. As a winter food it is not only excellent for cattle, but hogs will eat both stalks and corn when cured. Store hogs can be cheaply carried through with it.

### A New Work on Dairying.

To the English belongs the credit of bringing out the handsomest and most comprehensive work on dairying, for such is the character of "Dairy Farming," a new book by our occasional contributor Prof. J. P. Sheldon, late of the Royal Agricultural College at Cirencester. There is an American edition published by Cassell, Petter & Galpin, of 596 Broadway, New York city. The book is issued in monthly parts, each of which contains a colored plate, and, aside from these, the pages are well filled with engravings. The price is to be 40 cents per part and samples can be ordered at this price from the publishers.

Although from English sources, the interests of the United States and Canada are to be kept in view, American experience and authorities frequently cited, and several of the parts are to be devoted entirely to the history and progress of the industry in this country. Of the three numbers before us, the first is mainly devoted to the introduction, and the rest to four chapters upon dairy cattle, their breeding and selection, feeding and treatment. In the former we are told that special attention will be given to milk production and the milk trade, to dairy management and appliances in all countries, and to the commercial aspects of the business, with accounts of the history and methods of the dairy trade in different parts of the world. Soils and climates, the cultivated crops of the best dairying districts, the grasses and botanical peculiarities so far as valuable to the agriculturist, will be handled in a manner at once scientific and popular. "Dairy homesteads, farm buildings, fences, shelter, water supply, etc., will be illustrated and described." The editor says, "we trust on these bases to present to our readers a comprehensive and painstaking work, descriptive not only of the duties and conditions, the benefits and the drawbacks, but also of the elements of success as well as the causes of failure that, separately and jointly, fill in and rule the life of a dairy farmer. We are assisted in these matters by eminent authorities in various countries, each of whom writes on the subject with which he is specially acquainted; and, for ourselves, our part has lain in arranging the matter we have had contributed by others, and in writing on the several topics with which we happen to be familiar." From the portions already issued it is evident that the scientific sections are to be from such eminently satisfactory authorities as Dr. Voelcker and Prof. Frea. Part Second is accompanied by a finely executed colored geological map of the British Isles, to illustrate the article upon soils, which is yet to come. Parts First and Third have colored plates of celebrated Short Horns and Herefords, and similar illustrations are promised, with subsequent issues, of Ayrshires, Jerseys, and animals of other breeds.

**TEA ADULTERATION.**—Dr. J. M. Eder is the authority for the statement that one-half of all the tea sold is mixed with spent tea leaves. Processes for the sophistication of tea are considered valuable property, and if there has not been some misinformation sent abroad, the owner of a tea-doctoring secret lately sought protection in its use from our courts. Among dealers of an article so generally used as tea there is a keen competition, and the temptation to have recourse to swindling as a fine art is strong and sometimes irresistible. By and by the evils will compel a remedy.

## THE STABLE.

### Management of the Horse.

The following are extracts from a lecture by J. Storer, V. S., before an English Farmers' Club: How must horses be treated that they may be able to perform a certain amount of work without injury to their system? In the first place, they must have food; in the second place, they must have grooming; and, in the third place, they must have good stabling. In regard to food, of all animals the horse, in comparison to its size, has the smallest stomach; it is, therefore, of great importance that his food should contain as much nutriment as possible in the smallest bulk, more especially when undergoing hard work. Hay and oats have this qualification to a greater degree than any other of the feeding stuffs in general use, and that they should form the staple food has been proved by long experience. Bruised oats are very suitable for old horses and those that bolt their corn, but beyond this they have nothing specially to recommend them.

The average quantity of oats required to keep a horse undergoing hard work in good condition is about 20 pounds per day. Of course, some horses would eat more; others cannot be induced to consume more than 14 pounds. Drivers of contractors' horses are practically aware of the fact that the more they can get their horses to eat the more work they will do. But the result of over-feeding and overworking is the premature death of many valuable animals. Indian corn, when it happens to be cheap, may be advantageously used in the proportion of one to six; the only objection to it is that it causes torpidity of the bowels. This must be counteracted by giving an equal proportion of bran. Beans, but for their heating tendency, would form a very suitable adjunct to oats, as they contain a large proportion of nutritive material. They may be safely given to animals that are hard wrought, and upwards of seven years.

A horse cannot be maintained in health on grain alone; the stomach requires a certain amount of mechanical distension to keep it acting properly. Hay or straw serves this purpose. The ordinary allowance should be about 20 pounds per day; something like five pounds in the morning, five pounds at midday, and ten pounds at night. A few years ago chopped hay came greatly into vogue; but the principal argument in its favor was that the bad hay was eaten along with the good. This tells seriously against the plan, as a horse is certainly better without bad hay in its stomach than with it.

Green foliage is well suited to horses in its season; then the work is light, and they appear to thrive on it. It must be given in moderation, especially at first, as horses are so fond of it that they soon eat more than is good for them. Carrots, turnips and potatoes require to be given with equal discrimination; indeed, I am inclined to condemn the use of potatoes entirely, although I have known instances where horses were allowed as many as they could eat without bad results, but such cases are the exception and not the rule.

Cooked food is used by many horse owners with more or less advantage, the great objection to it being that it fattens without giving strength and firmness to the muscles. It is also apt to be bolted without proper mastication, which is a common cause of colic and indigestion. For a horse recovering from any debilitating disease, or for one coming off a long journey, it is of great benefit if given judiciously. To make a regular practice of feeding with it every day, however, is unnatural, and, I believe, highly injurious. It is a common practice to give a feed of it every Saturday night for the purpose of keeping the bowels in order. Three-fourths of a pailful of mashed bran would serve the purpose better, without the risk of deranging the bowels. This is a most necessary adjunct in horse feeding, and should be given regularly once a week. It acts mechanically on the lining membrane of the stomach, increases the secretion, and thereby averts constipation.

As already stated, the stomach or receptacle for solid food is very small; the cæcum, or receptacle for water, is quite the opposite. It is not uncommon to see a horse drink two or three pailfuls of water at a time. It is therefore probable that he does not require it often. Three times a day is sufficient, provided the horse is allowed as much as he will drink. In cases where he is excessively hot or exhausted, or where he has been kept without water for an undue length of time, it should be given in smaller quantities and more frequently. It is a great and very common error to allow horses water after being fed. In its passage through the stomach it is sure to carry with it some of the undigested food, which ought never to reach the intestines, and will probably cause colic or indigestion.

Grooming, or cleanliness of the skin, is not a mere matter of glossy or staring coat; it is essential to the health of domesticated animals. When it is borne in mind that the skin is one of the principal organs by which refuse material is thrown off from the body, the necessity of keeping the pores or little drains clear will become apparent. When they become silted up, the lungs and kidneys are overtasked, and hence diseases of both these organs. Washing the legs is the cause of much harm to all horses. It checks circulation, and causes greater evils than the mud and sand which it is intended to re-

move. It is a well-known fact that horses are never in better health than when at regular work. If exercise be neglected for even a few days in a horse in high condition he will put on fat; he has been daily making a sufficient amount of material to sustain the consumption caused by his work. If that work ceases suddenly, nature will still supply the new material, and fat, followed by plethora and frequently disease, will be the consequence.

## SHEEP AND WOOL.

### A New Era in Sheep Husbandry.

The *American Stockman* thinks there is warrant for saying that this country is entering upon a new era in sheep husbandry which is fraught with great promise for the future of that important industry—an era which will bring wealth and honor to intelligent and careful flock-masters, and to the country at large.

First there is the assured demand for wool to meet the requirements of the manufacturers of woolen goods, or, rather, the consumption of such goods by the people. During the period of business depression through which the country has passed, there was under-consumption of woolen goods; the mills turned out a class of fabrics into whose texture entered, more or less, cut-up rags. Shoddy goods were the rule, and straight woolen fabrics the exception. Now, this is vastly changed. People will buy good goods if they are able to do so, knowing that the best is the cheapest. Western mills, almost without exception, make straight goods, and Eastern manufacturers will be compelled, sooner or later, to adopt the same policy. Indeed, the percentage of the stuff which circumstances made necessary for some years past, forms an inconsiderable portion of the product of the mills at the present time, and as such is being relegated to the rear, there is little probability that it will ever regain the place it recently occupied.

Again, notwithstanding the quantity of refuse with which rag-dealers furnished the mills, the country has been a large importer of wool and woolen goods; in other words, we have fallen short of supplying our home requirements for wool by millions of dollars' worth. If this was the case while prostration marked almost every branch of industry, how much greater must be the deficit with labor of all kinds employed, and every manufacturing industry in active operation, unless the wool product is largely increased? We have not taken into account the increase of population, which, as recent statistics show, is being greatly augmented by immigration, and constitute an item by no means insignificant in forecasting the future requirements of the country for wool and woolen fabrics.

The foreign meat traffic furnishes, also, an opportunity to extend sheep husbandry in the production of mutton, which must, we opine, awaken a far greater interest in that branch of the business than has hitherto been known among us. The export trade in mutton—live and dead—is increasing every year, and must do so for some time to come. It is, as yet, in its infancy, and as American farmers come to understand, more generally, what the foreign market requires, it needs no seer to predict that this traffic will reach proportions compared with which its present volume is insignificant. Our capacity for the production of mutton of fine quality is almost without limit, and upon the quality of the product more than anything else the volume of this traffic depends. That it may be vastly augmented does not now admit of question; and that it will continue to grow in greater ratio even than it has yet done is scarcely less probable. Greater care in selection in breeding, in rearing, in alimentation, on the part of farmers who make this branch of sheep husbandry a part of their business, will mark the future of this industry, and place it on a higher plane than it has yet occupied in American agriculture, for the inducements are greater than they have ever been before.

From every point of view, therefore, the outlook for sheep and wool is encouraging. The opportunities are not wanting to make this industry more prosperous than it has ever been in this country, and judicious flock-masters, breeders and farmers will turn them to advantage. As has aptly been said by a prominent authority in this industry—"The 'luck' of sheep husbandry is so thoroughly within the control of the flock-master that he rarely need look beyond his own management for those causes and effects which go to make or mar his fortune." The present is a time, we believe, when the chances are all in the flock-master's favor.

**THE IMPORTANCE OF MERINO SHEEP.**—A. M. Garland, in the *National Live Stock Journal*, says: The little "groasy Merinos," as they are sometimes derisively termed, though possessing fewer attractions for the eye of the casual observer than most other breeds of sheep, are the backbone of the wool growing industry of more than one nation. They with their crosses yield a large majority of the wool and fully half the mutton consumed in the United States. They are the sheet anchor of Australian and South American sheep husbandry. Let him who doubts their merits as wool producers carefully lay open the uninviting exterior of the fleece, and feast his eyes upon the lustrous fibers therein hidden, and then, if he can, repress his admiration for the humble bearer of the "golden fleece."

## FLORICULTURE.

### Standards of Excellence in Roses.

Mr. H. B. Ellwanger, of Rochester, N. Y., one of our most successful and intelligent rose culturists, says that a rose for general cultivation, which should stand high in the scale towards perfection, should excel in each of the following five points, and in the order named:

1st. Beauty of color, as that which first attracts us to a rose.

2d. Beauty of form, without which our eye cannot rest long, but wanders on seeking a combination of the two in one flower.

3d. Fragrance, deprived of which no rose can be perfect. Whoever yet saw a beautiful rose without wishing to inhale its odors? Gratification in this matter is oftentimes far more pleasing to us than the mere sight of beauty.

4th. Profusion and continuity of bloom. We like our good things in abundance, poured out to us with generosity, that we may have to distribute and carry our pleasure to friends.

5th. Vigor and healthfulness of growth. That will produce strength of plant thriving with a moderate degree of care and attention, and that will endure the extremes of summer's heat and winter's cold.

As the best representatives of these several qualities, Mr. Ellwanger gives of the first, *Ahel Grand* and *General Jacqueminot*; of the second, the globular formed rose, *Alfred Colomb*; of the third, *La France* and *Louis Van Houtte*, as being alike "supreme in beauty and fragrance;" of the fourth, *General Washington*, and of the fifth, *John Hopper*, *General Jacqueminot* and *Baronne Provost*. Taking the five qualities named in the order of their importance, Mr. Ellwanger assigns the following number of points to each: Color, 24; form, 22; fragrance, 20; freedom of bloom, 18; vigor and healthfulness of growth, 16, making in all 100 points for each. The summer roses should also receive some mention. Though blossoming only once a year, some of them, notably the *Moses*, are so beautiful as to be essential to a rose garden of any size or pretensions. We name the following as the best: For climbers, *Bennett's Seedling*, *Baltimore Belle* and *Queen of the Prairies*. We have also a new race of climbing, hardy perennials, which promise to be valuable, but are not fully proved. Among non-climbers, the most desirable are *Persian Yellow*, *Mme. Hardy*, *Mme. Plantier*, and the following moss roses: *Crested*, *Common Moss*, *Countess of Murinais*, and *Salet*; the latter, though less beautiful than the others, blooms freely in autumn, and would be quite valuable for that quality alone.

### A Good Liquid Manure.

A Baltimore florist sends the *Boston Journal of Chemistry* the following formula for a liquid manure for flowers. The materials may be had at any blacksmith shop: Put one bushel of the clippings from horses's hoofs into a barrel, and fill it up with water. Let it stand for a week, when it is ready for use. Apply it with a watering pot. All bedding plants can be watered with this liquid every other day if they are not pot-bound. Repotted plants should be watered once a week until they have plenty of working roots to take up the manure. It will also be found excellent for hard-wooded plants if used once or twice a week. Two or three weeks after the plants have been watered with the manure the foliage generally changes from a green to a golden yellow, moving from the stem down to a point of the leaf, which, however, lasts only for a few weeks, when it changes to a dark glossy green. Plants under this watering grow very strong; the flowers are very large and bright in color. Plants thus treated can be kept in very small pots for a long time without being transplanted. This is especially advantageous to the market gardener, who can sell his plants in three or four-inch pots, while he would have to shift them into five and six inch if he used rich soil alone. Flowers watered with this liquid manure will bring 25% more than otherwise; besides being in small pots, they are lighter, can be packed closer and are easier to be handled. The fertilizer is not a stimulant, but a plant food, and plants that are watered with it, if planted out, will continue growing and keep in good growth, which cannot be said of guano. It is as powerful as guano, as quick in action, and more lasting.

It will not do the slightest harm to the foliage; most other liquid manures spoil the foliage when they come in contact with it. It forms no crust on the pots or soil. It is cheaper than any other good fertilizer which is used in liquid form. The chips need be renewed or replaced only twice a year, while the water can be withdrawn every day. When liquid guano is used too strong it will cause the plants to drop all their leaves. This liquid will not, even if used once or twice a day for a short time.

**GOOD INK.**—A commission lately appointed by the Prussian government, to investigate the best class of inks to be employed for official use, state that aniline inks are not suited for this purpose, because they can be easily washed away, especially by preparations of chlorine. Inks, in the composition of which alizarine (Adrianople red) is employed, can be obliterated less easily; but they are of opinion that the best of all is made from gall nuts and a salt of iron, the old description of ink.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### Meeting of the State Grange.

#### Second Day—Wednesday Evening.

Last week we gave the proceedings through the afternoon session, which completed the election of officers.

For the evening session of Wednesday, at 7 P. M. the Grange was again called to order, and proceeded in the secret work of the order.

#### Third Day's Session—Thursday.

The third day's session of the State Grange was the busiest. In due form, at 9 A. M., it was opened by Worthy Master Steele.

Following the roll call and adoption of the minutes many reports and resolutions were presented and acted upon. An important report of the Executive Committee, recommending that the Secretary and Lecturer's positions be properly sustained financially, was approved, and it was decided to continue the publication of the *California Patron* as the official organ of the Executive Committee.

The Committee on Co-operation then made a report strongly favoring the formation of all associations for trade and other business among farmers on the thorough plan of practical co-operation known as the Rochdale system, practiced successfully for so many years in England. This recommendation was endorsed by the State Grange.

The committee appointed to consider the question of cultivating jute and manufacturing burlaps in California advocated such experiment, and their report was approved.

The roll of subordinate Granges being called, that their representatives might present any matters desired, a number of resolutions were offered and referred to their appropriate committees.

#### Report of Committee on Education.

The Committee on Education then presented the following report. It was unanimously adopted and ordered to be published in full:

Your committee respectfully report that the prospective revision of the school law, in order to bring the State system of education into harmony with the provisions of the new Constitution, affords an opportunity for renewed efforts in behalf of agricultural education. The Constitution requires that the State school fund shall be exclusively devoted to maintaining primary and grammar schools—in other words, to that elementary education which is needed for all classes alike, but it also encourages the establishment of technical schools. The schools have passed the experimental stage in Europe, and have been established by the leading governments in the order of the importance of their industries; the rural communities being supplied with agricultural schools, primary, intermediate and higher, while the cities and towns afford corresponding facilities for instruction in the mechanic arts. The time has come when the establishment of farmers' high schools in our more populous counties is entirely practicable, and requires little more than a modification of the studies now taught, and the employment of teachers graduated from the agricultural colleges, which have combined theory with practice in their instruction. Familiarity with the works of these colleges is greatly needed in our Order to secure the unity of sentiment and of action in the cause of higher and lower agricultural education. Our youth are not led into industrial callings by our educational processes, as at present conducted. This is the natural result of the overpowering influence of the professions, which have hitherto enjoyed a monopoly of educational management. The Grange has not failed to express itself upon these points, and your committee would reiterate the sentiments expressed in the report of a joint committee to the Golden Gate Grange, made in May, 1897; also, in the report of the committee to the Stockton meeting, 1895. To carry out the views of our Order, in the form of effective legislation, your committee would recommend the appointment of a special standing Committee of Education to confer with the Legislative Committee on the revision of the school law. Your committee earnestly recommend the preparation of a memorial and the circulation of a petition to Congress asking that the Bureau of Agriculture be enlarged in its scope and raised to the rank of a National Bureau of Industry, whose chief officer shall be a member of the Cabinet. There is at present no means of determining year by year the condition of our industries; no data to guide the million of our youth leaving our public schools in the choice of occupations; no means of knowing when labor is needed or when idleness is enforced by a surplus of any kind of labor. All this would be remedied by a systematized bureau of information under national control. We would earnestly recommend the establishment of experiment stations, under the auspices of the National Department of Industry, in whose hands the results of such experiments would prove a national benefit. It is the duty of every Patron, as shown by our declaration of principles, to interest himself in promoting the efficiency of the district school in his immediate neighborhood; by frequent visits; by encouragement to teachers, by the selection of the best citizens for the responsible office of school trustee; in the growth of the district school library, and the encouragement of useful reading in the home, and in all other ways which tend to make schools centers of intellectual, moral and social improvement, around which the whole community has organized itself. This is the only means by which the necessary equilibrium of influence between city and country can be maintained, by which the affections of our youth can be held to the homes of their childhood, and the pursuits we are seeking to make honorable and honored above all others.

(Signed)

MRS. J. C. CARR,  
J. V. WEBSTER,  
J. STRENTZEL,  
H. R. SPILMAN,  
MRS. F. M. KIMBALL.

Soon after this report was adopted an adjournment was had till 1:30 P. M.

#### Afternoon Session.

At the appointed hour the Grange resumed business, and the report of the Committee on Officers' Reports was presented and duly considered. Its recommendations were concurred in.

A resolution in favor of female suffrage led to an animated discussion, and a vote showed that its friends at this meeting were in the majority. As a test of constitutionality, the Legislature was requested by resolution to pass a local option law.

The presence of several delegates from distant

parts of the State shows how much the farmers are yet devoted to the Grange. Delegates were there from San Diego, Modoc and Plumas counties.

Word was sent Prof. Hilgard that the members of the State Grange would go to Berkeley on the 7:50 A. M. train, to visit the University, on Saturday.

The rest of the session was occupied in very interesting statements concerning the condition of the State Agricultural Society and the great success of the State fair. President La Rue, Secretary Hoag and W. L. Overhiser participated in the discussion. It is proposed that at the next State fair farmers bring their tents and form an encampment. It will no doubt be a success.

#### Evening Session—Installation.

Few ceremonies of installation are more instructive and pleasing than those of the Grange. Soon after 7 P. M., Worthy Master Steele proceeded to install the newly elected officers, a list of whom has already been given. Mrs. Carr, who becomes State Lecturer for the next two years, is a member of Temescal Grange, Oakland. Upon yielding the gavel to the new Master, Mr. Steele congratulated him that the duties resigned by himself had fallen into such efficient hands. In reply, Worthy Master Spilman handsomely complimented his predecessor on his performance of the duties of the position. He thanked the members for an honor which called him to preside over so intelligent a body, assuring them that in no previous session had he met members of more culture and devotion to the welfare of the Order. He urged earnest devotion on their part for the next two years to the building up of their subordinate Granges, as the chief support of the Order; more attention to the education of their children, saying that our only safety lay in the education and intelligence of the people; that all must cultivate charity towards each other; that as taxpayers and builders of schools and supporters of our Government, they should have control of the election of men who govern us. He promised to visit subordinate Granges as much as was in his power, and hoped for their hearty aid in his work.

After words of mutual good will and fraternal regard between retiring Master Steele and Overseer Conlter at the close of the installation, the Grange adjourned until the open meeting announced for nine o'clock.

#### Friday.

The day was chiefly devoted to the open meeting, the discussion of an experimental farm and of the mining debris question, which we will report hereafter.

#### Evening Session.

The evening hour of Friday having arrived for conferring the Fifth or Pomona degree of Patrons of Husbandry, and the table having been fully prepared for its part in the ceremony, 60 members, of whom half were ladies, made that additional step in the work of the Grange, under the guidance of Worthy Master Spilman and other officers. More than this about the arcana of the Grange we are not permitted to make known to the uninitiated. But we can state that the ceremonies are impressive, instructive and beautiful, with occasional surprises not unlike much initiatory work of similar brotherhoods, the ideas of which have been handed down from the ancient Eleusinian mysteries. The work of initiation finished, the members withdrew from the hall to enjoy, with invited guests,

#### The Feast of Pomona

The tables for this purpose were spread in a dining-room of the Grand Central hotel. Two long tables were loaded, in honor of Pomona, with varieties of our richest fruits in lavish abundance—apples, pears, plums and peaches, figs and home-raised almonds. Tastefully mingled with these were the gifts of Flora and Ceres—flowers and golden heads of grain, in most elegantly arranged bouquets, and baskets and wreaths of different designs.

When reminded that no city on our coast can claim flower gardens richer and in more endless variety than Oakland, our readers can understand how exquisitely beautiful and attractive was the appearance of this bright array of fruits and flowers and grain.

One design is worthy of especial mention. It formed the central decoration of one table. It was a

#### Cornucopia Made of Flowers

And mosses, most delicate trailing vines (smilax) and ferns. In graceful spirals, forming this horn of plenty, were the richest roses, oleanders, chrysanthemums, fuchsias, begonias, plumbagos, dahlias, feverfew, heliotropes, jasmynes, candy-tuft and other delicate flowers of many hues, charmingly intermingled—crimson, scarlet, purple, pink, lilac, white and intermediate tints. The point was formed by a small bunch of night-blooming jasmine. It was four feet long, every portion of it displaying surpassing beauty and taste. At the mouth of this floral horn, fully two feet across, lay, admirably arranged in variety and color, small apples, pears, pomegranates, plums, melons, figs, California and English walnuts; also almonds, mingled with ears of popcorn and wheat. In the moss, on the upper arch of the mouth, were interwoven, in small white and yellow flowers (laurustinus) the words, "Hope and Perseverance."

This cornucopia was poised in graceful position, and with its fruits and grain, rested upon rich green leaves of walnut and pepper trees. This model of wonderful beauty and elegant symmetry was the work of a lady member of the Grange—Mrs. J. F. Deming, of Vallejo—the framework of wire having been made by

Mr. Deming. A large flower basket of equal elegance, filled with pomegranates, apples and grapes formed the center piece of the other table. This was made by another Mrs. Deming, also a member of Vallejo Grange. In the enjoyment of the feast, the fruits proved to be as delicious as they were beautiful. They were presented from the ranches of Dr. J. Strentzel, of Martinez; Mr. S. T. Coulter, of Sonoma; N. Jones, of Contra Costa; J. Adams, of Santa Rosa; W. H. More, of Centerville; Mrs. Kimball, of San Diego; J. Russell, of Hayward; J. V. Webster, Fruitvale.

The work of preparation was highly creditable to the committee appointed for the purpose. They were Mr. and Mrs. Deming, Mr. and Mrs. Webster, Mrs. A. T. Dewey, Mrs. J. C. Carr, E. W. S. Woods and J. Russell. A pleasing incident of the day was a Grange wedding. Before the evening session began the State Grange assembled in the parlors of the Grand Central hotel, and witnessed the marriage of Mr. Fitch, of Enterprise Grange, Sacramento county, to Mrs. P. Watson, of Sacramento, the Rev. Mr. Briggs, of San Francisco, officiating.

#### Fifth Day—Close of the Eighth Session.

The last day's work of a busy and useful session was begun by a visit, according to invitation and appointment, to the State University. About a hundred members left Oakland on the 7:50 A. M. train, and at the end of their five-mile ride were received at the Berkeley station by Profs. Hilgard and Dwinelle, of the Agricultural Department. These gentlemen conducted the party at once to localities in the grounds and buildings likely to be of special interest to farmers and their wives. Three or four hours were very pleasantly and instructively occupied in this inspection. The first place visited was the experimental grounds. He gave them details here of the culture and growth of the forage plants and trees. They next went to the tract where deep plowing and various fertilizers had been tried. Here numerous grains had been planted and the conditions best suited to their production studied. Space forbids to go into many details, as given, but a specially important fact was, that bone dust and ammonia proved to be the best fertilizers for wheat in that adobe soil. Thence they visited the greenhouse and adjacent ornamental grounds. From there they went to the agricultural building, and examined the museum; then the lecture room, where Prof. Hilgard explained their methods of instruction, exhibiting the magic lantern and views, and showed how this valuable adjunct of education is used in the study of vegetable fiber, as well as the fungi and insects hurtful to vegetation, etc. The next place inspected was the chemical laboratory, which is, without exaggeration, one of the most perfect, if not the best, in the world for complete appliances and convenience. Finally they strolled to the gymnasium, where some of the light weights and more active members showed their agility, and added greatly to the mirthfulness of the occasion.

All the visitors expressed themselves as much pleased, and before leaving, on motion of Mr. La Rue, of Sacramento, a vote of thanks was passed to Profs. Hilgard and Dwinelle for the invitation and their courtesies during the visit. As they wended their way along the handsome walks back to the depot, they admired, as do all who visit them, the delightfully picturesque views formed by the gray hillsides to northward and eastward; the gently sloping grounds, so beautified by nature and art with trees, and shrubs and flowers, and the pretty stream that meanders among its laurels, oaks and varied undergrowth; then, the fine bay of San Francisco lying calmly at their feet, with the city, the Golden Gate and intervening islands in the distance. As to educational excellence, the general feeling was, as it has long been, that the literary and scientific advantages offered by our chief State school are as good as in any college or university to be found, save, perhaps, in extent of books and other appliances of learning. And they thought they saw the dawning of that more perfect union of true practice with true science, which the friends of industrial education in this State have been long and earnestly urging.

At noon they returned to Oakland.

#### Afternoon Session.

At half past one P. M., as usual, the Grange was opened in due form by Worthy Master Spilman, and began with its unfinished business.

The Executive Committee offered a short report pertaining to the pay of the Lecturer while at work, recommending the issue of the Grange organ once a week as soon as its subscription list warranted it. Adopted.

Votes of thanks were returned to the daily papers of San Francisco for courtesies extended during the session; also to proprietors of Grand Central hotel for accommodations to the members while stopping there; also to the members of the Temescal Grange for attention to providing for the session, and in every way consulting the comfort of delegates; also especially to the committee appointed to prepare for the annual feast of Pomona.

It has been decided to meet in Oakland next October.

It was intended to finish their work in the afternoon, but some remaining for consideration, they adjourned at a late hour to 7:30 P. M.

#### Evening Session.

At the appointed time the last meeting of the eighth session began with the prompt dispatch of all remaining business, in a mutually satisfactory manner, and the rest of the evening was

spent in a fraternal interchange of views by a number of brief addresses. It was a scene long to be remembered by all present.

The participants in these exercises were Mrs. F. M. Kimball and Mrs. W. Johnston, Messrs. Nathaniel Jones, Joel Russell, B. F. Bobo, Amos Adams, G. W. Hancock, Wm. Johnston, S. T. Coulter, Past Masters Steele and Wright.

The Declaration of Purposes of the National Grange was read in full by their author, by special request, as a reminder of the old landmarks of the Order. The State Grange was then closed in due form by Worthy Master Spilman, and adjourned at 10 P. M. *sine die*.

In our next issue we shall give further matters of interest concerning one of the most pleasant and harmonious meetings of the State Grange of California.

### Grangers' Bank Meeting.

On Tuesday morning, October 13th, the stockholders of the Grangers' Bank of California held their sixth annual meeting in the Grange hall, over the bank, corner of California and Davis streets. The attendance was large, more than nine-tenths of the stock being represented, and President G. W. Colby presided. The report of the Directors and the statement for the past year were read by Secretary McMullen, showing the condition of the bank and the increase of business since last October to be highly satisfactory. A proposition was adopted to reduce the capital stock from \$2,500,000 to \$1,000,000. The cash capital paid in was shown to be \$400,020, four assessments, or \$40 on each share of \$100 having been paid on all stock subscribed, the entire amount being paid up on 213 shares during the past year. It was also shown that their expenses have been diminished one-third and the business increased about a third. A dividend of 10% on paid-up stock was declared, which no other banking institution of this city has reached during the same time, with one exception. Entire harmony prevailed between the stockholders, who are well pleased with results. Amounts of deposits have been nearly double to what they were for the year ending last October. Many commission merchants now make this bank their place of deposit. Loans on wheat in warehouses in the country are nearly twice as great as for 1898. Last year, for the first time, they made such loans at 12%. This year they began lending at the same rate, but for the past month they have been able to advance money on wheat at 10%. An interesting feature in their banking-room is more than 100 samples of wheat arranged neatly on four shelves. These are samples of grain on which loans have been made. The four shelves are classified as showing: First, Sacramento valley wheat; second, San Joaquin valley wheat; third, northern coast counties; fourth, southern coast counties.

By recommendation of the State Bank Commissioners the annual meeting of stockholders has been changed from October to the second Tuesday in January; hence, the next annual report will be made at that date.

The following Board of Directors was chosen for the ensuing year: G. W. Colby, John Lewelling, Thomas McConnell, I. C. Steele, J. C. Merryfield, J. V. Webster, C. J. Cressey, A. D. Logan, Seneca Ewer, Solomon Jewett and Uriah Wood. The last three are new Directors. At 7:30 P. M. the Directors met and selected the following officers: G. W. Colby, President; John Lewelling, Vice-President; J. V. Webster, Treasurer; Frank McMullen, Secretary; Albert Montpellier, Cashier.

### Notes on Taxation.

EDITORS PRESS:—Such sensible remarks on political economy, as those of Mr. Learned, it is not often our fortune to see in print, and while I believe his and my views coincident, I think he don't go far enough. At the first glance at the new Constitution where it says, "all property shall be taxed alike" it appears very just and equitable, but does it not appear in a different light when viewed from the proper standpoint? Is not enterprise, thrift and a spirit of improvement taxed by it? The thrifty farmer who erects a comfortable dwelling, shelter for his live stock, utensils and products of his farm, thereby enhances the market value of his slovenly neighbor's land, who from choice lives in a shanty, and ties his horses to the wheels of his wagon. Farm buildings are expensive but unproductive property, and should be taxed no more than the fence which protects his growing crop.

Again, we will suppose some enterprising capitalist erects a sugar-factory at our place, by which the whole community would be benefited in many ways, a few of which are worth mentioning. It would consume some of our surplus produce, for which we have no remunerative market. It would employ laborers who would do the same. It would reduce the price of sugar, if no more than the freight. It would increase our population. In short, this community would derive far more benefit from the enterprise, than the owner would over the interest of his investment, but he would be heavily taxed, which I think has a tendency to retard the pro-



gress of the country. But how to remedy the evil, is a problem, the solution of which I must leave to wiser heads than mine. H. G. Santa Ana, Oct. 7th, 1879.

**THE NATIONAL GRANGE.**—The National Grange will meet this year at Canandaigua, N. Y. The time of meeting is to be announced by the Executive Committee. W. M., B. R. Spilman, of our State Grange will attend, and would doubtless be glad to receive correspondence from Patrons concerning subjects which they think advisable to bring to the attention of the National Grange.

### In Memoriam.

**ALHAMBRA GRANGE,** Martinez, Cal., October 4th. Again has the Death Angel passed over Alhambra Grange, taking one of our number as an initiate into those great mysteries of that Brotherhood over which presides our Heavenly Master.

Bro. J. R. JEMISON, on account of long sickness, has not known yet that fraternal relationship, common to our Order, yet in spirit and feeling he was with us, and to our roll call will be only the silent response of Death.

To Sister Jemison and fatherless children is tendered the silent, though heartfelt sympathy of our Grange household.—(Mrs. Maria B. Lander, Thos. A. Griffin, Henry Hollinbeck, Committee.

**MAGNOLIA GRANGE,** No. 261, Nevada Co., Sept. 27th, 1879.

WHEREAS, It has pleased an all-wise Providence to remove, by death, from our midst a charter member of this Grange and much-beloved Sister, Mrs. DORA LADY, be it

Resolved, That while we, the members of this Grange, sorrowfully mourn our loss, we do hereby tender our heartfelt sympathies to the many afflicted friends, and especially so to the bereaved husband, whose home is made desolate by this dispensation, trusting that the bud of promise yet remaining to him may be spared to grow and blossom into a perfect flower of womanly worth, to make glad his heart as he still gleams his appointed time in earth's harvest field. Wherefore, in token of respect to our Sister's memory as a member of this Order, he it

Resolved, That we wear the badge of mourning for 30 days, and these resolutions be spread on the minutes of the Grange, and a copy be sent to the bereaved husband, and also for publication in the RURAL PRESS, California Patron and Foothill Tidings.—(Mrs. Mary L. Ritchie, Mrs. Ella Calvin, I. N. Ritchie, Committee.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### BUTTE.

**SUPERIOR MUSKMELON.**—General Bidwell, of the Chico ranch, has for some years past been growing a variety of muskmelon which has attracted much attention. Single specimens have been sold at \$1 apiece. It is called the "Casa-ba." The Department of Agriculture procured seed from Ionia, in 1869, at a cost of \$1.20 per pound in gold. A few seeds were sent to the General, and though he has been extremely liberal in disseminating the seeds, yet it is by no means known so well as its rare merits deserve. When pure it is the best muskmelon raised, and is peculiarly well adapted to the climate of the Sacramento valley. It is very large, with extremely thick flesh and few seeds.

#### CONTRA COSTA.

**DRYING FRUIT IN A HOP HOUSE.**—*Gazette*, Oct. 11: Some years ago Mr. Frederick Langenkamp, in connection with his hop growing enterprise in Ygnacio Valley, erected a drying kiln of large capacity, and very complete in all its appointments, and last season he experimented with it in drying grapes and other fruits, with such satisfactory results that he proposes using it for that purpose in the future to such extent as there may be demand for it by fruit raisers, either drying the fruit for them on shares, or renting the kiln, which has a capacity for drying of about two tons per day.

#### FRESNO.

**PROLIFIC BEES.**—*Editors Press*: I have only been with my bees nine days since last June, but have taken about 1,600 pounds from 25 stands, mostly extracted, and will probably get at least 1,000 pounds more. Honey is bringing me 12½ cents a pound at the apiary.—P. LOUCKS, Centerville.

#### LAKE.

**MOLD WHEAT.**—*Bee*, Oct. 9: Mr. Isaac Alter informs us that from four quarts of Mold wheat received from the Patent Office last fall he has harvested this season 17½ bushels. The grain is nice and plump.

**THE WOOL CLIP.**—We learn from sheep men that the fall clip of wool is a heavy one, and that the staple is very fine.

#### MARIN.

**THE RAIN.**—*Journal*: The first rain has put all in good humor and left the country fresh and roads less dusty. Everyone seems to be preparing for winter.

**GRAPES AT SAN QUENTIN.**—Lieut. Gov. Johnson, of San Quentin, has left some samples of grapes at our office, from vines set out three years ago, which show a most astonishing product. They are of the Mission variety, but fully twice as large as the ordinary Mission grape.

**FRUIT PREMIUMS.**—Some of the finest fruit exhibits we have ever seen were made at our District fair last week. They would have done credit to any fruit growing district in the land. They attracted universal attention, and constituted one of the foremost features of the great fair. It was pitiful to think that the highest premium offered in this department was \$20, not enough to pay for the grapes on one table at the vineyard where they grew. Yet the exhibitor had all the trouble and expense of preparing, shipping, arranging and tending the table, and returning boxes, etc., after the show.

These exhibits were all made by Sonoma county, and a manager of the fair suggested to us that the district should, at the next fair, lay down the gauntlet to the whole State, to compete in fruits, and to justify a healthy rivalry, the Society should offer a large premium, say from \$200 to \$300, for the best exhibit.

#### MENDOCINO.

**WHEAT AND WEATHER.**—*Ukiah Press*, Oct. 10: Threshing will be finished this week. The crop has been up to the average, but prices much lower than last year, the price ranging at \$1.12@1.15 per cental. The weather has been a mixture of fogs, clouds and sunshine for the past week, and on Friday morning we had the first ice. All day Monday it rained hard, and cleared off Tuesday, with a fall of 1.55 inches. I think we will have a very cold winter.

#### MERCED.

**RAIN.**—*Editors Press*: On Monday, Oct. 6th, after threatening for weeks, some heavy drops of rain commenced falling at 5 P. M. The rain came heavier and at 8 P. M. a continuous drizzling set in, with occasional downpours during the early part of the night. The rain penetrated about one and a half inches. About 2 P. M. Tuesday, a long peal of rolling thunder seemed to travel from north to south on the coast range of hills and rain again poured down. The sky was very cloudy all around. To-day, Thursday, there is promise of fine weather. Everything has cleared off nicely. No damage has been done to grain already sown.—MATTHEW J. BYRNE.

#### MONTEREY.

**WORK IN PRIEST VALLEY.**—*Cor. Index*: Although the harvest in this valley and surrounding country was a complete failure this season, the farmers intend to make a desperate effort to get in good crops this winter. Several of the farmers in Peach Tree have already commenced plowing. There will be considerable more grain sown in Peach Tree this winter than last.

#### NAPA.

**STATISTICS OF WINE MAKING.**—*St. Helena Star*: We presented last week a report from 14 wine cellars. This week we are able to add 16 to it, making a total of 30, out of about 40 cellars in the county. The figures given are the estimates of the makers themselves, and may be regarded as very close. The territory gone over covers the whole of the county as far as Yountville, except the Burrage & Tucker cellar. The district included made last year 1,347,000 gallons of wine. This year the estimate is 1,312,500, a deficiency of 34,500 gallons. That part of the county not included in this report made last year 715,000 gallons. From the opinion of wine makers a month ago, this amount will probably be reduced enough to make the whole deficiency 100,000 gallons or more.

#### SAN MATEO.

**OATS AND CARBOLIC ACID.**—*Redwood Times*: Geo. W. Lovie has tried an experiment with oats which has proved very satisfactory. He sowed some oats which had been soaked in diluted carboic acid, and the grain has turned out three times the yield of that sown in the ordinary way, both being in the same kind of soil. [Such reports should always give accurately the amounts of materials employed. For example in this case what is meant by "diluted carboic acid?"—*Eds. Press*.]

#### SANTA BARBARA.

**BLEACHING ALMONDS.**—*T. W. Coffin in Press*: I do not know of any machine for hulling almonds. Col. Hollister employs Chinamen, who gather them from the trees, and hull and sack them for 2½ cents per pound, they hoard themselves. The process of bleaching is as follows: Make a box 2 feet square by 4 feet high. In this place a wire partition about half way down from the top, across the box, slanting about 22 degrees, on which the almonds are to rest. Put a gate 6 inches square at the lowest edge of the partition. Fill the upper part nearly full of almonds. Underneath, in this box, place a little oil stove, calculated to burn California oil. On this stove put a shallow pan or dipper, in which place about a handful of brimstone. The almonds should be dipped in hot water, and should drain off mostly before going into the bleacher. Keep the fire going for a half hour or longer, according to the effect produced. Two of such bleachers will bleach one ton each day.

#### SANTA CLARA.

**GILROY PEARS.**—*Advocate*: The shipment of pears to the East will now engage the attention of fruit growers of this district every season. The quality of the best varieties of Gilroy pears has created a demand in Chicago and other large cities, and to meet this demand agents are sent here to contract for all that it is possible to purchase. Mr. Horace Wilson shipped the pear crop of the Gilroy valley last year to Porter Bros. of Chicago, and the same firm this year is buying all that can be had. Every week for the past six weeks no less than eighty boxes have been packed and forwarded from the Gilroy depot. The soil and climate of this valley are especially adapted to the perfect development of the pear, and enterprising settlers planting fresh orchard tracts should hold the pear in remembrance. Everybody knows that easily cultivated and salable fruit is the most profitable to raise.

#### SANTA CRUZ.

**EDITORS PRESS:**—We have just had the second rain of the season, which has put the ground in good order for the plow and for a new crop of grass. Blessed be Santa Cruz, for the rain always

comes in good time, and enough of it to insure good crops; and the clouds pass quickly away and leave us with glorious sunshine and a pure and bracing atmosphere. Grain, hay and fruit crops are good, and all cared for in good season. The people are healthy and happy, and in high hopes of the revival of business and the "good time coming."—M. P. OWEN, Soquel, Cal.

#### SOLANO.

**GRAIN AT SOUTH VALLEJO.**—*Vallejo Chronicle*: During the month of September the railroad company received and discharged at South Vallejo 2,352 carloads of grain. This grain is brought down the road on flat and box cars, consigned to different parties. Besides the grain that has arrived at South Vallejo by this mode of conveyance a large number of schooners and barges have come down by way of the Sacramento river. Most of the grain received is delivered aboard of ships chartered for Cork and Liverpool. At the present time there are eight vessels at South Vallejo engaged in loading for foreign ports.

#### SONOMA.

**GRAPE ITEMS.**—*Democrat*, Oct. 11: Hon. Wm. McP. Hill was in town on Tuesday. He has an extensive vineyard of first class vines, and has disposed of all his grapes at prices ranging from \$22 to \$23. The crop is almost all gathered. Herbert Austin brought to our office on Monday morning a bunch of Sweetwater grapes from James Shaw's ranch in Guilicos valley that weighed eight pounds. A large number of bunches weighing seven pounds have been gathered on this place this season.

**WINTER.**—Our correspondent at Forestville writes that an eighth of an inch of rain fell there on Monday and that residents are preparing for the winter by burning all the accumulated brush and trash. Frost was noticed last week severe enough to be distinctly noticeable in its effect on the foliage of the plants; tomato plants and potato tops have turned black and wilted.

**THIRSTY TRAMPS.**—*Petaluma Argus*: Tramps are numerous in and around Sonoma. They all make it a point to steer for the wine cellars, ostensibly to obtain work, but in reality to get wine. Mr. Poppe has issued orders that none of them shall have a drop at his cellar, an example it would be well for all our wine makers to follow.

**FAIR FIGURES.**—The following report of the Sonoma and Marin Agricultural Society shows our Society to be in a healthy financial condition: Receipts at the gate and grand stand, \$4,107.90; received from entrance money and privileges, \$1,833.70; due Society, about \$300 for entrance money and not yet paid. Add the State appropriation of \$1,500, and it will be seen that the income of the Society for the year 1879 amounts to the handsome sum of \$7,741.60. After paying a note of the Society for \$854, old debt, all the purses, premiums, improvements to grounds, employees and feed bill, there will probably be left a small balance in the treasury.

**HOPS.**—*Healdsburg Enterprise*, Oct. 9: Peter Schmidt informs us that he, John Born and Grant & Tauer this week sold their hops to an agent, realizing 30 cents per pound. Mr. Schmidt had 2½ tons, John Born about 13 tons of which he retained 3½ tons, and Grant & Tauer about 6 tons, they having disposed of half their crop at 15 cents per pound. Henry Hebron has about two tons which he will ship this week. The price realized this year is unusually high, and came in very handy for our hop raisers, who have been compelled to sell low for several years past. In 1874 they got about from 7 to 10 cents; in 1875, 25 cents, and in '76, '77 and '78 from 7 to 10 cents, so that 30 cents this year will help to make them even. We hope they will continue to get a good price for many years to come.

#### TUOLUMNE.

**EDITORS PRESS:**—You are so ably represented in this county by my old-time friend, John Taylor, that I seldom see where to gather material for an item. In these higher foothills, and so far as I see and hear, the fruit crop—especially apples—is far below an average; and the worms have done more damage than in any previous year. All the sound fruit—pears and apples—will be of an excellent size, color and quality. No apples are dried, but are fed to the swine as more profitable. My next neighbor and myself made a ton last season; this year not ten pounds. Our initial winter (?) storm visited us Monday night; the rain fell heavily for about ten hours—soaking to the grape roots—and if followed soon by another, plowing will be in order. More attention is being given to raisin grapes, especially the newly introduced Muscatello stock. It will grow into a magnificent business in the near future.—J. WINCHESTER, Columbia.

**SWEEPSTAKE PLOW COMPANY.**—In our advertising columns this week will be found a cut and description of the celebrated Eureka gang plow, manufactured by the Sweepstake Plow Co., of San Leandro, and sold so extensively by Baker & Hamilton for the past five or six years. This advertisement will be followed by others for several successive weeks, illustrating leading articles manufactured by that company. We invite the attention of farmers thereto, believing that the goods of the Sweepstake Plow Co. are inferior in material and workmanship to none made East, while in adaptability to the wants of California farmers they have already proved their high character.

CASSIAR miners are going to Sitka.

### News in Brief.

SIGNS of rain.

WEATHER very hot in New York.

THE Colorado Indian war is ended.

BRITISH forces have entered Cahul.

THE walking craze has become epidemic.

LAND troubles in Ireland. Tenants refuse to pay rent.

HENRY C. CAREY, the writer on political economy, is dead.

THE United States Supreme Court is now in session at Washington.

SNOW and hail prevailed in portions of British Columbia Sunday.

THE Panama Railroad Company has declared a dividend of four per cent.

SPECIE in the Bank of Germany decreased 13,829,000 marks last week.

THE Bank of Belgium has raised its rate of discount from 2½ to 3½ per cent.

EARTHQUAKES have recently occurred in Southern Hungary and Servia.

THERE are 12,000 tons of wheat at Walla Walla, W. T., awaiting shipment.

THE storm of last Saturday was quite general, and but little damage was done.

A DEFENSIVE treaty is said to have been concluded between Germany and Austria.

GREAT preparations are being made at Sacramento for the reception of General Grant.

THE value of the exports for the last quarter from Victoria, B. C., aggregate \$817,134.

GRAND Lodge of Good Templars for Nevada and Utah convened at Carson October 14th.

ADVICES from Montevideo state that the Cabinet has resigned and a new Ministry formed.

THE loss of the Afghans in the fight before Cabul on the 6th instant is stated at 400 killed.

SILVER in London, 52d; consols, 97 11-16; 5% United States bonds, 106½; 4s, 105½; 4½s, 102½.

YELLOW fever has recommenced in Memphis and has also appeared in Arkansas and Louisiana.

EIGHT hundred railroad employees are on a strike at Cleveland, Ohio, for an advance of wages.

EIGHT hundred barrels of potatoes were shipped a few days ago from St. John, N. B., to England.

It is proposed to consolidate the St. Louis, Kansas City and Northern Railroad with the Wabash.

TWELVE new cases of yellow fever were reported at Memphis Saturday, and five deaths occurred.

ACTIVE opposition to the employment of Chinese in railroad building prevails in British Columbia.

CONVENTION of Italian Benevolent Societies of the United States now in session at Louisville, Ky.

CALIFORNIA State Grange adjourned *sine die* at Oakland last Saturday. Important questions were discussed.

THE amount of public land taken by actual settlers during the late fiscal year was nearly 1,500,000 acres.

A SHIPMENT of 100,000 pounds of Arizona wheat was made lately from Maricopa, consigned to Liverpool.

RUSSIA is willing that Cabul shall be destroyed, but will not allow of the annexation of Afghanistan by England.

RUSSIA has demanded reparation from Turkey within twenty-four hours for insults to the Russian Consul General at Salonica.

THE Great Council of Geneva, Switzerland, has adjourned consideration of the separation of Church and State until May.

MEASURES to abolish slavery in Cuba is causing a crisis in the Spanish Cabinet. Ten thousand more soldiers are sent to Cuba.

THE strike of colliers at Charleville, in Belgium, which commenced a few days ago, is extending and assuming a threatening aspect.

IN San Francisco half dollars are quoted at 99½ buying, 100 selling; trade dollars, 95 buying, 96½ selling; Mexican dollars, 91 buying, 92 selling.

IN New York, Government bonds are quoted at 102½ for 4s of 1907; 103½ for 5s of 1881; 105½ for 4½s; sterling, \$4.82@4.84; silver bars, 113; silver coin, ½@1 discount.

THE coal burners in Belleville (Ills.) district are preparing for a general strike, to commence on the 15th of this month, unless they are paid three cents per bushel for mining.

THE London *Daily News* says: If gold continues to leave England and France as it has lately, it will soon become necessary to consider measures to stop the outflow. [This money comes to pay for American produce, to stop it would be repudiation.]

THE New York *Commercial Bulletin* correspondent declares, after an extended trip through the State, that the transportation question is a leading issue with the people in the interior. Oppressive railroad freight discriminations, as brought out by the Legislative investigation, has astounded the general public. If legislative remedies are prevented during the coming winter, it will not be the fault of the people, but it will rest solely with the dictatorial caucus-nominating system.

A PRE-HISTORIC CLAM-BAKE.—In excavating for the Jacksonville (Fla.) water works, recently, there was found, 28 feet below the surface, an ancient clam-bake. In a bed about six feet by four in area, the clam and oyster shells, many with gaping mouths, were arranged as for a modern clam-bake, intermixed with hardened sand, charcoal, and fragments of decayed wood.





### The Corn-Fields.

Vast corn-fields bright,  
How grand the sight,  
Of rain, and dew, and sunshine born!  
In stately mien,  
In emerald green,  
The lands they beautify, adorn.

The farmer's toil let no one deem in vain,  
Whose beading sweat transmutes to golden gain,  
Whose sinewy arm the nation's strong defense,  
Whom nature pays in golden recompense.  
Through all the boundaries of the peopled earth,  
Since Heaven's great fiat gave creation birth;  
The curse a blessing ever hath been found  
To him who plows and cultivates the ground.  
The explorer plants his footsteps on the sea;  
The scholar strives for immortality;  
The patriot statesman seeks by deeds sublime  
To stamp remembrance on the scroll of time;  
The miner delves in caverns deep and dark,  
No labor shuns to catch the diamond's spark;  
But what on earth e'er yet was so supreme  
As he who tills it with his faithful team;  
Who annual turns the ever-verdant sod,  
And ever grateful does the will of God—  
Bids tasseling corn-fields like battalions stand,  
With waving plumes, in matchless beauty grand,  
Their rustling leaves like maiden's silken dress,  
As the coy zephyrs play and gently press  
In billowy grandeur, while their bearding ear,  
Proclaim the bounty of the deepening year,  
Pouring from out abundance's golden horn  
The endless treasures of the golden corn.  
Sent to the lands with want and woe oppressed,  
With miseries dark famine and wars distressed,  
Painting on hunger's pallid cheek an hue,  
The rose and lily's bright carnation-hue,  
Feeding the world—proud minister to thought,  
From whose bright quarries priceless arts are wrought,  
Welding in living fires a golden chain,  
That tells, though man may die, he lives again!

—Prof. W. S. Blanchard.

### Sense of Duty.

[Written for Rural Press by MRS. MARIA B. LANDER.]

Being in that questionable state of mind which would abjure the knowledge and foresight of such men as Locke, Brown and Reid, I would almost defy their metaphysical decrees, acknowledge the inspiration of an extra instinctive prompter, nay, even that of a sixth sense, or more properly a sense of duty. In spite of such acquiescence of this intuitive power its wonderful workings are not allowed a place upon the abstruse shelves of mental lore, yet there is perhaps not a life but will and must acknowledge its ruling power, or dare gainsay the bold assertion that this same life-lot is fixed and guided in its course, to a greater or less degree, by the chains of this vice-like sense; its hold being as unyielding as the old law of the "Medes and Persians." The affirmation goes farther, namely, that very many of the successful trophies of both physical and mental labor are due this impelling power, if not of this as a distinct sense, 'tis, at least, an ever present nemesis of the accepted and fixed senses.

All primal knowledge is embodied in those five senses that are alive to the sensations of smell, taste, touch, hearing and sight; these "feelers of the soul" reach and grasp from a limited space such atoms of knowledge that the created world is intuitively wise. Adam and Eve's primeval days, or those few happy hours before the fall in the garden of Eden, may be likened unto the first time-spaces of baby life. The first knowledge of these dwellers of Paradise was of the fruits of nature which filled their measure of happiness, but ere long into their fullness crept a void, a want, an undefinable something, even like as unto the little child there comes a conscious but dim perception of something beyond—an impelling force, a recognized power, though its nature be wholly unknown, still in its dreamy, unreal awakening the bud of childhood almost imperceptibly but surely glides into the flower of manhood. With this quiet active growth of the initial man, this protested sense of which we speak springs into a protective over-ruling power, and the innocent crowing babe is lost in the responsibilities of the duties of this world's life; ever after each onward step is hedged with the pricking mentors of these awakened obligations, and at every progressive turn there comes a consciousness of that curse in the decree of banishment made by Infinity upon finite beings in their first disobedience, wherein the eternal fiat went forth that "the head of the serpent and the heel of man alike should be bruised!"

Thus it is from the happy hours of childhood this stern sense of duty takes each and all by the hand, sometimes casting lots in pleasant places and again circling them round about with sorrows and troubles. From the latter we are constrained to say, as to the lurking demon, "get thee behind me;" but the wiles of this sense being so inlaid in our very construction all efforts at separation from the ills inherited but show the futility of such a struggle, hence the mass of life-pilgrims plod that earth-line reaching from birth to death under the natural burdens of birth-right together with numberless ones self-imposed. Keeping step in this weary

onward march are those life-martyrs that bend to the flails of duty, even as the tiny reed is twisted in the fragrant breath of evening; still again fragmentary portions of this life-army in studied avoidance of the outposts of duty flit here and there as aimless and purposeless as a craft at sea without rudder or anchor. All these dutiful color-bearers, whether under ban of natural or borrowed burdens, or in the failing weakness of imbecile purposes, like weary marching pilgrims, aim to cast off their crushing load in that port of peace, wherein is the promised reward.

By such analysis of our growth prophetic eyes can see a "fate that lures us on," and that duty constituting itself the nemesis of such fate maps in checkered blocks our life work, and "rough hew them as we will," their least chipping is a record more enduring than time. The least change, nay, even the slightest variation of comparing angles, gives a new and different phase of that life-structure which was yesterday flaunted to the world. The fickleness of this creative God of duty is proverbial, for to-day we are in the midst of duties whose very entanglement redounds to our honor and glory; to-morrow those very intricacies that but yesterday seemed good fortune proves a net in which character is shown so fragile that many hitherto beauties become most glaring short-comings; in short, but loop holes through which that strength which is now weakness has dwindled into insignificance.

Force of circumstances often seems to make but a toy of human life, as it is mercilessly buffeted about by the unknown comings and goings of the ebb and flow of time, till in an inspiring moment the capriciousness of fate is braved and duty, stern as her decrees may be, is hailed master of the moment. 'Tis then the soul is as it were lifted out of itself, and those numberless tiny, irksome duties become, in the words of "Jennie June," "unconscious links of a ladder suspended between earth and heaven, uniting and giving glimpses of one while we are perforce made to travel in the other!" While in this toilsome earth journey if that wholesome truth was once made a part of our creed, that the best rounded life was not made by mastering one or more great duties, but on the other hand by gradually gathering and assimilating a long line of little pecking duties or trials into such shape or character that that which once was ill-shapen and unsightly is formed into a "thing of beauty and a joy forever;" then those heretofore aimless, unsatisfied lives would not so passively lie in that sinking rut of indifference, but would turn into channels whose depths are unfathomable, and whose quiet surface is of such pristine clearness that life labor and its endless routine would be idealized, nay, even spiritualized. From this refining crystallization the most commonplace life would from the nature of its God-given tendencies gradually assume a fitness for that holier higher life by partial conception of which those consolations that come to the sorely tried soul of this world's probation is but a slight foretaste of those never-ending joys sacred to the duty crowned, but held in reserve till death drops the veil between time and eternity.

The human family is as diverse in character, we might almost say as in numbers, and duty's chisel is not sparing of individual shades. In marshaling the forces of this armed hand stand most prominently those heroes who have battled ever with adverse fate and have stood bravely at the post assigned them; friendless and alone surmounting stumbling blocks whose very presence would have abashed forever the self-justified of the next class, or those self-consecrated who so consciously follow in the footsteps of the illustrious martyrs of old, with uncovered head and bare feet, upon cutting and rasping cobblestones of their own scattering, thus making unto themselves a martyrdom which the gods do not always duly reverence, for rarely do their names swell the least of the sainted calendar. Again another life-ordnance in duty bound to life's battle are the timid, quiet, unassuming pillars of society, who live a life within themselves, silently and with power helping others from their own overflowing fullness, losing naught, but rather absorbing back to self the growth given even as the quivering sunbeams have given light and heat for ages, yet the sunlight of to-day is not less bright than those first rays that stepped forth at the command "let there be light."

Assuming that each is chained in the bonds of duty and pointing a moral, if I must let all ask, under which banner must we muster? It is to be hoped that the inspiration of this sixth sense will guide each "in doing the greatest good to the greatest number."

October 6th, 1879.

PAGAN WISDOM.—It is related in the Koran that two angels guard every man on earth, one watching on either side of him; and when at night he sleeps they fly up to Heaven with a written report of all his words and actions during the day. Every good action is recorded at once and ten times over, so that no item shall ever be lost from the account. But when they come to a sinful thing, the angel on the right says to his comrade, "Forbear for seven hours to record that. Peradventure, as he wakes and thinks in the quiet hours, he may be sorry for it and repent, and pray and obtain forgiveness." The moral of this is that every one of us should pause before we proceed to judge our neighbor; for it may happen that we are altogether mistaken or that the very defect of which we complain may vanish in a moment.—*The Indian Mirror.*

### The Power of Life.

In every form life is a mystery. We cannot see it. We cannot touch, taste, measure or weigh it. And yet we know that it is one of the most searching and powerful and productive forces of the world. I have seen where the little, thread-like root of an oak had made its way under an immense boulder of granite lying on the mountain side, and by the slow, patient action of that invisible force in it called life, working on steady, year after year, the whole mass had been, at last, lifted and rolled from the bed where it had reposed for ages. The power that lurked in that little mystery thus came forth into manifestation. And so we always know life only by what it does—exterior to ourselves by the facts we observe, within ourselves by what we feel. It can be interpreted only by experience. We know it as the power which lays the whole surface of the earth annually with a new carpet of green, and festoons the mighty forests with leafy garlands, and gives our gardens a gala-day decoration which no deft fingers of art and taste can ever rival, and flushes the cheek with a glow richer than that of a summer evening's sunset, and carries forward the growth of the frail infant form to the full stature and strength of manhood, and holds it from dissolution against all the numerous forces that struggle to destroy it, for three-score and ten or fourscore years, and, in its longer reaches of duration, lifting the giant form of the sequoia in our Sierras to battle victoriously with the storms of 3,000 winters. We know what the unseen power is through these manifestations. In the same way we know the power of life in the words of truth, Jesus says, "My words are life." This is not simply a pretty phrase. We learn the life there is in His words from what it accomplishes before our eyes. We see it sending a frail, thread-like root of truth down under some colossal, century bedded wrong, and slowly lifting it from its place and rolling it away from the sight of men. We see it clothing the earth gradually with a tenderer humanity, creating a beneficence that mitigates the savage passions of war, and inspires foemen, even on the battlefield, with a divine kindness towards each other. We see it building asylums for every form of need and even extending its care to the mute sufferers of the brute creation. We see it rising up in Christian men and women in the midst of the corruptions and wrongs practiced in every department of human activity, not to smite the doers with the fist of anger, but to shame and change them by its own purer presence and patience. If stricken they strike not back,—infinite in hope, boundless in faith, with no time for complaints or enmities, feeling that—

"Life is too short to waste  
In critic peep or cynic bark,  
Quarrel or reprimand;  
'Twill soon be dark—  
Up! heed thine own aim,  
And God speed the mark!"

Thus life in nature is a type of life in the word of truth. And life in the word of truth comes forth into manifestation of its power in the lives of those who love the truth.—*L. H. in Work and Play.*

### What a Woman Can Do.

As a wife and mother, woman can make the fortune and happiness of her husband and children; and, if she did nothing else, surely this would be sufficient destiny. By her thrift, prudence and tact she can secure to her partner and to herself a competency in old age, no matter how small their beginning or how adverse a fate may be theirs. By her cheerfulness she can restore her husband's spirit shaken by the anxiety of business. By her tender care she can often restore him to health if disease has overtaken his powers. By her counsel and love she can win him from bad company if temptation in an evil hour has led him astray. By her examples, her precepts, and her sex's insight into character she can mold her children, however adverse their dispositions, into noble men and women. And, by leading in all things a true and beautiful life, she can refine, elevate and spiritualize all who come within reach; so that, with others of her sex emulating and assisting her, she can do more to regenerate the world than all the statesmen or reformers that ever legislated. She can do much, alas! perhaps more, to degrade man if she chooses to do it. Who can estimate the evils that woman has the power to do? As a wife she can ruin herself by extravagance, folly or want of affection. She can make a demon or an outcast of a man who might otherwise become a good member of society. She can bring bickerings, strife and discord into what has been a happy home. She can change the innocent babes into vile men and even into vile women. She can lower the moral tone of society itself, and thus pollute legislation at the spring head. She can, in fine, become an instrument of evil instead of an angel of good. Instead of making flowers of truth, purity beauty and spirituality spring up in her footsteps, till the earth smiles with a loveliness that is almost celestial, she can transform it to a black and arid desert, covered with the scorn of all evil passions and swept by the bitter blast of everlasting death. This is what woman can do for the wrong as well as for the right. Is her mission a little one? Has she no worthy work as has become the cry of late? Man may have a harder task to perform, a rougher road to travel, but he has none loftier or more influential than woman's.—*London Journal.*

### Heroism in Common Life.

He who leads a forlorn hope "into the jaws of death," with the eyes of the world resting upon him, is much less a hero than he who, beset by the snares and temptations of life, triumphs over the evil promptings of his own nature. There is an unwritten heroism in common life that far excels the storied heroism of the great and powerful. It costs one something to be brave and true when no eye but the eye of one's own soul rests upon him—when no approving smile cheers him on save that of his own conscience. And yet there are many such heroes in all the silent and unheralded ways of life.

We have seen a fair young girl, frail in health, but brave and strong in purpose, turn aside from the allurements to a frivolous and empty life—from the temptations to a luxurious and wicked one—and, storing her mind with the treasures of knowledge, fit herself for a noble work and duty. We have seen her take up her own and others' burdens, and, oftentimes with aching heart and bleeding feet, bear them uncomplainingly along life's rugged way. We have seen a young man, cast out upon the world, homeless and friendless, but buoyant in spirit and exuberant with healthy life, with mind and heart keenly sensitive to all the fascinating pleasures that lure but to destroy, shutting himself out from companionship of his kind, and setting his face firmly against the enticements and besetting snares of the world. We have seen him "burning the midnight oil," and with eyes fixed on the shining heights, laying deep and broad the foundations of a character upon which to rear the superstructure of a manhood that should withstand the "shocks of time," the turmoil and vicissitudes of life, till old age should mantle it with its snows. We have seen men and women in humble life, born to the hard conditions of poverty and toil, with hearts attuned to all goodness, and souls sweet with the refining baptism of unselfish charity. We have seen them bending beneath their burdens of care, of sickness, of poverty, with faces illumined with the smile of God, grand men and noble women, whose unwritten life-histories might be summed up in the words, "No trust betrayed, no duty left undone."

Are not such as these the world's true heroes and heroines? And are not their names deserving of enrollment on Fame's whitest and most enduring scroll?—*San Jose Mercury.*

### A Perpetual Calendar.

The following couplet, committed to memory, affords an easy rule for ascertaining without reference to an almanac on what day of the week any day of a month will fall:

"At Dover Dwells George Brown, Esquire,  
Good Christian Friend, And David Friar."

Explanation.—The couplet contains twelve words, one for each month, in order, beginning with January. The initial letter of each word corresponds with the letter in the calendar for the 1st of the month represented by the word. The key to the use of the rule is the knowledge of the Sunday letter for the year, which this year is E.

Example 1.—On what day of the week did March 16th fall this year?

Answer.—D, the first letter of "Dwells," stands for March 1st. But D is the letter or day before E—that is, D, the 1st of March, was a Saturday. The calculation is instantaneous that March 16th was the third Sunday in the month.

Example 2.—On what day in the week will December 3rd fall? F is December 1st. But F is the day after E—i. e., Monday; therefore December 3rd will be on Wednesday.

So many of my friends have asked for a copy of this ready-reckoner that perhaps its proved utility may induce you to publish it for general information.—*T. B. Paget, in London Times.*

SAN FRANCISCO THE CENTER.—Webster's eloquent description of the British Empire is familiar to every reader, but we doubt whether it is generally realized that we, too, have a dominion on which the sun never sets. It will hardly be believed, perhaps, without an examination of the maps, that San Francisco, in stead of being at the western limit of this dominion, is only about midway between our eastern and western limits; and yet it is a fact that the farthest Aleutian isle, acquired in our purchase of Russian America, is as far to the west of that city as Eastport, Me., is to the east of it. Between the northwestern limit of Washington Territory and the southeastern limit of Alaska there is a break of a few degrees, but, with the slightest deduction, our territory extends through 197 degrees of longitude, or 17 degrees more than half way round the globe. Hence, when the sun is giving its good-night kiss to our westernmost isle on the confines of Behring's sea, it is already flooding the fields and forests of Maine with its morning light, and in the eastern part of that State is more than an hour high. At the very moment when the Aleutian fisherman, warned by the approaching shades of night, is putting his canoe toward the shore, the wood chopper of Maine is beginning to wake the forest echoes with the stirring music of his ax.—*Pen and Plow.*

In a Danbury clothing store is a card announcing: "Perfectly fitting garments. Every article sets as good as a hen."



## Chaff.

"DECLINE love," said the teacher to a high school girl. "Not me," said the girl, "I'd as soon decline an offer."

"Yes," said a forlorn loafer, "I have tried everything, and nothing will answer." Better try an echo. That will answer.

"JAN," said he, "I think if you lifted your feet away from the fire we might have some heat in the room." And they hadn't been married two years either.

QUACK—"So you prefer my medicines to those of Dr. Pillsbury?" Mrs. Mulligan—"Och, in-dade, docther, dear, ye'er a dale better than the other ould humbug."

Pious old lady: "Just think, Rose, only five missionaries to 20,000 cannibals!" Kind-hearted niece: "Goodness! the poor cannibals will starve to death at that rate."

"No GIRL gets along well without a mother," says a moral exchange. This may be true; but hereabouts girls work harder to get mothers-in-law than they do to get mothers.

A "CONVERTED" Texas editor was called upon to make a prayer, and caused all eyes to turn upon him when he commenced, "Give us this day our daily pass." A circus had just arrived.

"Look at de pieanna, folkses," said old Sam Johnson the other night to a room-full of his sable friends—"look at de pieanna. Dars is whar you see an illegory, showing the proper spear ob de brack man. Doan you see de common notes, de white trash, down in de lower row, all run togeder like a whitewashed board fence? An' up in de balconia you see de brack notes, de people ob color, arranged in select assemblies ob twos and frees."

They tell a story in the Temple of an ex-Chief Baron, that one who wished him to resign waited on him and hinted at it, suggesting it for his own sake, entirely with a view to the prolongation of his own valued life, etc. The old man arose and said, with his grim, dry gravity, "Will you dance with me?" The visitor stood aghast at the Lord Chief Baron, who prided himself particularly on his legs, began to caper up to him, and said, "Well, if you won't dance with me, will you box with me?" And with that he squared up to him, and half in jest and half in earnest, fairly boxed him out of the room. The old Chief Baron had no more visitors inquiring after his health and suggesting his retirement.

## Why Eve Did Not Keep a Hired Girl.

A lady writer furnishes some of the reasons why Eve did not keep a hired girl. She says:

There has been a great deal said about the faults of women, and why they need so much waiting on. Some one (a man of course) has the presumption to ask, "Why, when Eve was manufactured of a spare rib, a servant was not made to wait upon her?" She didn't need any. A bright writer has said, Adam never came whining to Eve with a ragged stocking to be darned, buttons to be sewed on, gloves to be mended "right away—quick—now!" Because he never read the newspapers till the sun went down behind the palm trees, and he, stretching himself, yawned out, "Isn't supper ready, my dear?" Not he. He made the fire and hung the kettle over it himself, we'll venture, and pulled the radishes, peeled the potatoes, and did everything else he ought to do. He milked the cows, fed the chickens, and looked after the pigs himself, and never brought half a dozen friends to dinner when Eve hadn't any fresh pomegranates. He never staid out till 11 o'clock at night, and then scolded because poor Eve was sitting up and crying inside the gates. He never loafed around the corner groceries while Eve was at home rocking little Cain's cradle. He did not call Eve up from the cellar to get his slippers and put them in the corner where he left them. Not he. When he took them off he put them under the fig tree beside his Sunday boots. In short, he did not think she was especially created to wait on him, and he wasn't under the impression that it degraded a man to lighten a wife's cares a little. That's the reason Eve did not need a hired girl, and with it was the reason her descendants did.

WHY NOT.—If we are to have contests of strength—and it seems to be impossible to get along without them—why not have matches that will leave some tangible result behind, something that will make the world richer than before the contest? Not long since a woman tramped for three weeks or so around a sawdust track in this city. The boy who, during that period, sawed a single stick of wood, did more good than that trampist. At Newport and Coney Island Capt. Webb and Paul Boynton are engaged in long swimming matches, yet if either of these gentlemen would tow ashore one log of wood, that act would be more beneficial to mankind than their useless swimming. The same may be said of these wrestling matches, running matches and all such prodigal waste of strength. Let us have a wood-sawing match for the championship, or let some Amazonian female undertake to saw 2,016 arms-full of wood in 2,016 quarter hours. This idea was adopted near Newberg, New York, lately, and a potato-digging match was the result. John Whitmore dug against time for the belt and \$10. He was to dig 100 bushels in 10 hours. He wrestled Græco-Roman fashion with two rows at a time, and quit 45 minutes before his 10 hours were up, having dug 135 bushels of potatoes.



A DREAM OF YOUTH.

## Young Folks' Column.

## The Three Little Kittens.

I have a true story to tell you about three little kittens; not the ones who "lost their mittens, all on a shelf so high," but about three kittens who lost their mother before they were old enough to take care of themselves, which I think was much sadder than losing mittens; don't you? I will tell you how it happened. One morning, puss left her kittens fast asleep in their nest, under the stable, and went into the yard to hunt something for her breakfast. While quietly eating a piece of meat a neighbor's son, caring only for sport, shot her dead. The baby kittens awoke and cried a long time, but as their mother did not come, they were very hungry, and found their way into the chicken-yard, where they sniffed about, crying piteously. There was an old hen with seven little chicks in the yard, and around her the kittens played, after having made their dinner of cornmeal, with the chickens. The hen seemed well satisfied to have them about her, for at night she gathered them under her wings with her chickens, and always afterward treated them as if they belonged to her.

The kittens grew, and the chickens grew, but still they staid together, night and day, in barrel, coop, or wherever the hen chose to take her brood. One night my father put hen and chickens into a box, which he hung upon the barestable-wall, so as to keep them from the rats. In the morning, when he took them down from their high perch, behold! there were the kittens, all three nestling under the hen as snugly as the chickens themselves.

They grew together to be large cats and chickens, perfectly harmonious and happy.—St. Nicholas.

DON'T, BOYS.—Don't be impatient, no matter if things do go wrong sometimes. Don't give the ball a kick and send it into a mud-puddle, because it would not go straight where you threw it. Do not send the marbles against the fence, and thus break your best glass alley, because your clumsy fingers could not hit the center. Do not break your kite string all to pieces because it will not come down from the tree at the first jerk. It will take you three times as long to get it down afterward. Do not give your little brother an angry push and a sharp word if he cannot see into the mysteries of marble playing or hoop rolling at the first lesson. You were once as stupid as he is, although you have forgotten it. What in the world would become of you if your mother had no more patience than you? If, every time that you came near her when she was busy she thrust you off with a cross word? Dear, kind, loving mother, who never ceases to think of you, to care for you, who keeps you so nicely clothed, and makes such nice things for you to eat. What if she were so impatient that you would be half the time afraid to speak to her, to tell her of your own troubles at school or at play? Ah, do not grieve your mother by your impatience and your crossness.

"NOW I LAY ME DOWN TO SLEEP."—A writer in the *Evangelist* calls attention to a small but very common error which older people as well as children make in repeating the familiar little prayer, "And now I lay me down to sleep." Probably there are few persons who do not use the definite article "the" before the word "Lord" in the second and fourth lines. By so doing they simply make an affirmation, and not an invocation. This writer, with very good reason, holds that the prayer should be given as follows:

"And now I lay me down to sleep,  
I pray Thee, Lord, my soul to keep;  
If I should die before I wake,  
I pray Thee, Lord, my soul to take."

A BOY'S VACATION LETTER.—A small boy was sent to the country to board a short time ago. He promised his mother that he would write a good long letter, describing his trip and boarding place, etc. A week went by and his poor mother was nearly distracted when she got the following interesting letter: "I am here, and I swapped my watch for a pup, and he is the boss pup; and I went in swimmin' fourteen times yesterday, and a feller stole my pocket-book, and I want some money; and I shall bring the pup home."

## GOOD HEALTH.

PAINLESS DEATH.—In one of his lectures Prof. Tyndall spoke of the great probability that entire absence of pain accompanied death by lightning. It is popularly supposed that an impression made by the nerves, a blow or puncture is felt at the precise instant it is inflicted, but such is not the fact. The seat of sensation is the brain, and intelligence of the injury must be transmitted to this organ through a certain set of nerves, acting as telegraph wires, before we become conscious of pain. This transmission or telegraphing from the seat of injury to the brain takes time, longer or shorter, according to the distance of the injured part from the brain, and according to the susceptibility of the particular nervous system operated on. Helmholtz, by experiments, determined the velocity of this nervous transmission in the frog to be a little over 85 feet per second, in the whale about 100 feet per second, and in man at an average of 200 feet per second. If, for instance, a whale 50 feet long were wounded in the tail, it would not become conscious of the injury until half a second after the wound had been inflicted. But this is not the only ingredient in the delay. It is believed that in every act of consciousness a determined molecular arrangement of the brain takes place, so that, besides the interval of transmission, a still further time is necessary for the brain to put itself in order or its molecules to take up the motions or positions necessary for the completion of consciousness. Helmholtz considers that one-tenth of a second is required for this purpose. Therefore, in the case of a whale, one second and one-tenth would elapse before an impression made upon its caudal nerves could be responded to by a whale 50 feet long.

CARE OF THE TEETH.—Rare, indeed, do we find a person of 30 years of age with a sound set of teeth. Far more often do we find young lads and girls of 10 to 16 years of age whose teeth are mere shells of decaying tissue, rotting away with almost visible rapidity, depositories of decaying particles of food, and the source of contaminating elements which deteriorate digestion, and offensive odors which contaminate the breath. In connection with this, it is said that there are 12,000 dentists in the United States, who annually extract 20,000,000 teeth, manufacture and insert 3,000,000 artificial teeth, and consume about three tons of pure gold, to say nothing of the enormous quantity of mercury, tin, silver and other metals used as "fillings" for carious teeth. We have this upon the authority of *Good Words*, and can only add that judging from the vulcanized rubber required for gums and plates, the rubber-tree cultivation must needs be assiduous.

PRIZE FOR ESSAY ON DIPHTHERIA.—The Empress of Germany has offered a prize of 2,000 marks (\$500) for the best essay on diphtheria. The conditions are that the writer is to bring forward important new facts as to the essential nature (*das Wesen*) of the disease, especially with regard to the infectious matter which propagates it, its dissemination, and the means of arresting its progress. The essays may be written in German, English, or French, and must be sent to Prof. v. Langenbeck, Berlin, N. W. 3 Roonstrasse, on or before December 15th, 1880. The committee which will award the prize consists of Professor Klebs of Prague, Liebreich and Virchow of Berlin, von Nageli and Oertel of Munich, and Thiersch of Leipzig. Each essay is to have a motto corresponding to a similar motto on a sealed envelope containing the author's name.

COAL OIL AS A PAIN-KILLER.—The efficacy of coal oil as a pain-killer is not generally known, nevertheless it has curative properties to a remarkable degree. This was illustrated by an incident which happened at the Talisman mine a few days ago. On Sunday afternoon a man named John Jones was sitting in the hoisting works, when a large black spider, of the venomous species, bit him on the side. It caused great pain, and the resources of the workmen were taxed to suggest means to relieve the sufferer. At length Mr. Green, the engineer, got some coal oil and applied to the affected part, when the pain ceased almost instantly, and no trouble has since been experienced from the bite.—*Amador Ledger*.

## DOMESTIC ECONOMY.

HOME-MADE BACON.—At butchering time take the sides and hams, and the shoulders if you like, into your own keeping. Sugar-cure these in the most careful manner, using plenty of sugar, and a small amount each of salt and saltpeter; after being about six weeks in this preparation, smoke moderately, not for a month or two, steady, until the meat is as brown as the skin of a mulatto, three-fourths blacked, but gently browned, and having the flavor of the curing process slightly through the meat. Do not pursue that abominable practice of leaving the meat in the smoke-house to be treated to a heavy dose of smoke once a week, to keep the flies away, but encase each piece separately in heavy paper and pack away in dry wood ashes. When wanted, take one piece at a time from the storage place. Cut thin, not half so thick as the ordinary farmer's bacon is cut. Broiling is better than frying, and as the saying is, "do it nicely," and if you have prepared the bacon and hams from two such pigs as a first venture, you will need to double the allowance for the next season.

KANGAROO TONGUES.—A new Australian delicacy is finding its way into the London markets in the shape of dried kangaroo tongues, says *The Colonies and India*. The tails and skins of these animals have long been utilized—the former for making soup, the latter for leather; and the recent enormous destruction of kangaroos has given considerable impetus to these two trades. Struck by the waste of food occasioned by the slaughter of so many thousands of these marsupials, whose bodies are frequently left to rot where they have fallen, a Warroo settler made an experiment in curing the tongues of some of the slain, and so highly were they approved, that a considerable trade has sprung up in this commodity. The tongues are usually cured by drying in smoke, like the Russian reindeer tongues; but a much better plan is to preserve them in tins like the sheep and ox tongues received from America. Tongues lend themselves to this treatment better than almost any other portion of an animal, as they stand the excessive boiling better than beef or mutton.

PLAIN CHICKEN FRICASSEE.—Cut up the chickens, and wash well in salt water; put them in a pot with enough cold water to cover them; add (for two chickens) half a pound salt pork, cut up in thin strips; cover, and let heat very slowly; then stew until the fowls are tender. Cook slowly—if they cook fast they toughen and shrink. When almost done, add if desired a chopped onion or two, some parsley and pepper; cover closely again, and when it has heated to boiling, stir in slowly a teaspoonful of milk containing two beaten eggs and two teaspoonfuls of flour; boil up again and add a tablespoonful of good butter. Arrange the chicken nicely in a deep dish, pour the gravy over and serve hot.—*Cor. Germantown Telegraph*.

OATMEAL BREAD AND BREAKFAST CAKES.—Bread: One quart fresh oatmeal, two of water; let stand half a day or over night; when ready to bake add one quart of fine flour, half a cup of sugar, one tablespoonful of fine salt, two tablespoonfuls of baking powder; mix with a spoon; no kneading is required; if too stiff add water. Breakfast Cakes: One pint of fresh oatmeal, one quart of water, let stand over night; in the morning add one teaspoonful of fine salt, one tablespoonful of sugar, the same of baking powder and one pint of fine flour. If the above proportions make a batter too stiff for griddle cakes add more water.

BEEF BROTH.—Take four pounds of beef, crack the bone in two or three places, wash it in cold water, and put it with a gallon of water over a moderate fire; add to it a heaping teaspoonful of salt and a teaspoonful of pepper; let it boil slowly; take off the scum as it rises; in two hours add a bunch of parsley, cut small, or a head of celery; let it simmer for an hour longer. Toast some slices of bread a delicate brown, cut it in squares or lozenges, put them in a tureen, and pour the soup over. A cup of barley well washed and put in with the meat will be liked by invalids; or vermicelli or macaroni stewed tender in it is both healthful and palatable.

ONE great secret in frying whole or sliced fish is to use abundance of fat. If there is not enough to cover them entirely while cooking they will soak grease and be of poor taste and color. If the fat is very hot the fish will be crisp and dry upon the outside, and within will be well flavored. To prepare fish for frying, wipe them dry with a towel, sift flour upon them, dip into beaten egg, and roll in bread crumbs which have been mixed with salt and pepper. Parsley, water cress or sliced lemons are the most suitable garnishes for fried fish.

TO USE BACON FRYINGS.—Many people are not aware that bacon fryings can be prepared so as to be used for anything, unless it be for soap or wagon grease, and for the latter it is almost worthless. Boiling in a quantity of water, letting it get cold and remove it, repeating till the smoky taste is gone, and it can be used for almost any use that lard may be used for, unless it be for nice pastry. I have used it for frying doughnuts and for pumpkin pies, as only one crust is used, and with satisfaction.





DEWEY &amp; CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 202 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No raw names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.

Per line.....	.25	.80	\$2.00	\$5.00
Half inch (1 square).....	\$1.60	\$3.00	7.50	24.00
One inch.....	2.00	5.00	14.00	40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Quack Advertising positively declined.

The Scientific Press Patent Agency.

DEWEY &amp; CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, October 18, 1879.

## TABLE OF CONTENTS.

EDITORIALS.—A Plea for Scratching in Grain; Barley Abroad; A Suburban Residence; Cuzco Corn; The Isabella Regia; The Public Land Commission, 241. The Week; The Food Value of Potatoes and Beans; The Railroad Commission, 248. Work the Year Round; The Needs of Europe; Cave Dwellers of America; Australian Meat for England; Interesting Statements Concerning Russian Wheat, 249.

ILLUSTRATIONS.—Design for a Rural Home, 241.

Cliff Dwellings of the Colorado, 249.

CORRESPONDENCE.—Bouldin Island; Carson Valley, 242.

QUERIES AND REPLIES.—The Healdsburg Joint Worm; Grapes by Sub-Irrigation; Grape for Name; The Forest Rose; Wood-Chopping, 248.

HORTICULTURE.—Cinchona in California; Pruning Orange Trees; The Mandarin Orange, 242.

THE DAIRY.—Sweet Corn as Dairy Feed; A New Work on Dairying, 242-243.

THE STABLE.—Management of the Horse, 243.

SHEEP AND WOOL.—A New Era in Sheep Husbandry; The Importance of Merino Sheep, 243.

FLORICULTURE.—Standards of Excellence in Roses; A Good Liquid Manure, 243.

PATRONS OF HUSBANDRY.—Meeting of the State Grange; Grangers' Bank Meeting; Notes on Taxation; The National Grange; In Memoriam, 244-245.

AGRICULTURAL NOTES from the various counties of California, 245.

NEWS IN BRIEF on page 245 and other pages.

HOME CIRCLE.—The Corn-Fields (poetry); Sense of Duty; The Power of Life; What a Woman Can Do; Heroism in Common Life; A Perpetual Calendar; San Francisco the Center; Chaff; Why We Did Not Keep a Hired Girl; Why Not, 246-247.

YOUNG FOLKS' COLUMN.—The Three Little Kittens; Don't, Boys; "Now I Lay Me Down to Sleep;" A Boy's Vacation Letter, 247.

GOOD HEALTH.—Painless Death; Care of the Teeth; Prize for Essay on Diphtheria; Coal Oil as a Pain-Killer, 247.

DOMESTIC ECONOMY.—Home-Made Bacon; Kangaroo Tongues; Plain Chicken Fricassee; Oatmeal Bread and Breakfast Cakes; Beef Broth; To Use Bacon Fryings, 247.

MISCELLANEOUS.—The Colorado River Country; The Jeannette in Polar Waters, 250.

## Business Announcements.

Garden City Gang Plow, Geo. A. Davis, Agent, S. F.  
Hill's Eureka Gang Plow, Baker & Hamilton, Agents, S. F.  
American Exchange Hotel, S. F.  
Cuzco Corn, John Gardner, S. F.  
Windmills, Horse-powers, etc., F. W. Krogh & Co., S. F.

## The Week.

The larger portion of the State has had another foretaste of winter in the storm that reached the bay regions on Saturday evening of last week. This storm like its predecessor was a genuine one, and was preceded by a few hours earnest work by southerly winds. The rain extended from Los Angeles indefinitely northward, and from the coast to the Sierras, the long suffering upper San Joaquin country not being overlooked. From some localities there are reports of moderate damage to exposed grain and fruit, and to the dry feed. In some counties the new growth is starting and a plowable quantity of moisture is in the soil. From all sides come reports of good cheer and of anticipations of an old-fashioned winter, which will bring enlarged areas of soil into cultivation, and fill the State with the sounds and scenes of rural activity. This seems the gladder indication because of the new life which is tardily creeping into produce prices and markets. Wheat has stepped firmly upon its second dollar; wool has a new era before it; dairy produce is alive again; wine is sparkling with its prospects; raisins have the surety of an advancing market in the East; hops have turned the last quarter towards 40 cents, etc. It is true there are grand staples which are still lagging on the line between profit and loss, but the improved outlook may pull them over to the right side. It will be pleasant to have winter close in with full encouragement for value in another season's products.

## The Food Value of Potatoes and Beans.

Now that potatoes are in many regions below their digging value, and even in the market can be purchased at almost a nominal rate, it is quite important to arrive, as nearly as may be, at their value as a food for animals. If they can be shown to have good points in this direction, perhaps some of our stock feeders can profitably turn them into pork, or mutton, or beef, etc., and at the same time aid potato growers to get a better price for the balance which will be demanded for human food. It may be stated at the outset that potatoes are not in the best odor as food for animals, and it cannot be doubted that much of this impression comes from a wrong use of them. They are evidently unfitted for a sole food for a growing animal, because their composition does not include all the substances which the system demands, but when not used in excess, but in connection with other foods rich in the substances they lack, they will form a useful part of a food ration.

The food value of potatoes as compared with certain grains, is well fixed by many tests and analyses made at the German experiment stations. Thus the composition of the dry substance of the potatoes and some of the leading grains is as follows:

	Flesh-Formers.	Fiber.	Carbohydrates.	Fat.
Potatoes.....	8.4	5.4	82.8	0.8
Wheat.....	15.2	3.5	77.2	1.4
Corn.....	11.7	6.4	72.4	7.6
Oats.....	14.0	10.6	64.3	7.0

The carbohydrates, as is generally known, are the sugar and starch which are conceded to be the material consumed (oxidized) in the body in the production of heat. Potatoes, being eminently a starchy material, rank very high in the carbohydrates, and yet in the dry substance of the potato there is more than half as much of the flesh-forming compounds as in wheat. But potatoes contain more water than the grains. While potatoes are 75% water, grain is but about 14% water; hence to get the same amount of dry substance, about three and one-half times as much of them must be used as of grain.

But the German experiments with feeding animals give potatoes a higher place than their chemical composition above would indicate. Their tests were arranged to determine what percentage of the materials were thoroughly digested in the animal stomach. The following table gives the percentage of each substance found to be digested:

	Flesh-Formers.	Carbohydrates.	Fat.
Potatoes.....	8.4	87.2	0.8
Wheat.....	12.4	73.6	1.4
Corn.....	9.8	71.0	5.8
Oats.....	10.5	50.5	5.5

Considered, therefore, as an article of food, and not as a complete ration, the dry substance of the potato compares favorably with that of our best feeding grain. In speaking of the digestibility of potatoes, Wolff says that scarcely a particle of potato starch can be found in the excrements of ruminants which have been fed with them.

But a comparison of potatoes with other succulent matters which are often used as cattle food will probably be a more pertinent form of presenting their value. From the analytical tables of Dr. Wolff, which are highly regarded, we deduce the following statement giving the digestible nutrients of each material mentioned:

	Flesh-Formers.	Carbohydrates.	Fat.	Value.
Cured corn fodder 3.2	43.4	1.0	57c	
Potatoes..... 2.1	21.8	0.2	29c	
Carrots..... 1.4	12.5	0.2	18c	
Mangolds..... 1.1	10.0	0.1	14c	
Rutabagas..... 1.3	10.6	0.1	15c	
Turnips..... 1.1	6.1	0.1	11c	
Sugar Beets..... 1.0	16.7	0.1	19c	

These comparisons are not with the dry substance as in the former tables of comparison with grains, but are of the vegetables in their natural condition. The column of values in the above table is comparatively true as between the different vegetables, for any condition affecting the value of the product obtained by feeding them would influence them all alike. The value is obtained by rating one pound of flesh formers at 4½ cents; one pound of carbohydrates nine-tenths of a cent, and one pound of fat at 4½ cents.

But we have granted that potatoes are not fitted as a sole ration, because of their deficiency in flesh-forming principles in the proportion which the animal economy demands. Nothing could be better to round up the ration in this respect than bean meal made from the excess of beans which our southern county friends have this year. Beans are very rich in albumenoids or flesh formers, 25% of their composition being of this nature. It has been shown by experiments that in a perfect ration the albumenoids should stand to the carbohydrates about as one to six. The percentage of water in beans is about the same as in the cereals, that is about 14%. Therefore if we count 3½ parts of potatoes as the unit of measurement and fix our ration in the proportion of one to six, we should have one pound of bean meal to about 20 pounds of potatoes. It has also been found that if the ration of such substances is fed to ruminants in connection with about its equal weight of coarse fodder, the whole ration is generally well digested. Therefore in using potatoes and bean meal let the mixture stand

something like 1 pound bean meal, 20 pounds potatoes and 21 pounds hay or corn fodder. These suggestions may aid some of our readers to work off some of the surplus material they have at hand.

## The Railroad Commission.

Many people are now waiting with anxiety, and many more with deep interest, to see what will be the effect of the work of the Railroad Commission elected under the new Constitution. It is a matter which will have a marked influence upon our producing interests, and upon wise and just action on the part of the commission will measurably depend the degree of prosperity which certain regions of our State will attain. While we are thus waiting it is well to expect that the commission will wisely and honestly discharge the high trust placed in it, and it is well also to borrow such assurance as seems warranted by the experience of other countries which have vested high power in similar bodies of men.

The last issue of the *North American Review* contains an article on the "railroad problem," in which especial reference is made to the English railroad commission, the nature of its powers and the results therefrom. From this account we draw certain statements which will be interesting and comforting during our period of expectancy. The English railway commission was organized by an Act of Parliament in 1873, and consists of three persons and two assistants. Of the three commissioners one was skilled in law, and one in railroad; and no member was allowed to have any pecuniary interest in any railway or canal company. The commission was authorized to receive all complaints of discrimination, etc., and they were invested with all authority formerly reposed in the courts, which ceased to exercise jurisdiction in railway matters except to enforce the decisions of the commissioners. This commission has power to fix all apportionment of rates for through freight to the several lines participating in the carriage. Municipal or other public corporations could lodge complaints of discrimination without proving that they were aggrieved, as investigation into the fact devolved upon the commission. The companies were required to keep a list of special and schedule rates in a place of public access, and to furnish any required information regarding their business. Access by the general public to these schedule and rate lists has proved a good provision, as well as that making any individual or corporation an informant in charges of violations. The first duty of the commissioners was to simplify the methods of procedure on applications, dispensing with certain forms and placing a company on its defense without delay. The railway and canal companies were not permitted to consolidate without the commissioners' consent and only after the terms of agreement had been thoroughly published. These were among the reforms established during the first year of the English railway commission.

"During the second year the commissioners were called upon principally to decide upon questions of discriminations on the part of railway companies between customers. Rates were proved to have been charged higher and lower than those fixed by the schedules, and the schedule rates were restored. Abatements in charges to persons agreeing to patronize a certain company were discovered on complaint and stopped. Rebates for terminal service performed by customers were stopped on complaint of parties at a corresponding station where an opportunity did not offer for the performance of similar service. A number of cases of disagreement in reference to through rates and routes were submitted to the commissioners and equitably adjusted. In one or two cases the jurisdiction of the commissioners was contested, but, this being decided in their favor, the question at issue was privately arranged. There were no appeals allowed from the decisions of the commissioners, inasmuch as the exceptions were not based on questions of law."

These few items of reform in railway management which we have outlined must be regarded as of the greatest importance in the way of securing impartial public service from the companies, and this coupled with a reduction of rates to a fair compensation for the work done is all the public desires from its carriers. That the English commission has thus far succeeded in its work during the few years it has been in power is certainly a warrant that we may expect similar benefits from a similar organization. We trust that the commission which will soon come into power in this State will be characterized by a disinterested and unhesitating enforcement of right and justice between the companies and our municipalities and individuals, for thus and thus only can the men chosen at the last election show themselves worthy of the trust committed to them by the people.

QUEENSLAND AGRICULTURIST.—A new venture in agricultural journalism comes to us from Australia in the form of the *Queensland Agriculturist*, by R. M. Ross of Toowoomba. It is deserving of success because of its rich collection of valuable agricultural matter and the style in which it is presented.

## QUERIES AND REPLIES.

## The Healdsburg Joint Worms.

EDITORS PRESS:—I beg you will excuse me for not sooner acknowledging the receipt of the specimens of the "joint worm" and the copy of the *RURAL PRESS* containing your notice of it. I fear this is the joint worm. The joints contain the larva and the pupae. They are alive still and I am hoping they will evolve the fly. Then I can tell surely what it is, and I will write you again. At present I think it is probably the joint worm, and while I am sorry that it is in your State, I am glad to get, through your interest and kindness, authentic specimens and information. Please get me more specimens and try to ascertain how general is its occurrence on the Pacific coast.—A. S. PACKARD, JR., Providence, R. I.

This letter from Professor Packard, of the U. S. Entomological Commission, refers to the specimens sent us by the Healdsburg *Enterprise* during harvest, and which we described in full at the time. We expect that by this date the straw and stubble on the infested fields has been burned. We hope it has, for this, as we stated before, would materially reduce the number of the insects. If any of our readers have preserved specimens and have them to spare, Prof. Packard would be glad to receive them by mail at Providence, R. I. The need of many specimens is to increase the chance of getting the perfect insect. The larva and pupae of a number of these small pests are so near alike that demonstration of species cannot be attained without producing the winged insect. Although many larvae are easily recognizable by those familiar with them, there are many more which must be hatched out, just as the propagator must often wait for the fruit before he can fix the variety of his tree. Therefore, if there are more of the little worms send them to Prof. Packard.

## Grapes by Sub-Irrigation.

EDITORS PRESS:—By to-day's express I send you a small box of white Muscat grapes—raised by sub-irrigation. My pipes have been laid down only one season, along each row of orange trees, and are 30 feet apart. The grapevines are between the rows of trees. Last year without irrigation my grapes were quite small and inferior, while this year they are very fine and large. After you have examined the grapes send please let me hear from you through the *RURAL PRESS* as to their merits.—M. P. GROVE, Los Angeles, Cal.

The grapes are noticeably good both in size (which is easily attained by irrigation), and in flavor, which is apt to be lost unless great care in the use of water is observed. We never saw any irrigated grapes better than these in flavor, and we have seen them where the flavor was largely diluted. It seems well demonstrated that the degree of irrigation bestowed in this case was sufficient to accomplish the best results. The sub-irrigation pipes, as we understood it, being 15 feet from the vines on each side would probably furnish only such amount of water as the vines could readily make use of. The specimens are very satisfactory evidence to the value of the system.

## Grape for Name.

EDITORS PRESS:—I send you by express a small box of grapes, and not knowing the name I thought perhaps you would. They are rather late in ripening, bunches from a foot to over 18 inches long. We have had bunches longer than those we send; some within the last ten years have weighed from 3 to 4½ pounds each.—WILLIAM THOMPSON & SON, Yuba City, Cal.

This grape is, as nearly as we can determine, either the Black Morocco or a seedling therefrom. These specimens have some variations from this variety as it is usually seen in our market, and yet has marks in common therewith which prevent our giving it another name. It looks like a grape grown by copious irrigation, which of itself gives peculiar appearance and characteristics to the fruit.

## The Forest Rose.

EDITORS PRESS:—I imported from Ohio some Forest Rose strawberry plants two years ago, and they bore tolerably well the next season, and the berry was as good as represented; but this season, although mulched and watered, they did not fruit at all, and anyone of your subscribers is welcome to the plants. The soil is pretty heavy clay.—E. W., Fruit Vale, Alameda County.

## Wood-Chopping.

A reader of the *PRESS* in the extreme north of the State wishes to spend the winter in wood-chopping, but thinks the excessive rainfall there unfavorable thereto. If any reader in the drier portions of the State knows of a chance for fair pay for wood-chopping, he will do our northern friend a favor by sending word to this office, stating the prices usually paid for the work.

BREEDING FOR COLOR.—An interesting fact in breeding is mentioned by Mr. Richardson, in his late work on French agriculture. He states that Mr. Colcombet, an intelligent French farmer, set to work to build up a herd of white Short Horns, beginning by purchasing the entire 22 volumes of the English Herd Book, and every volume of the French. Then, with the patience of a Benedictine monk, he traced back from generation to generation, the accidents of color in each family. With the knowledge thus laboriously acquired, he was able to select his stock with such certainty that the most perfect success rewarded his toil. He has reared upwards of 40 calves, each perfectly white, without a single hair of red or roan appearing in any of them to upset his calculations or betray his hopes. In all cases they do not possess uniform excellence of form, but now that he has established color, he will next give attention to quality.



## Work the Year Round.

It is an interesting fact that the progress in agricultural machinery is attended by an increased length in the working season instead of a reduction of it as might be expected. It is true that without the machinery the work which is now easily accomplished could not be done at all, but with this gain in dispatching work there comes also a call for other kinds of work which keeps the farmer's time well employed nearly the year round. This change is mainly occasioned by the growth of agriculture as an industry and as a system of efforts. The first point is too palpable to need comment, viz., the increased power bestowed by machinery leads to the cultivation of many times the number of acres which would or could be mastered by the old hand-methods. Had it not been for improved farming machinery, the great fields of the prairie and Pacific coast States would still be grazing grounds.

The development of agriculture as a system is a very interesting subject of inquiry. We have not space to inquire into its phases in encyclopedic style, but will throw in two marks of the movement. First, in this State, note the change from the old style of waiting for copious rains before starting the plows. This gave a long idle interval generally between harvest and sowing, and while the grain was growing there was another long idle interval until it ripened. Now in most parts of the State this system of short labors and long rests has given way to a succession of work irrespective of times and seasons. While the thrasher is at work at one end of the field, the long mule-teams are quite likely to be breaking up the stubble ground dry, on the other end. The harrow follows the plow at once, and the seed sower follows as a sandwich between harrowings. Thus the work proceeds day after day through the autumn in the Sau Joaquin and other valleys, until the rain puts an end to dry working. Still the plows and sowers push along whenever the open days in winter give a soil in proper condition, until the time comes when it is too late to sow with chance of success. Then the seed sower gets a rest under the shed, but the plows go on, daily increasing the area under summer-fallow almost until the force of men and animals are again required for harvesting. This system of continuous work is in marked contrast to the old style, and its rewards are commensurate with the greater effort required. The value of the summer-fallow in this State is now beyond question, and the advantage of dry plowing and putting the grain where it will get the full benefit of all the rain that falls, is also widely recognized, except in certain locations where such practice is not admissible because of local conditions, like excessive rainfall and quick growth of foul weeds, etc. It is a fact that in this way our working season, even in the one line of grain growing, has lengthened because of changed system in culture.

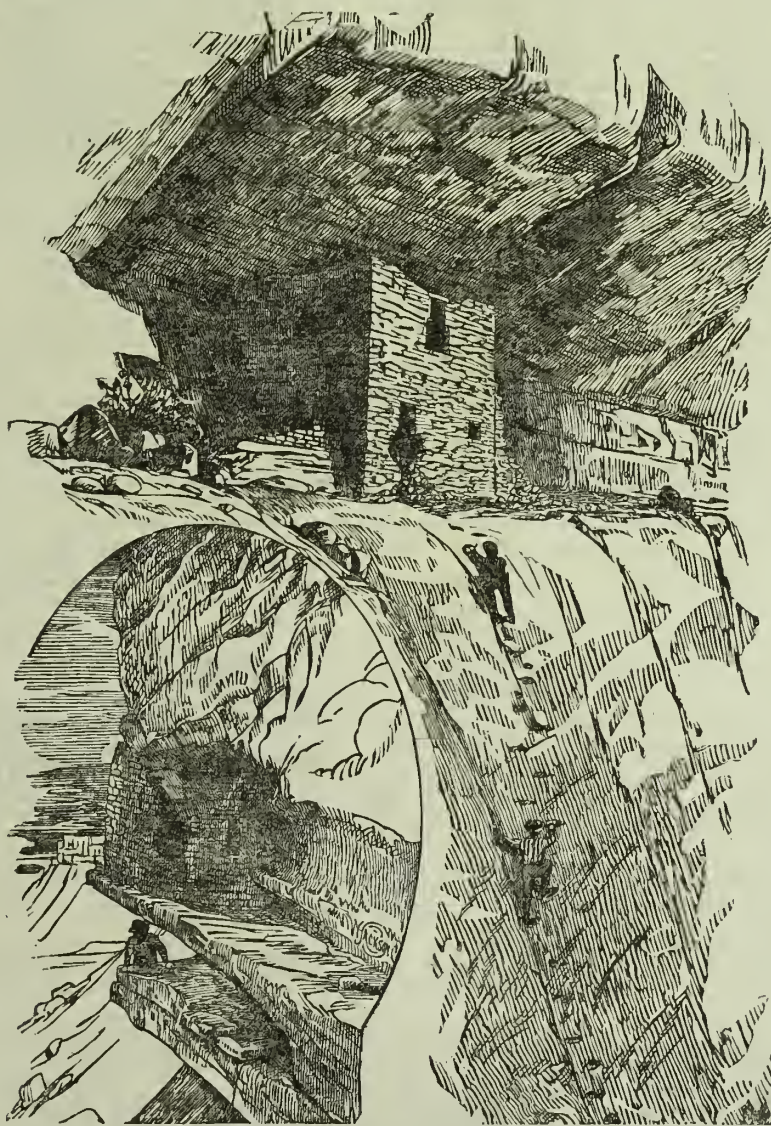
It is interesting to note that a similar change in system is creeping into England agriculture. We read in the London *Farmer* these comments: "There was a time in the history of agriculture—at a period not very remote, and well within the recollection of the 'oldest inhabitant'—when farmers had long seasons of comparative idleness alternating with periods of busy work. Between the sowing of spring corn and hay time there was not much to do, for turnips and mangolds were but little cultivated, and the sole work of the plow from barley sowing to harvest was the occasional turning over of the fallow ground. After the ingathering of the corn there was rest until the sowing of winter wheat commenced late in the year."

Times have changed. There is more activity in the factory and on the farm. Competition is rife in all industries, and it is only by great effort a satisfactory position can be maintained. The farmer's life is one of incessant toil and anxiety from year's end to year's end. There is no rest, no long or short vacation. The harvest over, and a new series of busy operations are immediately begun. The scanty crops of a past age are insufficient to enable him to hold his own. More attention must be paid to the cultivation of the soil than of old. It must be tortured to yield its wealth by formidable implements and machines. The weeds that cumber the ground must be exterminated, and crops must be harvested quickly to minimize the heavy cost of labor and to secure the grain in the best possible condition. The preparation of the soil for succeeding crops takes place as soon as the ground is cleared, and in many instances it goes on contemporaneously with harvest work. Instead of commencing plowing in November, it is common now to practice early Autumn cultivation, and on clay or loamy soils the system is to be highly commended.

This change in English agriculture is not of course put forth as a counterpart of ours, for conditions are wholly different and the new practices are taken up for different reasons, but both indicate that agriculture is progressive and like other progressive industries, is throbbing with new life. It also reflects the spirit of progress which is characteristic of the age and adapts itself to all changes in practice which are demanded by the teachings of experience and investigation.

## The Needs of Europe.

Statesmen, divines, educators would each descant differently upon the needs of Europe, but neither of them would strike the line of facts and arguments of most importance to us at this time. To us Europe is chiefly interesting as a consumer of breadstuffs, and may her appetite never grow less. All advices thus far received continue to point to a long and large consumption of American grain. It is now a question among grain experts in England and on the Continent whether we can supply enough for them, notwithstanding the immense amounts we sent them last year. The London *Farmer* says that the ascertained differences in the harvests of western Europe are so great that doubt is felt whether the unascertained surplus of America, of Russia, of Egypt, and the East will suffice to balance the scale, and supply adequately and promptly—and, therefore, cheaply—the food wants of England, France, Italy, Belgium, Holland, and the Iberian peninsula. The astute merchants of Paris, Le Havre and Bordeaux, have already made up their minds that even if sufficiency be forthcoming the balance will be too close to allow of value remaining at the present low level. They have, there-



CLIFF DWELLINGS OF THE COLORADO.

fore, purchased new American wheat on a scale never before known, while the merchants of Marseilles are understood to have made arrangements for heavy supplies of Russian grain. English traders have been somewhat less enterprising. Their purchases have been considerable, but not so large in proportion to wants as have been the investments of the foreigners. Time alone can show whether those who buy largely at present prices are well or ill advised, but the general opinion of the most thoughtful English observers appears to be that prices will continue to rise, because very heavy imports will be absorbed and consumed without exercising on the markets the depressing effect which follows on large foreign supplies into a country already in possession of an average home crop.

**FREAK OF NATURE.**—A singular freak of nature is shown in a marble mantel at the Cincinnati exhibition. In one of the onyx pilasters are seen the outlines of a woman's form, produced ages ago, when the marble first assumed its growth and consistence. Its discovery was the result of an accident. One of the workmen turned the pilaster upside down, and the strange beauty of the features of the face at once attracted his attention. His employers were summoned, and the pilaster reversed is now the chief ornament of the mantel.

At Liverpool wheat was quoted at 10s 4d @ 11s 2d for average California white, and 11s 1d @ 11s 7d for club.

## Cave Dwellers of America.

The remarkable discoveries that have been made within the past few years connected with the age and origin of the cave or cliff dwellers of America, have been the continual source of much speculation. Southwestern Colorado has seemed to be the location of the most complete discoveries, particularly along the Rio Las Animas and San Juan. The Valley of the Mancos is filled with mounds which appear to demonstrate the existence of numerous villages, from the San Luis valley in Colorado in a continual chain to Mexico. The ruins of these ancient people are found in such various stages of perfection, from the small rock-cut chamber to the massive and imposing structures, indicating the work of different ages, as to afford Senor Altamirano proofs that the Aztecs originated in unsubmerged parts of America, and were as old as the Asiatics themselves, and that Asia may even have been peopled from this country.

Major Powell, however, in another column, sees in these various forms of structure only evidences of the same race building under the different conditions of peace or war. E. T. Elliott discovered and examined in December, 1877, about 12 or 15 of the houses or caves near Del Norte, many of them, especially those along the face of the cliffs, have nearly disap-

peared from the effects of the disintegration of the rocks. Mr. Elliott says that as no human remains have been found, nor any semblance of graves, it is probable that cremation was practiced.

It is evident from appearances and surroundings that these caves were inhabited during the period when the San Luis valley was an immense lake or sea. The valley is 7,000 feet above the ocean, and the natural inference is that most of the continent at that time was under water, which hypothesis would preclude the idea of their reaching Colorado from Asia.

**THE METRIC SYSTEM.**—The educational society for introducing the Metric system, the American Metric Bureau, has just published a new edition of the standard work on this subject by its President, F. A. P. Barnard, President of Columbia College, New York, which has heretofore been published in New York at \$3 per copy. This new edition contains three times the matter, and has been made the most complete work in the language, its index of 2,000 references making it really a metric cyclopedia. The society wish to scatter it widely through the country as the best means of giving accurate information about the metric weights and measures of which so much has been ignorantly written. They offer it at \$1.50, or one-fifth the rate charged by the New York publishers for the original edition. If not found at the book stores it can be had of the society by mail at \$1.70. The address is Secretary Metric Bureau, 32 Hawley street, Boston.

## Australian Meat for England.

Since the startling proposition, which we noted some weeks ago, to make overland tourists of Australian cattle to England by way of San Francisco, Ogden, etc., we have heard no more of making the cattle go to England alive. There continues, however, active experimentation in Australia in the hope of getting the beef to the old country in eatable shape. The ways now being tested are very interesting and may be valuable to some of our readers who may wish to preserve some meat for their own use during a period of trying weather. We should think that the methods which we shall briefly describe would change the character of the meat altogether too much to please a party so expert in roast beef as John Bull, but might do very well for the traditional Yankee, who cares little what his meat is so long as his knife is sharp.

One of the Australian processes is as follows: The meat, which is first cut into joints, is either boiled, roasted or steamed, for the purpose of ejecting the oxygen, coagulating the albumen, and closing the pores of the meat. The joints are then sorted, and closely packed in wooden cases capable of holding 3 cwt. or 4 cwt., a small space being left between the sides of the case and the meat, wire being used to raise the meat from the bottom of the case. Stearine or fat from which the oleine has been extracted is produced by first purifying tallow by steam, and then submitting it to hydraulic pressure for the purpose of extracting the 25% of oleine contained in the tallow; the remainder, which is stearine with margarine, is an almost tasteless and inodorous substance, which preserves its solidity at a temperature of 138 degrees Fahr., and is not liable to turn rancid. The stearine is heated to about 250 or 300 degrees Fahr., and poured on the meat till the case is full, and the stearine, on solidifying, renders the meat impervious to the air, and consequently prevents putrefaction setting in.

Another process which is now in training for the Sydney fair proceeds upon the plan adopted by the microscopist for injecting coloring and preservative matter into his anatomical specimens, and by the undertaker for injecting embalming material into the human frame. Immediately after the animal is killed the beast is laid bare, and a pipe inserted into the left ventricle, through which a stream of weak brine is forced from an elevated tank. The brine flows along all the vessels, and drives out the blood through the right ventricle, when a stronger brine is forced in until all the vessels are full. It is stated that the distribution of the salt is thorough, and that the meat is perfectly preserved by the process.

This would seem to be a perfect way of making corned beef, but the Englishman does not want corned beef. He wants it fresh and juicy and in a perfectly sweet condition. Hence we think these methods will fail to meet the peculiar demand, although they may be very useful for other purposes.

**INTERESTING STATEMENTS CONCERNING RUSSIAN WHEAT.**—The *Mark Lane Express* gives some interesting facts concerning wheat growing in southern Russia, which were communicated to the English government by its representative at Odessa. He is of the opinion that for the English market, Russian wheat cannot, under the present system of cultivation, contend with American. Notwithstanding the low value of the rouble and the low freights, there was last February a stock in hand at Odessa of upwards of 1,000,000 quarters, and much more in the country waiting for better prices. The holders, however, cannot afford to wait much longer. The year 1878 began with a stock in hand of 708,000 quarters, and in the hope of an early raising of the blockade, much speculation took place, which raised the prices 10%. On the 8th of February, the port was opened to commerce, and the transactions in grain largely increased with further rise in prices. The high prices remained till the middle of March, when the large arrivals by river and rail, and the low prices in England, owing to the good American harvest, caused a fall; the best Polish and Besarabian wheat falling 1s. per quarter. The amount exported during the year reached the unprecedentedly high figure of 6,685,536 quarters, the greatest amount previously exported being in 1870, when 3,900,000 quarters were exported. An objection in the English market to south Russian wheat is the unfit condition in which it is often shipped. The greater part arrives from the interior in uncovered wagons, and frequently, for want of wagons, remains exposed on the railway platforms. Unless the wheat can be produced cheaper and brought to Odessa in better condition, and the cost of transport and placing on board be reduced, south Russian wheat will soon no longer, except in exceptional seasons, find a market in England and Western Europe, being unable to compete with American, Indian and Australian grain. During the past year, for instance, owing to the depreciated value of the rouble, purchasers in England had to pay only £1 for what at the normal rate of the rouble they would have had to pay £1 7s. 6d., yet even thus America was able to undersell Russian wheat.



### The Colorado River Country.

At the meeting of the Academy of Sciences on October 6th, Major J. W. Powell, of the U. S. Geological Survey, well known as a scientist and explorer, addressed the meeting on the subject of his explorations in the Colorado River country. His highly interesting report on this subject, published a few years since, brought into prominent notice the wonderful features of the region he describes—a region with such marked peculiarities and characteristics as to have attracted the attention of the whole world to its wonders. Although called upon without opportunity for preparation or being provided with notes, Major Powell entertained the Academy for over an hour, with an account of the Colorado region, its geological features, peculiarities, habits of the Pueblo Indians, etc. His manner of speaking is as eloquent as his style of writing is graceful, and the Academy have seldom been entertained as they were by this noted explorer.

The great Colorado river, for nearly 1,000 miles, is not approachable from above. No human industry could thrive; there are no farms, no habitations. The river has carried a vast amount of sediment. The valley of the Colorado is a region of naked rocks, where the strata can be measured with accuracy, where geological studies can be made with an approach to certainty of conclusions. It is an open book, a book of Revelations. We are able now to state with accuracy the amount of material carried off by the river. This amount would average over the whole area a depth, or thickness, of 5,000 feet. A rock as large as the combined States of California and Nevada, and 5,000 feet thick, has been washed away by the storms which have beat upon it, moved it into the river, and the river has carried it away.

Where there has been 1,000 feet of sedimentation, there has been 1,000 feet of degradation in some locality. In the valley of the Colorado, we are able to study the results of the erosion or degradation. These studies have resulted in bringing out interesting facts in dynamical geology. One of these facts is that in this valley the rivers are older than the mountains. The river winds its way over a region of country, carving its channel, cutting its channel deeper and deeper. As the mountains rise, the river cuts its channel through like a saw through a log which is fed to it. Hundreds of instances prove this.

The subject of transportation of material by rivers is a study which is an open book in the Valley of the Colorado. In 1869, I passed through the Grand canyon, and said that the courses of rivers were never determined by factors of strata; but all this is a faulted region. We find the folds in the valley of the Colorado broken by faults. The displacement in these faults is often very great—ten, twelve, fifteen or twenty thousand feet. In the Wasatch mountains, a fault running north and south has been traced 400 miles. In the plateau region, we find simple faults, great blocks, 20 or 30 inches wide, lifted up. There are 11 great faults across the valley of the Colorado. One block dips down, another is lifted up, or vice versa. The structure of the country is displacement by faults. The strata are horizontal. Besides this general structure we find another interesting feature. We find a zone, or belt, of rocks broken into irregular fragments, some blocks tipped one way and some another, on their edges or on their ends, like blocks of ice in a river. We find these zones of broken or irregular rocks, 10, 12, 20, and 30 or 40 miles long. No dynamical theory of a contracting earth explains this structure.

The ride through the Colorado was interesting to us studying geology. When we reached the head of the Grand canyon, our boats were injured. The Grand canyon has its base in granite, and there is generally 1,000 feet of granite rocks, and then carboniferous rocks. We found that the rapids were caused by the granite; that wherever we came to granite the passage was bad. When we came to a fault of sandstone the river would be half a mile or more wide, or at least 200 or 300 yards; but when granite or basalt was reached, it would narrow down to 60 or 70 feet. In this narrow, confined space, as much water as the Ohio river carries will rush and roar down in a mad, wild stream. In the sandstone or shale it opens out broadly. At high water the river fills its channel from wall to wall, and there are no landing places. The difference between high and low water is very great. The river drains an immense region. There are thousands of springs and streams, the waters from which tumble down over the rocks in every direction. In a single great storm, the river will rise twenty, thirty, or even a hundred feet.

At high water the river runs with such irresistible force that oars were of no use, and the boat would sweep along at an alarming and dangerous speed. We found it advisable to travel on the low water, making portages where necessary.

All the falls or rapids are caused by one of two reasons; either the walls have tumbled down and the broken rocks caused them, or else a side channel coming in had washed material into the river bed.

I went down the length of the river in a boat, and there is not a single vertical fall in the whole distance. And here I may mention certain facts, which I have not before made public, concerning the formation of falls, and which my observation proves to me conclusively,

A fall on the river is an exception. A vertical fall needs always an excavation. The Colorado river cuts its own channel, and carves it out so that there can be no fall unless there is some extraordinary circumstance to produce it. It takes two things to produce a fall. One may be a "fault," but here it will not last long—geologically speaking—for the stream will soon wear it away. Or, when a river is somewhat rapid and some strata are hard and some soft. In either case the lower one will be undermined farther than the upper.

Now we knew before we started that the Colorado river had to descend 5,000 feet in its course. Geologists said we would assuredly find an immense fall somewhere; or else a series of falls. After exploring the Green and White rivers I concluded that since the Colorado must carry an immense amount of sediment, it would be impossible for it to have many vertical falls. I had faith that there were none. In all the tributaries carrying sediment, there was a very rapid current but no fall. The sediment will wear away the upper strata before the under are undermined, even if the upper are harder.

The Valley of the Colorado has been the home of a Pueblo building people. In the Uintah mountains are thousands of ruins, some of them very ancient and deeply buried. The whole of the region has been inhabited by people who built houses of two, four, five, six and seven stories in height, and who cultivated the soil to some extent. The Pueblo Indians of to-day are a portion of the same people, allied by their arts only, but with a wide separation in respect to language. There are four distinct stocks of Pueblo language in the United States now.

These people have covered a wide area with their ruins. North, and away west toward the Uintah mountains; east toward the Park mountains of Colorado; about the heads of all the streams piercing the Colorado we find very ancient ruins buried under the drifting sands. As we go down towards the Colorado river, the ruins become more recent. When we come to the deep canyons and high cliffs we find houses three, four and five stories high yet remaining. In the earlier parts of their history they built at the outer part of the valley and heads of the rivers. Here they were probably molested by nomadic tribes, and finally sought safety in the walls of the canyons themselves. The cliff houses do not constitute a distinct style of architecture for the Pueblos, but are much the same style as those built earlier, with a construction and site, however, more especially for defence. The nomadic tribes drove them from the perimeter of the great basin to the river. The Pueblos of to-day are fragments of this ancient people.

The form of axe or hatchet shown here this evening from Tulare lake is one we frequently find. What are here found and called arrow-heads, I have often seen among the Pueblos, in use as knives, having wooden handles. The Utes of Utah, the Shoshones and Sioux all have these stone knives, which we commonly call their spear-heads. As far as my 20 years' experience among Indians goes, I never saw a stone arrow-head. I have always seen them of bone. What we call spear-heads are really their knives. At Santa Barbara they have opened lots of graves and mounds, and have found numbers of these implements such as we call spear-heads, but many of them have wooden handles yet preserved, these handles being five or six inches long, so that what I have observed has been proved true by these graves. The Indians of Southern California and Utah use a peculiar gum for securing the handles and knives. I found it in graves as far north as Oregon.

The pottery of the Colorado country is very interesting. The most peculiar feature, however, is the picture writing. This art was very highly developed among the Pueblos. The cliffs and rocks are covered in every direction with painted figures, etc. In one wild canyon in northern Arizona, the face of the sandstone cliffs for 14 miles is almost an uninterrupted series of pictures. Several of the incidents indicated in this picture-writing I find confirmed in the Buckingham Smith manuscript in the Smithsonian Institution, which is some 300 years old.

When man lives in a primitive condition his wants are few. The families live on small pieces of ground and raise corn. There is very little game and no fish, the river being too low down between the cliffs. In this country, where there is only an annual snowfall of four or five inches, they still raise their corn in the drifting sands. They dig a hole twenty inches or two feet deep, and plant the corn in them, the hills being ten or twelve feet apart. They succeed very well. The corn scarcely reaches ten inches above the ground, while it is two or three feet to the bottom of the root. They bake their cornbread very nicely. In a corner of the house is a little oven, with a pottery pipe to lead off the smoke, and a flat hearth on which to bake. The oven is about eighteen inches square. The corn is ground and made into a sort of dough or batter. The woman takes a handful of this, and spreads it deftly over a stone in a thin film or sheet, like a sheet of paper. This is instantly lifted off and another substituted, until there are seven cooked and laid one upon the other. These seven sheets are then folded into a loaf. They are very particular as to the colors of the corn; that is, in separating the red, blue or white ears; and the head made of these ears is separated also. The chief source of subsistence of these Indians is agriculture, as will be seen from what has been stated.

### The Jeannette in Polar Waters.

It may be safely presumed that by this time the *Jeannette* is fully on her way to her destination, the North Pole. As early as August 27th last, her course was shaped for Cape Serdez Kamen, 67° north, 172° west, to learn particulars concerning Nordenskjöld, who was supposed to be frozen in at Kolintchin bay, news of the coming out of Nordenskjöld not having been received at that date; thence her course was to be directed to Wrangel Land direct. Everything so far has been favorable to the success of the expedition. The *Jeannette* has proved a better sea boat than was anticipated, and the Kuro Siwa flowing in through Behring's straits has assisted her speed. The officers and crew at the date named were in excellent health and spirits. Indeed, the weather has been exceptionally fine and warm, and no ice except the old land ice of last winter clinging to the shore line and every prospect of open water in the Arctic. Up to the 27th August there was no necessity for fur clothing, the temperature even at night not exceeding 35°. The scientific work has not been neglected, and everything that could aid in the gathering of information has been done.

The *Jeannette* has progressed thus far without molestation on the part of Arctic difficulties, and has advanced much further than she could possibly have done at this season of the year had she gone by the eastern route.

This coast has a particular interest in this expedition, inasmuch as San Francisco may be regarded as its home port, and is the first to undertake the attack upon the North Pole through Behring's straits upon the theory of the inflowing Japanese current. It would certainly seem as if success must crown the effort made, because it is so much in accordance with the natural theory that a warm inflowing current like the Kuro Siwa must create an impression upon the ice floes and packs, which on the east are so compact from the never-ending ice-cold polar current flowing out in that direction.

It is hardly to be expected, however, that we shall receive any further communication from the steamer except through entirely accidental sources. From Wrangel Land, which is the last point of civilization in the Arctic, we may receive accounts of her arrival and departure, but that will probably be all. Imagination alone can trace her course towards the settlement of the many questions, shrouded in mystery by the inaccessible region to which all the energies of officers and crew are devoted. Is the north pole the birthplace of storms, or the home of a tremendous volcano? Will Symmes' theory of an opening into the earth be confirmed, or will it all end in the knowledge only of an impenetrable ice harrier? We can do nothing but wait.

### BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

#### CATTLE.

PETER Saxe & Son, 520 Bush St. S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

#### SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

#### POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Doves, etc. Eggs for hatching. Send for price list.

#### SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Poland-China Swine and Black Cochlin Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

#### BEEES.

JOS. D. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

### Grangers' Bank of California,

42 California Street,

SAN FRANCISCO, CAL.

Authorized Capital - \$2,500,000,

In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

#### OFFICERS:

PRESIDENT.....G. W. COLBY.

MANAGER AND CASHIER,

ALBERT MONTEPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

## PIANOS

### LARGEST MUSIC HOUSE

On the Pacific Coast.

WHOLESALE AND RETAIL.

Lowest Prices and Best Goods.

Write for Information concerning any Musical Instrument, and terms of sale. It will be given with pleasure.

ESTABLISHED IN 1850.

### KOHLER & CHASE,

137 and 139 Post Street, San Francisco.

### Read This!

New Hotel, Just Opened on the European Plan.

### ST. GEORGE HOTEL,

812 Kearny Street, near Old City Hall.

Meals served in first-class hotel style, of great variety and good quality, at all hours of the day for 25 cents. Steak and coffee 15 cents; coffee and cakes 10 cents.

Rooms from 25 cents to \$1 per night, as per size and location.

Board (per week) - \$4.00

Room and Board " " - \$5.50 to \$7.00

Accommodations for families correspondingly low.

North Beach and Mission street cars pass the door.

TIMOTHY SARGENT - - - Manager

Some fine sunny offices (next to the PRESS office), to rent (at very reasonable rates), by Dewey & Co., at 202 Sansome street, corner of Pine.

Rooms for \$10, \$15 and \$20 per month.

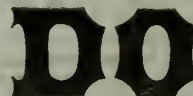
### ALMOND HULLER.

Will Hull One Ton Per Day.

ONE OR TWO MEN CAN RUN IT.

Price, \$25. Address

A. O. RIX, Washington, Alameda Co., Cal.



NOT FAIL TO send for our NEW PRICE LIST. More complete than ever. Contains descriptions of every thing required for personal or family use, with over 1000 illustrations. Send nine cents for it. (Stamps will do.) We sell all goods at wholesale prices in quantities to suit the purchaser. The only institution in America who make this their special business. Address, MONTGOMERY WARD & CO., 227 & 229 Wabash Ave., Chicago, Ill.

### ROOMS TO RENT.

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

### The New Beekeepers' Text Book.

By N. H. and H. A. KINE. The latest work on the Apiculture, embodying accounts of all the newest methods and appliances. Fully illustrated. Sent by mail, post-paid, for \$1. DEWEY & CO., 202 Sansome Street, S. F.



Lands for Sale and to Let.

FARMS FOR SALE.  
IN THE FERTILE AND HEALTHFUL  
San Pasqual Valley,  
San Diego County, Cal.

TITLES PERFECT.  
The owner (an architect) having recovered his health by a residence of four years in this Valley, is desirous of returning to the city, and so offers the following farms for sale

At a Great Sacrifice:  
The Home Farm of 200 acres is well fenced and subdivided. There is beside 800 yards of movable panels, 50 Acres in Alfalfa,

Yielding five and six crops a year. There is an abundance of water on the place for stock, besides running water for garden, orchard, etc., and a one-sixth interest in the S. P. V. Ditch Co. House 28x36, enclosed in a lot 200x180, barn and stable, 54x35, two sheds 24x14 and 18x14, smoke-house, 20x14, with an adobe cellar under it, and every convenience as regards large tanks, etc., for making bacon. The implements are of the best, nearly all new, and in good order. They consist of two farm wagons, 10-foot header, header beds, hay rack, mower, gang plow, single do, harrow, 10-foot seeder and cultivator, small do, sulky rake, two sets of strong harness, together with a lot of other tools, bay, grain seed, etc.

Price for the whole, \$4,000; one-half cash, balance on time at 1 per cent.

For Sale Also,  
A farm under cultivation of 116 acres, adjoining the above, suitable for grain, corn or alfalfa, with a one-sixth interest in the Ditch Co., and about one and one-quarter miles of fencing, no other improvements. Price, \$1,200; one-third cash, balance on easy terms.

For Sale Also, -  
A farm of 120 acres, one-quarter mile from the above ranches, mostly damp land, suitable for a nursery, alfalfa, corn, etc. There is a small house, etc., and a ditch running along its upper side. Price, \$900; one-third cash, balance on easy terms.

The neighborhood is exceedingly healthful and growing. Two schools are in the valley, one within one-quarter mile, and the postoffice within one mile, neighbors with families are all round.

My stock consists of superior brood mares, colts, hogs etc., and they may be taken at a valuation if wanted.

For particulars apply to W. B. STEWART,

San Pasqual Valley, San Diego Co., Cal.

Farm For Sale.

Yields an Income of \$4,000 a Year.

Price, \$10,500.

My Farm and Poultry Business yield over \$4,000 a year. The place—116 acres—with orchard, vineyard and improvements, has cost me \$15,000. The good will of the business is worth fully \$6,000. I will sell the business and farm for \$10,500, half cash, or exchange for San Francisco property. It is a bargain such as is seldom offered.

M. EYRE, Napa, Cal.  
Law Office in San Francisco, No. 636 Clay St., Room 25.  
I am in Napa each Saturday and Sunday; other days in San Francisco.

FOR SALE.

700 Acres. The Finest Stock and Grain Farm in Northern California.

Price, \$25,000, including Farming implements. The whole under fence.

The Stock upon this farm, all thoroughbred and graded, embracing some of the finest in the State, will be sold at private sale. Among the stock is some that has been awarded different premiums at State and County Fairs.

This is one of the finest opportunities for a man of means in the State. For full particulars apply to

D. B. HAYS,  
Real Estate Agent, Oroville, Cal.

C. C. RODGERS,  
CALIFORNIA LAND AGENCY,  
Office, 276 First St., San Jose, Cal.

GENERAL LAND, REAL ESTATE, U. S. PENSION AND BOUNTY AGENT.

Will buy and sell Land Warrants; Locate and Survey Public Government Land, Pre-emption Homesteads, Soldier's and Sailor's Homesteads, Timber and Wood Lands, Desert Lands, Etc.

FARMING LAND

For Sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,  
202 Sansome Street, San Francisco, Cal.

ALMOND, RAISIN,

Orange Land for Sale

In lots to suit. On the line of Clear Lake Water Works Ditch. Address

D. C. RUMSEY,  
Head Capay Valley, Yolo county, Cal.

50 Perfumed, gilt edge & chromo Cards, elegant case, name in gold, 10c. ATLANTIC CARD CO., E. Wallingford, Ct

PAINT YOUR ROOFS

— WITH —

Averill Mixed Paint!

The Best, Most Durable and Beautiful of all Paints.

PREPARED READY FOR USE, AND OF ANY SHADE OR COLOR DESIRED.

O. S. ORRICK, General Agent,

No. 329 Market Street, opposite Front, - - San Francisco.

OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library containing official American and foreign reports, files of scientific and mechanical publications, etc. All worthy inventions patented through our Agency will have the benefit of an illustration or a description in the MINING AND SCIENTIFIC PRESS. We transact every branch of Patent business, and obtain Patents in all countries which grant protection to inventors. The large majority of U. S. and Foreign Patents issued to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most reliable advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free. DEWEY & CO., PATENT AGENTS. A. T. DEWEY. W. B. EWER. GEO. H. STRONG.

Secure Patents and TRADEMARKS.

PATENTS OBTAINED IN ALL CIVILIZED COUNTRIES

Through Dewey & Co.'s Scientific Press Patent Agency.

WELLS, RICHARDSON & CO'S PERFECTED BUTTER COLOR

Gives Butter the gilt-edge color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.

MONEY in CHICKENS

If You Want to Make Money

By raising any number of Chickens at any season of the year without setting hens, procure an ECLIPSE INCUBATOR (E. A. SAMUEL'S Patent).

In both public and private trials on this coast as elsewhere, the "ECLIPSE" has proved itself a perfect and successful Egg Hatcher. It may be examined and its merits proven to customers before they make purchases. Write for particulars and circulars to G. G. WICKSON, 319 Market Street, S. F. Agent for the Pacific Coast.

MONEY TO LOAN

AT LOWEST RATES

On Country Real Estate and Grain in Warehouse.

McAFEE BROTHERS.

202 Sansome Street, San Francisco.

LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price, \$2 per gallon. For directions and testimonials, apply to FALKNER, BELL & CO., Sole Agents, 430 California Street, S. F.

A Card to Grangers and Farmers.

HAY, GRAIN, HORSES and CATTLE.

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nos. 11 and 13 Bluxome St., San Francisco.

LAND

Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No droughts, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor, of Reading Ranch, Anderson, Shasta County, Cal.

Educational.

HEALD'S BUSINESS COLLEGE, 24 Post Street, Near Kearny, San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed. LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College. TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper. For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

W. E. CHAMBERLAIN, JR. THOS. A. ROBINSON

PACIFIC Business College, 320 POST ST. SAN FRANCISCO.

SEND FOR CIRCULAR

F. A. ROBBINS.

MANUFACTURER OF

Canners and Soap Makers' Presses and Dies

JEWELERS' TOOLS.

ELECTRICAL and MODEL MACHINERY.

No. 7 First St., San Francisco.

SEND FOR THE \$1.50 Homeopathic Medicine Case.

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address BOERICKE & TAFEL, Homeopathic Pharmacy, San Francisco.

JOHN ROGERS & SONS,

GENERAL STOCK AND SALE YARD,

Corner Market and 9th Sts., San Francisco,

HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN. Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

60 Chromo, perfumed, Snowflake & Lace cards, name on all 10c. Game Authors, 15c. Lyman & Co., Clintonville, Ct

Seedsman.

PRINCIPLE'S New Hybrid Wheats, CHAMPLAIN — AND — DEFIANCE.

Heads 6 in. long—128 bushels to the acre.

These two varieties which have succeeded so wonderfully as SPRING WHEATS, have been shown by experiments to be equally valuable when sown in the Fall for WINTER WHEAT. A trial the past season has proved them the most productive varieties in cultivation. Illustrated circulars showing different methods of cultivation by which this and other wonderful yields were produced, mailed to all applicants. Price of each variety, \$2.00 per peck, \$7.00 per bushel. Bags containing two bushels, \$13.00. Prices for larger quantities on application. Trial packages by mail, 1 lb 40 cts, 3 lbs \$1.00.

Mold's Ennobled Red and White Winter Wheats.

Two new English varieties introduced last season which we are confident will prove valuable acquisitions to this country. See circular. Price of each variety, \$2.50 per peck, \$3.00 per bushel. Trial packages by mail, 1 lb 50 cts, 3 lbs \$1.25. Address

B. K. BLISS & SONS, 34 Barclay St., N. Y. P. O. Box 4129.

SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON, Importer and Dealer in Seeds, 425 Washington Street, - San Francisco.

EXOTIC GARDENS. F. A. MILLER & CO., Mission St., opposite Woodward's Gardens. Send for Catalogue and Price List.

Nurserymen.

1,000,000! Strawberry, Raspberry, Blackberry and Cranberry Plants.

STRAWBERRY PLANTS.—The Essex Beauty, Crescent, Cinderella, Forest Rose, Glendale, Jucunda, Monarch of West, Langforth Prolific, Triomphe d' Gand, Wilson Albany.

RASPBERRY PLANTS.—Cuthbert Early, Early Prolific, Reliance, Pride of the Hudson, Brandywine, Herstine, Philadelphia Red, Clark, Henrietta, Hornet, Belle de Fontenay, Delaware Bristol.

BLACKBERRY PLANTS.—Deering Seedling. Early and the most productive of all. I will give satisfactory proof that these Berries have realized \$750 per acre. It paid more than twice as much as the old varieties; also the Early Cluster, the Vina Seedling, Kittanning, the Mammoth Cluster, Missouri Mammoth, Dorchester and Lawton.

CRANBERRY PLANTS.—The Cherry Cranberry Vines at \$10 per 1,000, by mail 64 cents more. I will sell to responsible parties on time, part cash, 10-acre field of Cranberry vines under cultivation. Can be seen at the place. Send for Catalogue.

H. NYLAND, Boulden Island, San Joaquin River.

TREES

FOR THE MILLION

The most complete assortment in the West. A particularly fine lot of Standard Pear Trees. Also a superb lot of as healthy Peach Trees as were ever grown. Full stock of Apple, Plum, Pear, Peach, Cherry, Quince, etc. A select lot of Grapes, Raspberries, Gooseberries, Currants, Strawberries, etc. An immense stock of Greenhouse Plants, Trade-Land and Greenhouse and Bulb Catalogues free. Correspondence solicited. 26th Year. 400 Acres. 15 Greenhouses.

STORRS, HARRISON & CO. FAIRFAXVILLE, LAKE CO., OHIO.

ONE MILLION WINTER-FLOWERING Plants and Bulbs

Apply by letter for "Special Low Priced List," in which will be found instructions for Culture.

Peter Henderson & Co. 35 Cortlandt Street, New York.

PEPPER'S NURSERIES.

(Established 1858.) For sale at reduced prices, a general assortment of Fruit Trees and Small Fruits; also choice Ornamental Shrubs, Roses, etc. A limited supply of Cook's Seedling Apple, one and two years old. Catalogue and list of prices furnished on application. Address

W. H. PEPPER, Petaluma, Sonoma Co., Cal.

TREES

A large assortment of FRUIT, SHADE, ORNAMENTAL TREES and SHRUBS; ROSES, GREENHOUSE PLANTS, etc., GREGG RASPBERRY, SNYDER BLACKBERRY, APPLE SEEDLINGS. New Fall Catalogue free. Established 1852. BAIRD & TUTTLE, Agents, Bloomington Nursery, Illinois.



## Dr. Carver's Opinion of the Greener Gun.

We find in the London *Field* a note from Dr. W. F. Carver, the famous marksman, concerning the qualities of W. W. Greener's celebrated wedge-fast, choke-bore, breech-loading guns. This testimony of Dr. Carver has a local interest on the Pacific coast, as the Greener arms are now offered here by N. Curry & Bro., as may be seen in our advertising columns. Dr. Carver writes as follows:

On my arrival in England last winter, I noticed a discussion in your valuable paper relative to the merits of hammerless guns; and it occurred to me that they were just the kind of gun for my exhibition shooting, where rapid firing and easy loading are most essential. The only doubt I had respecting them was their durability, the work I have being very severe on the gun.

After much consideration, I selected the treble wedge-fast, hammerless gun made by Mr. W. W. Greener as the most likely to meet all my requirements. Those who have witnessed my exhibitions at the Crystal Palace will agree with me that the hammerless gun was put to a very severe test, my rapid firing so heating the barrels as to necessitate the constant application of cold water to render the handling of the gun agreeable. I have shot this gun 130 consecutive days, generally in two, and often in three exhibitions per day, often in hail and rain storms, and during this period it has never been taken to pieces, the locks or action cleaned or oiled, or the stock taken off, and yet the gun works evenly and smoothly, and is quite as pleasant and efficient to use as when first turned out. This gun has gone through more rough work and withstood more hard usage than is likely to occur to any gun during five years' game shooting. I am acquainted with either in England or America. Rifle shooting is my great "forte," but the way this gun breaks glass balls at long distances—60 or 80 yards—has called forth much applause.

I feel much pleasure in recommending this gun to the notice of my brother sportsmen in the United States as being the most reliable, the easiest to manipulate, the safest to use, and the best adapted for hard work.

**A JUST TRIBUTE.**—The lady editor of the San Francisco *Reporter* writes thus truly of the worthy man lately gone from our midst: The death of R. B. Woodward has cast a gloom over the community. We were not prepared for so sudden and conspicuous a death. It occurred mid the wildest political contest ever known in this State. The excitement absorbed all attention, and many forgot that so distinguished a man as R. B. Woodward had gone to his home beyond the vale. No more honored or respected citizen ever gave credit to our city. He was honest, modest, true, enterprising, agreeable and kind; as an employer, he was loved; as a business man he was respected, and his integrity no man questioned. His death will create a void that will be hard to fill. Mr. Woodward has done much to adorn the city, and has done more than any other to provide healthy and innocent entertainments for the people of this State. He was the projector and proprietor of the world wide known Woodward's Gardens, the Central Park of the Pacific. Long will his memory live in the hearts of an appreciating people. The city has lost one of its best friends and benefactors. His burial, at his request, was like his life, unostentatious.

**BONE MEAL FOR RAISING WHEAT.**—As the first rain has set in we cannot but advise our friends and patrons to try the effect of an application of bone meal upon a part of their wheat land. To those who own their land the advice will be most pertinent, for the effect of the bone meal is lasting. It not only assures good crops, but the land becomes every year more valuable. We have taken considerable pains to ascertain the results obtained where it has been used, and in no case has it failed; but quite to the contrary, has proved to be a great success. An opportunity is now offered to make a test on a small scale, and should our farmers fail to take advantage of it, years may elapse, and untold injury will be done to our lands before another such opportunity is offered. In the Eastern States, as well as all over Europe, where the land is in the highest state of cultivation, this result is only obtained through a liberal use of fertilizers, and where bone meal cannot be obtained, guano is substituted for it, and at a price nearly double that of the former. We say, by all means, give it a trial. The office of the company is 523 Market street, where small lots may be had for trial at the same rate as by the ton.

**GARDEN CITY PLOWS.**—The Furst & Bradley Manufacturing Company of Chicago, at their California Branch House, at 327 Market street, are now offering their well known "Garden City Plows." The branch house is under the management of George A. Davis, who has long been connected with the agricultural implement trade of this city, and is highly esteemed. The advertisement of these plows in this week's *PRESS* gives abundant testimony of their quality in California uses. We are personally acquainted with a number of the farmers giving the testimonials, and can endorse them as men of high standing and good farmers.

**A SINGLE TRACK RAILWAY.**—A movement is now on foot to give a practical test of the James single track railway system, by building a mile of road back of Antioch, Contra Costa county. The money has been subscribed to defray the expenses of the experimental trials, and a meeting will be held within a few days at Antioch to determine the precise locality for building the mile. The locomotive drawings of which we have seen, will, in all probability, be built by the Union Iron Works in this city. An engine of a capacity of hauling 300 tons can, it is estimated, be built for a little over \$2,000. It is also estimated that freight can be carried from Mussel Slough to Antioch, a distance of 180 miles, for \$2.50 per ton, whereas it now costs more than \$6. It is thought the cost of building the road will not exceed \$1,200 per mile. If the experimental trials are satisfactory, efforts will be made to construct the road down through the valley to Mussel Slough. Active efforts are now being made to carry the project through.

**TELEGRAPH IN BRAZIL.**—The Brazilian government has presented to the Legislature a project for establishing a general system of telegraphs, to spread all over the republic like a network, and to be placed in immediate communication with the public offices.

**SUB-IRRIGATION.**—We are informed that John Brower, of Marysville, has bought the right for the Asbestine sub-irrigation method in Colusa county, and proposes to introduce it to the attention of residents forthwith.

## General Pruning.

**EDITORS PRESS:**—Soon, if not already, portions of the orchard, shade and ornamental trees require lopping and pruning of overgrown limbs and thickness, as well as shaping them in symmetry, form and comeliness. Time, labor and art combined are requisite for the make-up of a well regulated perspective view of home surroundings; to gain advantage in this line the cultivator studies how he may bring them under one head by the use of some implement for general use. Many who have used the newly patented "Boss Pruner" can testify of its general use, having qualities so combined that it can fill the bill; which by little use it becomes easy, a pleasure as well as good exercise to the operator.

It is expected every new invention will have many points of superiority over former contrivances. To give some of these qualities that this pruner has I can name four in general terms: Simplicity in its few complications, ease in its work, rapidity in its motion and durability in use.

Its work and finish is in the best style. It works by cog principle with chisel attachment, which can be duplicated when needed. Its general agent for the State is Mr. Geo. Larkin, of Newcastle, who is now ready to supply the trade. Orders can be filled by addressing him as above. I feel confident that all who use the "Boss" will have no other. **CEO. RICH.**

Sacramento, Cal.

## OUR AGENTS.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. L. THARP—San Francisco.  
B. W. CROWELL—California.  
A. C. KNOX—Pacific Coast.  
S. V. BLAKELEE—State of Nevada.  
G. W. MCGREW—Santa Clara county.  
MILTON KENNEDY—Kern and Inyo counties.  
J. B. BACHELDER—Shasta County, Cal.  
H. H. MESSENER—Arizona.

**PACIFIC RURAL HANDBOOK.**—The little work before us could not have been treated of by a more competent authority. The book manifests throughout the author's ardent love for the beautiful in nature, and is well calculated to inflame and stimulate the same sentiment in its readers.—*Rural New Yorker*.

THE book is written in a very pleasing manner by one who thoroughly understands his subject. In laying out private grounds or gardens, or in the cultivation of flowers and plants, to one who is inexperienced in such matters, a copy of this book will be found valuable.—*San Jose Mercury*.

The "PACIFIC RURAL HANDBOOK," written by Chas. H. Shinn for the publishers of the PACIFIC RURAL PRESS, will be sent, post-paid, in substantial cloth binding for \$1; in full leather, \$1.50; in cloth, interleaved with fine ruled paper for memoranda, \$1.50. Address

DEWEY & CO., PUBLISHERS,  
No. 202 Sansome Street, San Francisco.

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavillon performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

**HOW TO STOP THIS PAPER.**—It is not a mercenary task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

**SAMPLE COPIES.**—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate the copy sent.

**JOHN RIDER,** of Sacramento city, shipped on October 11th, to J. H. Orcutt, of San Luis Obispo, one pair of thoroughbred Berkshire pigs.

**EXTRA COPIES** can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.

**THOMAS DUNDON** will oblige us by sending his P. O. address to this office.

## S. F. MARKET REPORT.

**NOTE.**—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which this paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

**SAN FRANCISCO, October 15th, 1879.**  
The revival of business is now the topic of conversation everywhere. The elevation of prices at the East in various lines of manufactures is sharp and quite extensive. California merchants are making up their goods accordingly, and the talk on the street is that in the metal and hardware trades alone, an advance on stock now on hand in this city would be in the neighborhood of \$2,000,000. This is a pretty high figure, and we give it merely as a rumor. The fact is, however, that the feeling is upward, and prices exhibit the same tendency. It is fortunate that there is some tendency to rise in Produce prices, else the advance in Merchandise would tend to make the road all the harder for our farmers. And such is the fact to a great extent, for Produce has exhibited no such general and marked advance as Merchandise.

The Wheat market is still in an ascending condition here and abroad.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday...	10s	4d	11s	2d	11s	1d	11s	7d
Friday.....	10s	4d	11s	2d	11s	1d	11s	7d
Saturday....	10s	4d	11s	2d	11s	1d	11s	7d
Sunday.....	10s	4d	11s	2d	11s	1d	11s	7d
Tuesday....	10s	6d	11s	4d	11s	3d	11s	9d
Wednesday..	10s	6d	11s	4d	11s	3d	11s	9d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1877.....	12s	7d	12s	10d	12s	10d	13s	2d
1878.....	9s	8d	10s	—	9s	10d	10s	4d
1879.....	10s	6d	11s	4d	11s	3d	11s	9d

## The Foreign Review.

**LONDON, October 14.**—The *Mark Lane Express* says: Agricultural advances are still most discouraging. Quantities of Wheat and Barley still afield are deteriorating from spreading damp and discoloration. Turnips and Potatoes are badly diseased. Hops are a total failure in many of the best districts in Kent. Arrivals in London of all articles except Oats have been moderate. Last Monday's list showed only about 23,000 quarters of foreign Wheat, chiefly American, and subsequent imports up to Friday amounted to 61,120 quarters. Prices again favored sellers to the extent of fully two shillings at the beginning of the week, but with only a retail demand at the advance, as large a faller and speculators hesitated to follow the rise, which, during the past few days, has been maintained with difficulty. Fine American reds and such varieties of white Wheat as could be used in place of English Wheat have been in fair request, but it is probable the Russian descriptions will shortly come in favor when supplies of home-grown increase, as the condition of the new crop is sure to necessitate a large admixture of hard foreign Wheat to render it suitable for milling. There has been no excitement in the trade, neither have the week's sales been large, but steadiness prevailed, as sellers were by no means impatient to realize. The recent marked rise in the price of Wheat has not served to unsettle opinions of holders, as it is due to most perfectly legitimate influences that can affect values, namely, supply and demand. As far as can be seen at present, there appears no valid reason why Wheat should not advance another 5s. Business still rests on a firm basis, although it must be admitted that increased supplies of home-grown Wheat will probably check the advance temporarily. Wheat for shipment has been in large request, and an extensive business was done, principally in California and red winter American, at a shilling advance. California descriptions also participated in the advance. Arrivals of grain-laden vessels off coast have been small. Wheat has been in good request, and advanced a shilling to 1s pence, but the limited choice restricted business.

## Freights and Charters.

The *Commercial News* says: The scarcity of spot ships has naturally led to a number of vessels being taken to arrive, and it is now a foregone conclusion that the disengaged list for the next 60 or 90 days must be remarkably light. The rates of the ships chartered this week show just how the market has been. At present \$3 2s 6d to Liverpool for a wooden ship appears to be the current rate; iron ships in proportion. We have now 69,638 tons in port loading Wheat against 33,421 tons in 1878. Ships are in nearly all cases receiving excellent dispatch, and the clearances are at the rate of 50 vessels a month. The disengaged list foots up 9,743 tons; in 1878, 68,330 tons. There is now a total of 164,835 tons bound to this port; in 1878, 130,708 tons.

## Eastern Grain and Provision Markets.

**NEW YORK, October 11.**—The general markets continue active in many departments, although the unseasonable weather has in a measure acted as a drawback. Prices, however, are firm, with a tendency to an advance. Flour is steady, quiet. Wheat is unchanged, firm. Barley is in fair demand, at 98c for No. 1 Canada. Pork and Lard are fairly active, steady.

**CHICAGO, October 11.**—Grain markets throughout the week have been nervous, unsettled, excited, and generally higher than last week. Wheat has been particularly strong, and closed this afternoon with a sharp upward turn that bewildered the army of operators who have been pressing it down for a month past. The prospects are good for higher prices and for a well-sustained market the greater part of the Fall. Sales for November were: Wheat, 105¢@114¢; the lowest price Monday, the highest to-day at the close; Corn, 37¢@39¢. Oats, 27¢@29¢. Cash Barley at 73¢@76¢. Provisions have been unsettled, with a tendency slightly downward, despite the well-maintained prices in hogs, which are coming forward well. November Pork, 8.70¢@8.90¢, November Lard, 5.70¢@5.80¢. Closing prices for November Wheat, 114¢; Corn, 38¢; Oats, 28¢; Pork, 8.85¢@8.90¢; Lard, 5.65¢@5.67¢. Closing cash prices: Wheat, 112¢; Corn, 38¢; Oats, 28¢; Rye, 70¢; Barley, 73¢; Pork, 10¢; Lard, 6.10¢@6.12¢.

## New York Dried Fruit Markets.

**NEW YORK, October 11.**—Foreign Fruits of all kinds are in good demand, steady, except Raisins, which show an advance.

## Eastern Wool Markets.

**NEW YORK, October 11.**—Wool continues buoyant, and prices are hardening. Sales of California embrace 100,000 lbs Spring California, at 23¢@32¢; 25,000 lbs new Fall, at 32¢@33¢.

**BOSTON, October 11.**—Wool is in demand, quiet active, and prices of nearly all grades are 1¢@2¢ higher, with a decided upward tendency. During the past week the market has exhibited more strength than at any time since the upward movement began, and higher prices are confidently looked for. Sales of domestic for the week amounted to 2,730,100 lbs; being 1,293,500 lbs more than

during the corresponding week last year. Stocks have become considerably reduced, and the best portion of the clip is fast passing into the hands of manufacturers, who are running their machinery at its full capacity. Oregon Wool still attracts considerable attention. In unwashed and unmerchanted fleeces business continues larger; Combing and Delaine fleeces met with a good demand at full prices. Pulled Wools are very firm. Transactions comprise Ohio and Pennsylvania XXX and No. 1, at 40¢@45¢; Michigan and Wisconsin fleeces X and No. 1, 30¢@42¢; Combing and Delaine, 38¢@45¢; Kentucky Combing, 36¢; coarse unwashed Combing, 30¢; unwashed and unmerchanted fleeces, 23¢@36¢; Kentucky Clothing, 27¢@35¢; Missouri fms and medium, 23¢@33¢; Eastern and Valley Oregon, 26¢@35¢; Territory, 18¢@31¢; scoured, 33¢@67¢; Super and X pulled, 53¢@56¢. California Wool is in demand. Sales of 425,000 lbs Spring at 19¢@32¢ and 39¢; 200 lbs Fall at 13¢@24¢. The assortments are much broken.

**PHILADELPHIA, October 14.**—Wool is firm, with an advancing tendency. Colorado, 25¢@30¢; do unwashed, 15¢@22¢; extra and Merino pulled, 36¢@38¢; No 1 and Super pulled, 35¢@40¢.

## Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon to-day as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Sept. 24.	WEEK. Oct. 1.	WEEK. Oct. 8.	WEEK. Oct. 15.
Flour, quarter sacks....	22,769	49,291	41,691	30,790
Wheat, centals.....	423,453	712,575	416,730	582,824
Barley, centals.....	58,520	70,611	78,142	73,644
Beans, sacks.....	3,909	9,064	8,225	5,906
Corn, centals.....	9,955	9,810	10,638	2,823
Oats, centals.....	7,737	16,168	6,198	22,116
Potatoes, sacks.....	9,222	21,795	18,343	22,683
Onions, sacks.....	2,012	1,965	1,308	2,416
Wool, bales.....	2,779	6,447	7,162	7,214
Hops, bales.....	350	508	1,384	2,998
Hay, bales.....	1,631	1,657	1,560	2,026

**BAGS.**—There is a good trade in Flour and Bean Bags, but no change in prices.

**BEANS.**—Baysos, Pink and Small White Beans have experienced a very slight advance, but Butter and Pea Beans have receded. Field Peas have fallen exceedingly low, 85c @ \$1 7/8 ctl being the range. We note Bean sales as follows: 314 sacks Pink at \$1.07; 80 do Pea, \$1.50, and 50 do Small White, \$1.47 1/2 ctl.

**BARLEY.**—Brewers are now using New Barley freely, and the advantage of Old is lost. Prices are unchanged. We note sales: 200 tons Coast Feed at 72¢. 200 tons Brewing sold at 82¢, and 1,000 sacks Coast Feed at 72¢.

**CORN.**—Unchanged and sales limited.

**DAIRY PRODUCE.**—Fresh Roll Butter is still advancing, and all good boxes now bring 35¢@37¢ @ lb, with fancy selections at 40¢. Cheese is unchanged.

**EGGS.**—An advance of 2¢@5¢ @ doz has occurred during the week.

**FEED.**—Hay scores 50c higher per ton.

**FRESH MEAT.**—There is no change in prices.

**FRUIT.**—Figs and Peaches are becoming scarce and higher, though the demand is light. Grapes have about held their own. Raspberries and Strawberries are higher.

**HOPS.**—The best California Hops have reached 32¢. We hear of sales of about 100 bales at that figure. Other lots have sold at 30¢. Washington Territory Hops range at 28¢@30¢. We note sales of 300 bales Washington Territory at these rates. The New York Market is reported by telegraph as firm and advancing. Cable reports from England continue accounts of destruction or damage on the best goods. Emmet Wells, in his circular from New York, dated October 3d, says: "We have to report a very strong and active market; the movement has been almost exclusively export. New York State Hops are quoted at 28¢@30¢.

**LIVE STOCK.**—Butchers complain of light Hogs, as the low price restrains farmers from graining their Pigs as generously as usual. We note sales as follows: 3,000 Sheep, all wethers, wool on, \$2 per head, at Ukiah; 1,800 Lambs, at Fresno, \$1.25, nice and fat; 900 Lambs, on wharf at S. F., at \$1.80; 1,625 Lambs, on wharf at S. F., \$1.65, poor; 920 Ewes, \$1.50, fat, on wharf at S. F.; 1,209 Scalawag Ewes and Wethers, \$1.50, do; 2,200 Cattle, all Steers, \$32.50 500 Mixed Cattle, \$27; 1,500 Hogs, at 3¢ @ lb; 246 Hogs, at \$3.20 @ ctl.

**OATS.**—Receipts have been swelled by large arrivals from Washington Territory. Prices are within former range. We note sales: 468 sacks Humboldt Milling at \$1.35; 600 sacks do do, \$1.35; 1,100 do good do Feed, \$1.32; and 250 sacks do do, \$1.30.

**ONIONS.**—White Onions are again in possession of the field, and prices have advanced to 65¢@75¢ per ctl.

**POTATOES.**—There is no change except in Sweet's, which have fallen again to 75¢ per ctl.

**POULTRY AND GAME.**—Hens are 50c lower per dozen. Other sorts are unchanged.

**PROVISIONS.**—The trade is active but prices are unaffected as yet.

**RYE.**—Fine Stockton Rye now sells as high as 95c per ctl.

**VEGETABLES.**—Changes are few and unimportant. String Beans have lost 1¢; Garlic has gained 1¢; Summer Squash now commands 75¢ per box; Cauliflowers are becoming fewer, and the best have sold as high as \$1 per dozen.

**WHEAT.**—The market is in good heart, and advances have been made as noted above. We note sales: 200 tons No. 1 Shipping and 500 sacks do Milling at \$2; 70 tons good Shipping, \$1.96; 135 sacks good Milling, \$1.95; 1,000 tons do Shipping, \$1.92; \$1.95; 500 sacks No. 2, Oakland delivery, \$1.90; 199 sacks Superfine, \$1.87; 100 tons off grade, \$1.86; 2,200 sacks poor, \$1.82; 200 sacks Coast, \$1.80; 1,900 sacks do, \$1.77; 350 do do, \$1.65, and 200 do do, \$1.40 @ ctl.

**WOOL.**—Choice Northern Free is in good demand and commands an advance of 2¢ @ lb. Sales have been made at 24¢ and at 25¢ for extra choice selections. The trade is in good heart, and promising Eastern reports, printed in another column, are very promising.

## Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, October 15, 3 P. M.

**SILVER, 25.**  
GOLD BARS, \$200@210. SILVER BARS, 10¢@18 ¢ cent. discount.  
EXCHANGE on New York, 20, on London bankers, 45¢ @ 49¢. Commercial, 50¢; Paris, five francs @ dollar; Mexico dollars, 22.  
LONDON Consols, 98; Bonds (4%), 108.  
QUICKSILVER in S. F., by the tank, 1/2 lb, 33¢.



DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., October 15, 1879.	
Beans, Peas, .....	12 1/2 @ 15
Butter, .....	1 35 @ 15
Butter, .....	3 00 @ 30
Butter, .....	1 40 @ 30
Butter, .....	1 00 @ 10
Butter, .....	1 40 @ 30
Butter, .....	2 75 @ 30
Butter, .....	3 00 @ 30
Butter, .....	2 @ 24
Butter, .....	3 @ 4
Butter, .....	4 @ 44
Butter, .....	5 @ 7
Butter, .....	6 @ 12 1/2
Butter, .....	7 @ 12 1/2
Butter, .....	8 @ 12 1/2
Butter, .....	9 @ 12 1/2
Butter, .....	10 @ 12 1/2
Butter, .....	11 @ 12 1/2
Butter, .....	12 @ 12 1/2
Butter, .....	13 @ 12 1/2
Butter, .....	14 @ 12 1/2
Butter, .....	15 @ 12 1/2
Butter, .....	16 @ 12 1/2
Butter, .....	17 @ 12 1/2
Butter, .....	18 @ 12 1/2
Butter, .....	19 @ 12 1/2
Butter, .....	20 @ 12 1/2
Butter, .....	21 @ 12 1/2
Butter, .....	22 @ 12 1/2
Butter, .....	23 @ 12 1/2
Butter, .....	24 @ 12 1/2
Butter, .....	25 @ 12 1/2
Butter, .....	26 @ 12 1/2
Butter, .....	27 @ 12 1/2
Butter, .....	28 @ 12 1/2
Butter, .....	29 @ 12 1/2
Butter, .....	30 @ 12 1/2

Signal Service Meteorological Report.

SAN FRANCISCO.—Week ending October 14, 1879.

HIGHEST AND LOWEST BAROMETER.							
Oct. 8	Oct. 9	Oct. 10	Oct. 11	Oct. 12	Oct. 13	Oct. 14	
30.143	30.180	30.099	29.930	29.785	29.960	30.067	
30.022	30.101	30.000	29.720	29.702	29.836	30.071	
MAXIMUM AND MINIMUM THERMOMETER.							
Oct. 8	Oct. 9	Oct. 10	Oct. 11	Oct. 12	Oct. 13	Oct. 14	
63	62	62	63	59	58	59	
50	52	50	50	52	49	50	
MEAN DAILY HUMIDITY.							
64	73.7	74	76	71.3	72	74.7	
PREVAILING WIND.							
W	W	SW	SW	SW	W	W	
WIND—MILES TRAVELED.							
226	165	108	196	209	144	167	
STATE OF WEATHER.							
Clear.	Clear.	Clear.	Fair.	Clear.	Clear.	Clear.	
RAINFALL IN TWENTY-FOUR HOURS.							
			.07	.15			
Total rain during the season, from July 1, 1879. 0.81 in.							

Commission Merchants.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Luek & Co., San Francisco, Cal.

BRYANT & COOK,

Commission Merchants,

AND DEALERS IN

GRAIN, FLOUR, ETC.

No. 8 Davis St., near Market, San Francisco.

CHARLES NAUMAN.

FRANK NAUMAN.

C. & F. NAUMAN & CO.,

Wholesale Commission Merchants

— AND DEALERS IN —

GRAIN, POTATOES, FRUIT, BUTTER, POULTRY,

EGGS, GAME, ETC.

227 & 229 Washington St., San Francisco.

Consignments Solicited.

R. J. TRUMBULL & CO.,

SUCCESSORS TO

R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail

Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock

EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

\*"Guide to the Vegetable and Flower Garden will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL & CO.,

419 and 421 Sansome Street, S. F.

STRAWBERRY PLANTS.

E. P. ROE offers one of the LARGEST and FINEST stocks of Strawberry Plants ever grown in this country. Also Raspberry and Blackberry plants, currants and grapevines. Prices very reasonable. New Descriptive Catalogue free to all.

E. P. ROE,

Cornwall-on-Hudson, N. Y.

Baling Fencing Telegraph Telephone Galvanized

Barbed Fence Wire.

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the Trademark.

A. S. HALLIDIE

Wire Mills.

Office, No. 6 California St.

SAN FRANCISCO.

WIRE ROPE AND CORDAGE

Of every kind on hand or Made to Order.

ARCHITECTS.

We are continually designing Suburban and Rural Residences to meet the wants and means of all classes of people, always endeavoring to secure an effect of beauty on the smallest cottage, as well as the most costly residence.

Our charges for furnishing drawings of the building shown in this issue of the Press, all complete, with specifications, will be \$100 00.

By our economy in the construction of buildings and the proper selection of materials, we save far more money to the owner than our fees amount to.

Before choosing a home, a copy of Hobbs' Suburban and Rural Architecture should be obtained, a beautifully bound volume of 122 designs, which we mail post-paid, for \$3 50. Those who remit direct to us, will receive in addition to the book, 15 new designs.

Upon receipt of \$2 we send a copy of our blank forms of specifications and bills of quantities. They are invaluable to all persons about building, and for carpenters and builders who build without the aid of an architect. They are especially valuable, as they bring before the mind all the different parts used in the erection of a building, so that nothing will be left without consideration.

Address all letters of inquiry to the architects,

ISAAC H. HOBBS & SON,

NO. 520 Walnut Street, Philadelphia, Pa.

WANTED.

A partner to take part interest in a Nursery, or a young man, with a little capital, anxious to learn the business from an Agricultural graduate who has worked in a few of the largest Nurseries and most varied Fruit Orchards, etc., in this State. Address NURSERYMAN, Care Dewey & Co., S. F.

Traveling Agents.

We want several canvassing agents who will make it their business to solicit subscriptions and advertising for our first-class progressive newspapers. Men of ability and experience can secure good pay and permanent employment. Send references and state your past occupation, etc., to the publishers of this paper.

BUY LAND

Where you can get a crop every year; where you will make something every season; where you are sure of having a crop when prices are high; where you have a healthy place to live; where you can raise semi-tropical as well as other fruits; where you can raise a diversity of grain and vegetables and get a good price for them. Go and see the old Reading Grant (in the upper Sacramento Valley), and you will find such land for sale in sub-divisions to suit purchasers—at reasonable rates and on easy terms. Send stamp for map and circular to EDWARD FRISBIE, proprietor, (on the Grant), Anderson, Shasta Co., Cal.

Windmills!

HORSE POWERS!

TANKS AND PUMPS

Built and Repaired at

No. 51 Beale street, S. F.

Send for Circulars.

F. W. KROGH & CO



CHEAPER YET!

Tension Sewing Machines!

A large number of nearly new genuine SINGER, WHEELER & WILSON, HOWE, WEED, WILSON, GROVER & BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

NO TENSION MACHINE.

Wilcox & Gibbs' S. M. Co.,

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.

CUZCO CORN.

Fresh Seed Direct from Peru.

Price, \$1 per pound in 5-pound bags.

JOHN GARDNER,

Care Dewey & Co., 202 Sansome St.

SEASIDE RESIDENCES AT SANTA CRUZ.

A charming Homestead in the very choicest position may now be secured at a really tempting price. State requirements and receive suitable particulars from the Real Estate

EXCHANGE & MART,

Santa Cruz, Cal

MEYER & Co., Insurance and Money Brokers and Agents

Should consult DEWEY

and FOREIGN PATENT SOLICITORS. Established in

1860. Their long experience as journalists and large practice as patent attorneys enables them to offer Pacific Coast

inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of

the MINING AND SCIENTIFIC PRESS and PACIFIC RURAL

PRESS, No. 202 Sansome St., San Francisco.

This paper is printed with Ink furnished by

Chas. Eneu Johnson & Co., 509 South 10th

St., Philadelphia & 59 Gold St., N. Y. Agent

for Pacific Coast—Joseph H. Dorety, 120

Sutter St., S. F.

50 Perfumed, Snowflake, Chromo, Motto Cards, name in

gold and jet 10c. G. A. SPRING, E. Wallingford, Ct.

FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., October 15, 1879.	
Apples, box, .....	40 @ 1 00
Apples, box, .....	30 @ 1 00
Apples, box, .....	20 @ 1 00
Apples, box, .....	10 @ 1 00
Apples, box, .....	5 @ 1 00
Apples, box, .....	2 @ 1 00
Apples, box, .....	1 @ 1 00
Apples, box, .....	1/2 @ 1 00
Apples, box, .....	1/4 @ 1 00
Apples, box, .....	1/8 @ 1 00
Apples, box, .....	1/16 @ 1 00
Apples, box, .....	1/32 @ 1 00
Apples, box, .....	1/64 @ 1 00
Apples, box, .....	1/128 @ 1 00
Apples, box, .....	1/256 @ 1 00
Apples, box, .....	1/512 @ 1 00
Apples, box, .....	1/1024 @ 1 00
Apples, box, .....	1/2048 @ 1 00
Apples, box, .....	1/4096 @ 1 00
Apples, box, .....	1/8192 @ 1 00
Apples, box, .....	1/16384 @ 1 00
Apples, box, .....	1/32768 @ 1 00
Apples, box, .....	1/65536 @ 1 00
Apples, box, .....	1/131072 @ 1 00
Apples, box, .....	1/262144 @ 1 00
Apples, box, .....	1/524288 @ 1 00
Apples, box, .....	1/1048576 @ 1 00
Apples, box, .....	1/2097152 @ 1 00
Apples, box, .....	1/4194304 @ 1 00
Apples, box, .....	1/8388608 @ 1 00
Apples, box, .....	1/16777216 @ 1 00
Apples, box, .....	1/33554432 @ 1 00
Apples, box, .....	1/67108864 @ 1 00
Apples, box, .....	1/134217728 @ 1 00
Apples, box, .....	1/268435456 @ 1 00
Apples, box, .....	1/536870912 @ 1 00
Apples, box, .....	1/1073741824 @ 1 00
Apples, box, .....	1/2147483648 @ 1 00
Apples, box, .....	1/4294967296 @ 1 00
Apples, box, .....	1/8589934592 @ 1 00
Apples, box, .....	1/17179869184 @ 1 00
Apples, box, .....	1/34359738368 @ 1 00
Apples, box, .....	1/68719476736 @ 1 00
Apples, box, .....	1/137438953472 @ 1 00
Apples, box, .....	1/274877906944 @ 1 00
Apples, box, .....	1/549755813888 @ 1 00
Apples, box, .....	1/1099511627776 @ 1 00
Apples, box, .....	1/2199023255552 @ 1 00
Apples, box, .....	1/4398046511104 @ 1 00
Apples, box, .....	1/8796093022208 @ 1 00
Apples, box, .....	1/17592186044416 @ 1 00
Apples, box, .....	1/35184372088832 @ 1 00
Apples, box, .....	1/70368744177664 @ 1 00
Apples, box, .....	1/140737488355328 @ 1 00
Apples, box, .....	1/281474976710656 @ 1 00
Apples, box, .....	1/562949953421312 @ 1 00
Apples, box, .....	1/1125899906842624 @ 1 00
Apples, box, .....	1/2251799813685248 @ 1 00
Apples, box, .....	1/4503599627370496 @ 1 00
Apples, box, .....	1/9007199254740992 @ 1 00
Apples, box, .....	1/18014398509481984 @ 1 00
Apples, box, .....	1/36028797018963968 @ 1 00
Apples, box, .....	1/72057594037927936 @ 1 00
Apples, box, .....	1/144115188075855872 @ 1 00
Apples, box, .....	1/288230376151711744 @ 1 00
Apples, box, .....	1/576460752303423488 @ 1 00
Apples, box, .....	1/1152921504606846976 @ 1 00
Apples, box, .....	1/2305843009213693952 @ 1 00
Apples, box, .....	1/4611686018427387904 @ 1 00
Apples, box, .....	1/9223372036854775808 @ 1 00
Apples, box, .....	1/18446744073709551616 @ 1 00
Apples, box, .....	1/36893488147419103232 @ 1 00
Apples, box, .....	1/73786976294838206464 @ 1 00
Apples, box, .....	1/147573952589676412928 @ 1 00
Apples, box, .....	1/295147905179352825856 @ 1 00
Apples, box, .....	1/590295810358705651712 @ 1 00
Apples, box, .....	1/1180591620717411303424 @ 1 00
Apples, box, .....	1/2361183241434822606848 @ 1 00
Apples, box, .....	1/4722366482869645213696 @ 1 00
Apples, box, .....	1/9444732965739290427392 @ 1 00
Apples, box, .....	1/18889465931478580854784 @ 1 00
Apples, box, .....	1/37778931862957161709568 @ 1 00
Apples, box, .....	1/75557863725914323419136 @ 1 00
Apples, box, .....	1/151115727451828646838272 @ 1 00
Apples, box, .....	1/302231454903657293676544 @ 1 00
Apples, box, .....	1/604462909807314587353088 @ 1 00
Apples, box, .....	1/1208925819614629174706176 @ 1 00
Apples, box, .....	1/2417851639229258349412352 @ 1 00
Apples, box, .....	1/4835703278458516698824704 @ 1 00
Apples, box, .....	1/9671406556917033397649408 @ 1 00
Apples, box, .....	1/19342813113834066795298816 @ 1 00
Apples, box, .....	1/38685626227668133590597632 @ 1 00
Apples, box, .....	1/77371252455336267181195264 @ 1 00
Apples, box, .....	1/154742504910672534362390528 @ 1 00
Apples, box, .....	1/309485009821345068724781056 @ 1 00
Apples, box, .....	1/618970019642690137449562112 @ 1 00
Apples, box, .....	1/1237940039285380274899244224 @ 1 00
Apples, box, .....	1/2475880078570760549798488448 @ 1 00
Apples, box, .....	1/4951760157141521099596976896 @ 1 00
Apples, box, .....	1/9903520314283042199193953792 @ 1 00
Apples, box, .....	1/19807040628566084398387907584 @ 1 00
Apples, box, .....	1/39614081257132168796775815168 @ 1 00
Apples, box, .....	1/79228162514264337593551630336 @ 1 00
Apples, box, .....	1/158456325028528675187103260672 @ 1 00
Apples, box, .....	1/316912650057057350374206521344 @ 1 00
Apples, box, .....	1/633825300114114700748413042688 @ 1 00
Apples, box, .....	1/1267650600228229401496826085376 @ 1 00
Apples, box, .....	1/25353



## Agricultural Articles.

## The Famous "Enterprise."

PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.

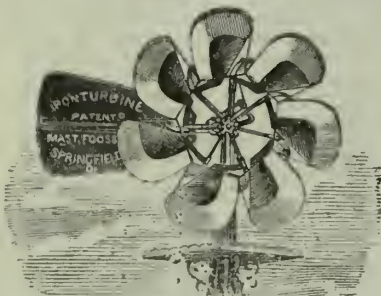
These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babbitted boxes. Positively self regulating, with no coil springs or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

**HORTON & KENNEDY,**

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

## Iron Turbine Wind Engine



## AND BUCKEYE FORCE PUMP.

This machine made of iron, wheel, vanes, etc., made of No. 24 sheet iron, bound and braced with best quality of wrought bar iron, gives more power than any other wheel of same diameter. No wood to swell, shrink, rattle or be destroyed by the wind. The most durable and the best Windmill ever invented. For particulars, price lists, etc., address

D. E. GOLDSMITH, State Agent,  
419 Sansome street, San Francisco.

## MATTESON &amp; WILLIAMSON'S



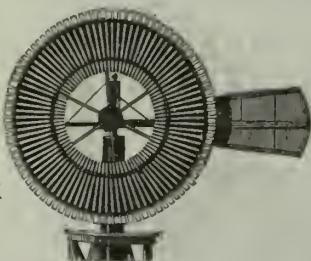
Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

**MATTESON & WILLIAMSON,**  
STOCKTON, CAL.

**\$50.**

The New  
**Worthington**  
**Windmill**



Manufactured  
by

W. D. PARSON,  
1364 San Pablo Avenue, Oakland, Cal.  
Also, maker of the "Colorado Wind Engine," Wind Crist Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern of Deep Well and Artesian Lift Pump Cylinders. Circulars free.

## The Boss Pruner.

Patented Jan. 8, 1878.

**ENTIRELY NEW!**

Works on a cog principle. Smallest size cuts one inch, and largest size two inches in diameter. Has been thoroughly tested, and given perfect satisfaction. Sold by

**GEORGE LARKIN,**  
Newcastle, Placer County, Cal.

**WANTED.** A man fully competent to manage the sale of Dr. NAPHET'S FAMILY MEDICAL WORK and take charge of territory. Must be a good organizer and able to hire and control men; also willing to go into the field and learn how to sell the book and then teach others. Will pay a man who can do this business from \$1,000 to \$3,000 a year after a fair trial. Give age, experience, and send this.

W. J. HOLLAND & CO., Chicago, Ill.

## Nathaniel Curry &amp; Bro.,

113 Sansome Street. San Francisco,

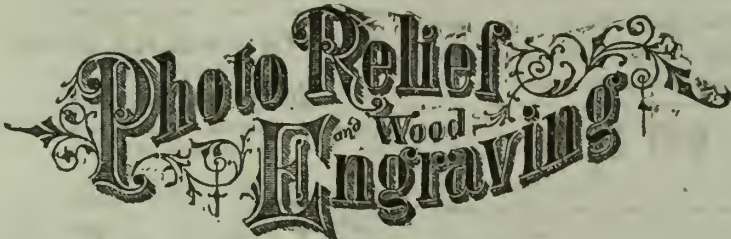


Sole Agents for the

## Sharps Rifle Co., of Bridgeport, Conn.

FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO.

Also Agents for W. W. GREENER'S Celebrated Wedgefast, Chokebore, Breech-loading DOUBLE GUNS; and all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America. AMMUNITION of all kinds in quantities to suit.



The use of Photography in producing stereotype and electrotype plates for artistic and common printing, forms, comparatively, a new method, in which we are making continual improvements and executing different kinds of work, superior to any before issued. It also enables us to produce certain kinds of work at greatly reduced prices.

Designing and Wood Engraving of every variety in the best style of the art, continued as usual. All orders executed promptly and on the most reasonable terms. We guarantee satisfaction. For the credit of our own journals, our customers can rely upon first-class work of the styles desired.

SCIENTIFIC PRESS ENGRAVING CO.,

No. 202 Sansome St., S. F.

## HOLLY &amp; MAGOON'S CULTIVATOR.

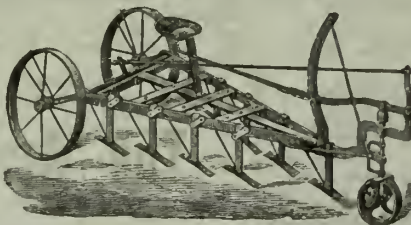
Manufactured by HOLLY & MAGOON, Stony Point, Sonoma County, and E. J. HOLLY Lakeville, Sonoma County, Cal.

Jones' Patent, May 29th, 1877, and Holly & Jones, Apr. 8, 1879.

This Cultivator is made by practical men, after years of experience, and better meets the wants of California farmers than anything before offered.

Made of the best material (with wood or iron frame) and warranted in every respect.

Prices  
REASONABLE.



For further information address the Manufacturers, or

**M. C. HAWLEY & CO., Agents,**  
San Francisco and Sacramento, Cal.

In consequence of spurious imitations of  
LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

## A BARCAIN IN BERKSHIRES.

The undersigned offers for sale for the next 30 days a limited number of Pure Bred Berkshires, aged from 3 to 18 months. These pigs are all bred by myself from stock imported from some of the most noted breeders in the United States, and include several Boars fit for service, and a few choice Sows in farrow, to imported Boars. These pigs are not culls, but the choice pigs of their respective litters.

PRICE LOW FOR CASH.

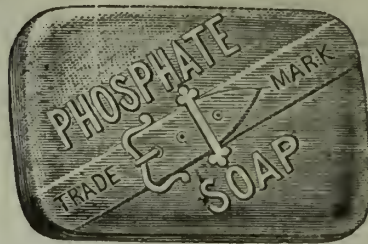
A perfect and complete pedigree, and a written guarantee they are as represented sent with each animal sold. Correspondence solicited. Among purchasers of my stock are the following gentlemen well known as men of careful discrimination: Dr. C. A. SHURTLEFF, Superintendent State Insane Asylum; GRANT L. TACDART, Oakland; J. D. SMITH, Prof. Livermore College; LELAND STANFORD, by R. H. COVEY; Col. PATER SAXE, San Francisco; L. U. SHIFFER, President S. J. V. Ag. Society; W. Mesick, Sacramento; W. C. HOPKINS, P. M., Sacramento. For further particulars address

Bellota, San Joaquin Co., Cal.

ALFRED PARKER,

Dewey & Co. { 202 San- } Patent Ag'ts { 60 } Elegant Perfumed Cards, Chromo, Motto, Lily, Etc., some St. 15c. Gift with each pack. H. M. SMITH, Clintonville, Ct.

## PHOSPHATE SOAP



THE BEST soap for toilet use ever manufactured. BEST because it contains all the excellencies of the most expensive foreign or American soaps without their defects. BEST because it combines strength with delicacy in such a way that its strong detergent qualities do not injure the skin. BEST because it is the result of years of study and experiment in the soap manufacturing business, assisted by modern chemical discoveries. BEST because it contains ingredients beneficial to the skin, which unite chemically with the soap in such a manner as to increase its saponaceous qualities. Every chemist familiar with soap manufacture knows that some ingredients which are in themselves beneficial to the skin cannot be saponified; some are partially neutralized, while others injure the quality of the soap. There are soaps in the market which are to some extent beneficial to the skin, but they are inferior articles for toilet use. PHOSPHATE SOAP is the ONLY article offered to the public which combines all the best elements of toilet soap with medical ingredients beneficial to the skin.

If your wife is in the habit of using cosmetics of any kind, advise her to give up the pernicious practice, as the most harmless face powders obstruct the pores of the skin and sooner or later injure the complexion, while PHOSPHATE SOAP removes all impurities and assists nature in developing a natural, healthy and beautiful skin.

It is an old proverb that an ounce of preventive is better than a pound of cure. Twenty-five cents invested in a cake of PHOSPHATE SOAP will save hundreds of dollars in doctors' bills. It acts as a constant disinfectant, preventing Salt Rheum and other skin diseases.

If your wife will persist in the use of cosmetics, buy her a cake of PHOSPHATE SOAP and tell her to use it every night before retiring. In that way much of the harm will be avoided, as the skin will thereby be able to retain much of its natural vigor and beauty.

No salve or ointment can heal a wound or sore of any kind. Every educated physician will tell you that nature alone can do this. PHOSPHATE SOAP, by its cleansing, soothing and purifying qualities, gives nature a chance to act freely.

Natural beauty surpasses anything which can be imparted by artificial means. PHOSPHATE SOAP gives health to the skin simply by removing impurities and eradicating the poisons which give rise to skin diseases.

Not only for daily use on the face and hands, but for bathing the entire body, there is nothing equal to PHOSPHATE SOAP. It is a thorough disinfectant and removes offensive odors of every kind.

Ladies who have injured the skin by the constant use of cosmetics may do much to restore their faces to that beauty which nature alone can give by constantly using PHOSPHATE SOAP.

For all diseases of the skin use PHOSPHATE SOAP. There is nothing like it for removing impurities and giving the skin a healthy and natural vigor.

Cheap toilet soaps manufactured from rancid and refuse grease injure the skin and are really more expensive than PHOSPHATE SOAP, which retails for 25 cents per cake.

Thousands of articles are palmed off on the public which have no genuine merit, but PHOSPHATE SOAP is the result of modern discoveries of celebrated chemists.

PHOSPHATE SOAP costs no more than other good toilet soaps, while its medicinal qualities make it worth ten times its price to every man, woman and child.

If you want a nice article of Toilet Soap and something that is beneficial to the skin, buy PHOSPHATE SOAP.



H. J. HASKELL,



MANUFACTURER OF

CARRIAGES,  
BUGGIES,

— AND —

SPRING WAGONS,

At the Lowest Rates.

Corner of Alameda and White Streets,

SAN JOSE, CAL.

## NEW OPERAS!

**Carmen.** Opera by Bizet.....\$2.00  
Carmen is an Opera that has gradually and surely won its way to a great popularity. Although the book is large, in fact what one might call a "four dollar book," it is got up in elegant style with music and all the words, English and foreign, for \$2.00.

**Fatinitza.** Opera by Suppe.....\$2.00  
Splendid new Opera that is a decided success. A large, fine book, with English and foreign words, and the opera in every way complete, for a low price.

**Doctor of Alcantara.** By Eichberg.....\$1.50  
A famous opera, now brought, by the popular price, within the reach of all. Orchestral parts, \$15.

**Bells of Corneville.** By Planquette (nearly ready).....\$1.50  
A great success. This, with the "Doctor" and the "Sorcerer" (\$1.50) are well worth adopting by Companies who have finished Pinafore (still selling well for 50 cts.), and who are looking out for new and easy Operas.

Remember our first-class Singing School and Choir Books, VOICE OF WORSHIP and THE TEMPLE, each \$9 per dozen, or \$4 each. Send for copies. Also always remember the MUSICAL RECORD, published weekly. It keeps you well posted as to musical matters, gives six or seven pages of music per week and costs but \$2 per year.

OLIVER DITSON & CO., BOSTON.

C. H. Ditson & Co., 843 Broadway, N. Y.

THE WILSON ADJUSTABLE CHAIR,  
With 30 Changes of Position.

Patented in the United States and Foreign Countries.  
BEST CHAIR IN THE WORLD.

Parlor, Combining  
LIBRARY, Beauty,  
Invalid Chair, Lightness,  
Rocker, Strength,  
BED or Simplicity  
LOUNGE, and  
READING POSITION, Comfort.

Same Chair in Cane Seating, very desirable for summer. Manufactured of the best of wrought iron and rivets. Castors made purposely for the Chair. Everything to an exact science. **WILL LAST A LIFE-TIME.** Has been awarded Medals, Prizes and Diplomas for its superiority and merit wherever it has been exhibited. Orders by mail promptly attended to. Goods shipped to any address, C. O. D. Send for Illustrated Circular.

Address the WILSON ADJUSTABLE CHAIR MFG CO.,  
535 Washington St., Boston

J. P. JONES. J. THOMPSON.

JONES & THOMPSON.

Wholesale and Retail Dealers in

Hay, Grain and Feed.

Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,

1535 Mission St., San Francisco.

A. COOKE. R. J. COOKE

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,

AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GARGORY.

60 Perfumed Chromo, 20, Cards, name on, 10c. 42 Mixed Cards and the Pocket Knife, 25c. Autograph Album, 25c. Omeo Authors, 10c. 30 Post Cards, 10c. Clipping Box, Clipping Box, 10c.

# Winchester Repeating Rifle,

MODEL 1873.



One-third size by Dr. E. H. Pardee.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Command it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carabines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder.

JOHN SKINKER, No. 115 Pine Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.

## Trall Hygienic, Medical and Surgical Sanitarium.

No. 8 Ellis Street, San Francisco, Cal.

Treatment by a Purely Scientific and Rational Method Without Drugs of any Kind.

THE TREATMENT DEPARTMENT EMBRACES ALL APPROVED REMEDIAL AGENTS, AS OXYGEN INHALATIONS, VACUUM TREATMENT, THERMO-ELECTRIC, TURCO-AMERICAN, ELECTRO-MAGNETIC, GALVANO-CHEMICAL, STEAM, VAPOR, WARM AIR, AND ALL FORMS OF WATER BATHS;

Swedish Movements, The Health Lift, Spirometer or Lung Strengtheners, Steam Atomizers, all Electric, Galvanic and Surgical Appliances, Sun Baths, and Solar Ray Surgery, new and perfect Truss for the Radical Cure of Hernia, lately discovered Chemical Compound for the speedy, safe, painless and permanent removal of Cancers, Scientific and successful method for the Cure of Piles, etc., etc.

**Aims to keep Abreast with, if not in Advance of the Progressive Age.**



It has been the mission of this System to mold public sentiment and this Institution will hope to be no disgrace to the immortal name it has assumed. The time has come when Physicians of this School can afford financially to keep a conscience; in fact it is disastrous financially as well as morally to compromise the truth one iota; hence patients can rest assured that they will be treated by the Physicians after the most approved and scientific methods, out of pure and enlightened selfishness, recognizing the truth and beauty of this great principle:

"The Universe is so ordered and arranged that the real and permanent good of every creature is best subserved in promoting the real and permanent good of every other being."

### THE BOARDING DEPARTMENT.

The table will be supplied with the best the excelsior market of the world affords, embracing fruits, grains, vegetables, meats, fish, fowl, eggs, cream, etc. Regular and transient boarders will be accommodated as well as patients. Business and professional men and women who are tired of restaurant fare, may appreciate eating to live a more healthful and enjoyable life. Pure food means pure blood. Pure blood means good health.

"The vegetarian school has demonstrated beyond the possibility of a doubt that farinaceous dishes, sweet milk and fruit, are sufficient to maintain a hard working man in perfect health. Such a diet might certainly be substituted by sedentary people for their ordinary fare."

The Rooms are pleasant, warm, well ventilated and sunny; convenient to treatment rooms, so as to afford the best advantage of nursing and professional attendance.

### GENERAL PRACTICE.

Fever, and in fact all cases may be treated at home successfully. Parturition confinement cases are taken in the Institution or attended at home in any part of the city or country. Preparatory treatment in these cases is most important. Testimonials of extraordinary cases and cures can be seen on application. The most desperate cases, and especially those that have been given up as incurable by the old methods, are invited. Puerperal and typhoid fever and diphtheria cases, after all other methods have failed, may be said to be a specialty. **Send for the TRALL HEALTH JOURNAL.**

DRS. D. C. & MRS. E. D. MOORE,

Trall Hygienic Sanitarium, 8 Ellis St. S. F.

— OFFICE OF THE —

## BLACK POINT PACKING AND SLAUGHTER HOUSE.

MERRY, FAULL & CO., Proprietors.

### TO OWNERS OF LIVE STOCK!

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

### SQUARE DEAL and FULL MARKET PRICES

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices.

Please address our

Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.



Pyrethrum Cinerariae Folium—A California Production.

THE MOST WONDERFUL DISCOVERY OF THE NINETEENTH CENTURY.

This wonderful Insect Powder will exterminate Flies, Weevils, Caterpillars, Mosquitoes, Midges, Crickets, Cockroaches, Spiders, Tarantulas, Scorpions, Ants, Hawk-bugs, Phylloxera, Plant Lice, Moths, Beetles, Grasshoppers, Locusts, Bed-bugs, Fleas, and every species of Insects.

Remember that none is genuine unless my Trade-Mark is attached to every package.

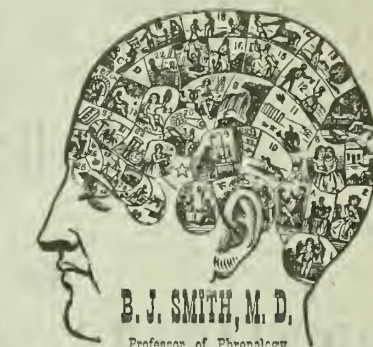
\$100 WILL BE PAID IF IT FAILS TO KILL ANY INSECT.

Endorsed by Prof. E. W. Hilgard, of the University of California, and by Prof. C. V. Riley, Chief Entomological Commissioner at Washington, D. C., and pronounced superior to any imported article, and perfectly harmless to man and beast.

G. N. MILCO.

Patentee and Sole Manufacturer, Stockton, Cal.

CHARLES LANGLEY & CO., Wholesale Druggists, Sole Agents, S. F.



B. J. SMITH, M. D.,  
Professor of Phrenology

— AND —

### MENTAL HYGIENE.

Proprietor of the Hygienic Medical and Phrenological Institute, 633 California Street, above Kearny.

This Institute has of late been entirely refitted, and is now far more healthful and conveniently arranged for the reception of patients and boarders than ever before, and by combining medical hygiene with the various Water Cure treatments and the most powerful Electroized Horseshoe Magnet in the world, claims to cure speedily and permanently all forms of acute or chronic nervous derangements, Brain, Spinal and Heart diseases, St. Vitus Dance, Palsy, Epilepsy and all Rheumatic, Liver and Kidney troubles. The Institution has for the past 20 years made a specialty of treating all forms of weaknesses and diseases peculiar to males and females. By the use of hygienic remedies and electro-motricity the worst forms of impotency and seminal weakness in males and sterility in females are speedily and permanently overcome. Hygienic board, with or without rooms. Terms moderate. Electro-thermal, Russo-Turkish and Medicated Baths given daily.

Mrs. Dr. Smith as Matron has charge of the female bathing department. Dr. SMITH has practiced Phrenology the past 30 years, and during the last 20 years has been constantly using the science connected with Physiognomy, in examining or diagnosing disease in this city, and claims to have made discoveries in the SCIENCE of Phrenology that enables him, by an examination of the head, even hindfolded, to determine the disease to which the person is constitutionally subject, or whether the disease at the time afflicting the person, is the result of accident or hereditary weakness; whether Consumption, Dyspepsia, Rheumatism, Aneurism, Neuralgia, Leucorrhoea, or Seminal. Especially does the form of the head indicate the strength of the uterine, genital or reproductive system. The head is also an index of the natural strength of the lungs, heart, stomach, liver, kidneys, spleen, back or vertebra, and it determines the power of the system in warding off and overcoming disease of all kinds.

Ladies or gentlemen, desirous of obtaining a thorough and correct Phrenological examinations with Fowler and Wells' barts, will meet with a respectful reception at his consulting rooms. Parties can depend upon a reliable delineation of the character of their intimate male or female friends, by presenting a clearly defined photograph.

Phrenological or Physiognomical examinations without charts, \$1.50; with charts, from \$2 to \$3.

### INVITATION TO INVALIDS

And all persons who are in any way out of health, who desire to know the nature and causes of their disease, may avail themselves of an examination through phrenology in regard to health free of charge, between the hours of 9 A. M. and 8 P. M. Sundays from 9 A. M. to 12 M.

### PLEASANT SUMMER READING.

#### THE NEW PENELOPE

— AND —

### Stories of California Life.

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. Agents wanted for this popular work. Easy sales and large commissions. Address

MRS. F. F. VICTOR,

721 Market St., S. F., Bancroft's Building, top floor.

PRICE, \$2 00.

### Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.



# THE GARDEN CITY GANG PLOW

Among the Scores of Testimonials at hand, we have only room for the following:

WATSONVILLE, Cal., July 16th, 1879.

MR. G. A. FRIERMUTH, Watsonville, Cal.—  
Dear Sir:—The Furst & Bradley Plow, purchased of you last spring, has given me entire satisfaction. It is very neat, strong, light and of easy draft, and is easily managed by any boy of ordinary strength. It turns the furrows evenly and at any required depth, buries and covers large weeds and trash better than any Gang Plow I ever saw. Altogether, I consider it a first-class Plow, and cheerfully recommend it. Very respectfully,  
G. M. BOCKINS.

WOODSIDE, Cal., July 18th, 1879.

GEO. A. DAVIS:—Yours received. Will say I have used the Plow I bought of you last fall, and am perfectly satisfied. I think it does the best work of any Gang Plow I ever saw used.  
Yours,  
A. HALLEBURTON.



SAN FRANCISCO, July 7th, 1879.

GEO. A. DAVIS, Esq., 327 Market Street:—  
Yours of June 30th is at hand. The Garden City Gang Plow I bought of you last fall was sent up to my farm in Sacramento county. The man who is cultivating my place used it through the winter, and pronounces it a success. It is of light draft, stirs the ground well, and is easily operated. Respectfully yours,  
AMOS ADAMS.

By permission, we also refer to the following gentlemen near Gilroy:

E. A. DAVIDSON, of Miller Ranch.  
REEVE BROS., H. REEVE,  
JOHN PAINE, T. R. THOMAS,  
C. H. DUSTON, MIKE CASEY,  
J. P. SARGENT.

The GANG PLOW represented here is the result of many years' experience in their manufacture, aided by a long series of practical tests in the hands of some of the best farmers on the Pacific Coast. They are extremely simple, strong and durable, and have several features superior to all other known Gang Plows. One feature of great importance is the BRAKE arrangement, for raising the Plows out of the ground. By this means even a boy can raise them with perfect ease, since the horses do the raising as soon as the brake is applied to the wheel. Another desirable feature consists in having but ONE simple lever for regulating the depth of the furrow, and raising or lowering the plows.

We invite the attention of all who intend to purchase this class of plows, feeling assured that after a careful examination, ours will receive the preference over all others.

Manufactured by **FURST & BRADLEY MANUFACTURING CO.** Chicago, Illinois.

CALIFORNIA BRANCH HOUSE,

No. 327 Market Street, San Francisco, Cal.

**GEORGE A. DAVIS,** - - - - - **Manager.**



**Celebrated Detrick "E W" 22x36 Grain Bag.**

CALCUTTA, DUNDEE and PACIFIC JUTE HAND-SEWED BAGS always on hand. OUR No. 1, No. 2 and No. 3 SECOND-HAND GRAIN BAGS selected and graded with care.

**TWINES.** 3, 4 and 5-ply for Grain Bags. 6 and 8-ply for Potato Gunnies, 3-ply EXTRA FINE for Flour Bags, made expressly for our trade and QUALITY GUARANTEED.

FLOUR BAGS Printed to Order WITHOUT EXTRA CHARGE. POTATO GUNNIES, Wool, Bean, Ore and Salt and Seamless Cotton Bags.

**Tents, Awnings and Hydraulic Hose.**

ORDERS PROMPTLY FILLED AT LOWEST MARKET RATES.

119, 121 and 123 Clay St., and 118 and 120 Commercial St., San Francisco.

**Geo. F. Silvester,**

IMPORTER, WHOLESALE AND RETAIL DEALER IN

**SEEDS,**

**Fruit and Evergreen Trees, Plants, Etc.**

**ALFALFA, GRASS AND CLOVER SEEDS**

In large Quantities and offered in Lots to suit Purchasers.

GREAT REDUCTION IN PRICES.

Seed Warehouse, 317 Washington Street, San Francisco.

**Hill's Celebrated Eureka Gang Plow.**



No. 7c.

HILL'S CELEBRATED EUREKA GANG PLOW received first premium at last State Fair, and all previous State Fairs for years past, and at all County Fairs wherever exhibited.

It is provided with all minor conveniences, including Hill's Land Gauge Attachment that enables the driver to give the plow more or less land while in motion; the device for changing the plane of the wheels and the detachable hubs of the wheels, which can be easily and cheaply renewed when worn out.

The Eureka in all its forms, whether as a "New Model," Sulky, Two Gang or Three Gang, is provided with Hill's S. P. Bottoms or Hill's Slip Share Bottoms, both being of the same form, and the handsomest and best shaped plow in the United States.

Both kinds have patent iron-center mold boards that are chemically hardened and the shares are either our own hand made or else the best cast steel.

The cut above shows the Eureka as a double lever with Land Gauge. It is also made as follows: Single lever, loose pole and land gauge for general work. Single left hand lever with or without land gauge, to be operated by driver when walking. With hillside attachment by means of which the driver can set the axle obliquely across the beams.

Send for Catalogue containing Full Description.

**SWEEPSTAKE PLOW CO.,**

San Leandro, Cal.

**BAKER & HAMILTON,**

**Agents.**

**Engraving.** Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the MINING AND SCIENTIFIC PRESS, San Francisco, at favorable rates. Send stamp for our circular and samples.

**Patents**

OBTAINED IN U. S. AND FOREIGN COUNTRIES; trademarks, labels and copyrights registered through DEWEY & CO.'S MINING AND SCIENTIFIC PRESS Patent Agency, San Francisco. Send for free circular.

GARDEN SEEDS.

FLOWER SEEDS.



# PACIFIC RURAL PRESS

Volume XVIII.]

SAN FRANCISCO, SATURDAY, OCTOBER 25, 1879.

Number 17.

## Grazing and Bull-Whacking.

Since the greater parts of our own State have become so thickly settled that the grazer finds his ranges seriously cramped upon, there has arisen in the newer regions of Nebraska, Colorado, Wyoming and adjacent territories a grand system of grazing which bid fair to deluge the Eastern States with beef, until an outlet was found in shipments to England. Since this comparatively new trade has opened, there has been imparted a great stimulus to cattle breeding in the great central regions of our country, and the prospect is that old "cattle-kings" will long pursue a profitable business and that their ranks will be swelled by many recruits. For not only does grazing in the new regions attract the attention of many lovers of wild life among Americans, but foreigners and foreign associations of capitalists are coming in and driving their immense herds over the prairies and rich table lands on each side of the Rocky mountains. The life is one of many hardships and attended by some risks of person and property, but where good range is secured and visitations of drouth and heavy snows are infrequent, the increase of the herds is large and gold rolls in upon the grazer.

The business of grazing in all its history has called forth races of peculiar people, and they have devised systems and methods of operation according to the phases of the work in which they are engaged, and the circumstances under which it is pursued. A writer for the *New York Tribune*, who recently visited the grazing lands of Nebraska, gives an account of his observations from which we take leading points to show the general system followed. The cattle are herded on Government land at very little expense. The owner of the stock has, of course, no valid legal claim to the range which he takes up, but the right of the first comer, to the occupancy of the land of which he takes possession, is one that has thus far been almost universally recognized. To take up a range, a man selects a section of unoccupied country lying along some stream, builds a house upon it, and drives his cattle to it. The extent of his range will depend upon the size of his herd. The Bosler herd of 27,000 cattle occupies the valley of the North Platte river for a distance of 40 miles. From May to October the cattle are carefully watched, driven where the richest feed is to be found, and gathered up at night. This requires an outfit, the size of which is governed by the size of the herd. All the conveniences for camping are carried in wagons, and for five months the "cow-boys" are in the saddle 18 hours a day, and sleep at night either on the open prairie or in a tent. In October that part of the herd that is not to be sent to market is turned loose upon the plains to shift for itself until the next spring. Of course, during severe and long-continued storms many cattle die, but most of them come through, though they are generally rather lean in the spring. During the winter no effort is made to keep the different herds separate, and the cattle all run together, and often wander as far as 200 miles from their range. In April and May there is a general "round up." Parties start out and scour the country in every direction, gathering up all the cattle that can be found. At night each stock raiser goes into the herd thus collected, and picks out the cattle which bear his brand, and drives them off in a separate herd. This is continued from day to day until the whole country has been searched. During very severe winters the cattle become much more scattered than during mild seasons. Last spring 10 weeks were spent in "rounding up."

The herds are replenished every year by the purchase of Texas yearlings, and by the natural increase. The more enterprising of stock raisers improve the breed of their cattle by keeping them with a good class of bulls which are purchased in the East. Half-breed cattle grow larger and bring a better price than pure Texans.

The "cow-boys" who are employed to herd the cattle are, as a rule, a rough set of men. They would as soon think of leaving off their trousers in the morning, as neglect to buckle

on their belts with their long revolvers and full supply of ammunition; and Eastern men who employ them or superintend them, and who have been accustomed to live in civilized communities are obliged to carry arms in order to command the respect of their subordinates.

Another peculiar race of people called into existence by local conditions are the freight-wagon drivers, or as they are generally called, the "bull-whackers" of the plains. Freight of every kind destined for the outlying settlements has to be brought from 150 to 300 miles in wagons, and this gives employment to a great number of men and teams. A train generally consists of five or six teams of from five to twelve yoke of oxen each and drawing immense wagons. There is one man to drive each team and a wagon-master who accompanies each train, on horseback, and has general supervision of it. The skill with which the "bull-whackers" manage these great teams is wonderful. Each one carries a whip, the handle of which is about six feet long with twice that length of lash, and two inches thick in the largest part. Taking this whip in both hands and standing off five or six feet on one side, they will bring the lash down upon the back of an ox who

is not doing his share of the work with a crack that sounds like the report of a pistol. Besides using the whip, the drivers curse their teams with a peculiar kind of oath, without which, it is said, the animals could not be made to understand. The "bull-teams" make the journey from Sidney to Deadwood in from 12 to 15 days. At night a camping place near some stream is selected, the wagons are drawn up in a semi-circle, and the oxen turned out to graze. The men cook their suppers over a little fire, and then rolling themselves up in their blankets, sleep in the open air.

FLAX GROWING.—J. D. Fowler, of San Luis



"BULL WHACKING" ACROSS THE GREAT PLAINS.

Obispo, recently informed us that this year he has harvested 2,000 pounds of flaxseed to the acre; some years the yield is as high as 3,000 pounds to the acre. This year's crop was sold by contract at 3 cents per pound, on the ground. The contractors offer 2½ cents for next year's crop. According to his observation, flax does best on adobe land. The stems, he notices, are eaten by cattle in preference to straw. We should like to hear from readers generally on the subject of flax growing; how best to crop the crop, and what the profit is at present prices.

SALT AND RUST.—An Australian writer upon the subject of wheat rust says that of the many applications used as a top dressing for the prevention of rust, the only ones found to exert any good effect were salt and air-slaked lime. The writer proceeds: "It has been noticed that crops subject to sea influence are seldom damaged by rust, while crops grown a few miles inland suffer equally with those grown at greater distances." Unless we are very much mistaken, it has been the experience of growers in this State that the nearness to the sad sea waves has yielded no immunity to rust.

In some of our coast valleys where the ocean breeze is strong and continuous the injuries from rust have been grievous. In fact in some locations in our south coast counties, wheat growing has been deemed out of the question, unless some rust-proof variety is secured. Here the interest in the Odessa wheat, which has been found thus far to withstand the attacks of the fungus, is sharp, and great desire has been evinced to secure the seeds for this year's planting. However it is on record in an Australian exchange that "experiments were made by the Rev. E.

Cartwright on rust-infected crops by dressing them with salt in solution, the mixture being at the rate of one pound of salt to one gallon of water. The result was completely successful, and the crop came to maturity." This is worth trying in an experimental way by some of our growers. The cheapest way to apply would doubtless be to broadcast a small piece of grain with a moderate amount of cheap salt before the spring rains, and watch for the results.

INDEX TO GOVERNMENTAL AGRICULTURE.—The Commissioner of Agriculture, at Washington, has just issued a pamphlet which will be a

## A Red-Fleshed Apple.

Some one has sent us half a dozen peculiar apples, forgetting to send word whence they came or what is claimed for them. The apples are, however, sufficiently interesting to introduce themselves, and from an item which we read in the *Grass Valley Union* we infer that the fruit is from A. Mattison, of Nevada county, and that its name is the "Mattison Seedling." If our surmise is not correct, will the sender of the apples correct us?

The apple is fairly startling to one who sets teeth into it unawares. The exterior is innocent enough—yellowish green, somewhat mottled, speckled sparsely, and traces of russet about the stem and a patch here and there on the surface beyond. It is also corrugated, the furrows running from the base outward and extending almost to the hilt. The base and apex are both considerably depressed. The stem is quite short, and wholly within the depression of the base. The general form of the apple is oblong, oboate, and slightly oblique. The size is 9½ inches circumference, measured either vertically or horizontally. Thus far there is nothing unusual about the apple except that its general appearance is a little uncouth, as is common with "natural fruit."

A close observer would notice that a reddish tinge appearing here and there is not that of a "blush," but lies rather beneath the skin, and thus is a little peculiar. The significance of this tinge is apparent when one breaks the skin, for he finds a flesh as thoroughly tinted with pink as the core of a watermelon, deepest in hue at the core, which has symptoms of "water core," but the color is generally distributed through the flesh.

This apple is indeed a novelty. It is of course common to find dashes of red color in the dark red apples, as in the "Detroit Black" and "Detroit Red," the "Fulton's Strawberry," "Kenrick's Red Autumn," the "Red Calville, etc., but a flesh more thoroughly red than any of these under a yellowish green skin is indeed startling. Downing mentions one apple something on the style of the one we have in hand, which is very properly called the "Surprise." He describes it as "a small, round, whitish yellow apple, of little or no value, but admired by some for its singularity, the flesh being stained with red." The "Mattison Seedling" is very superior to the "Surprise," for it is a good-sized apple, tending toward large, and it has a brisk sub-acid flavor, which would make it fairly desirable, even if its crisp, tender flesh were white or yellow.

The "Mattison Seedling" doubtless has a career before it as a "surprise fruit," if not on its own intrinsic value. It fairly brings the apple into the company of the orange and the peach in the possession of a "blood" variety. We shall take samples of the fruit to the meeting of the Horticultural Society on Saturday, where any who may desire may see them.

In this connection, we may mention that the Marysville *Appeal* has learned that a Mr. Rivers, of Kirksville, Missouri, raises an apple, the entire flesh of which is a beautiful strawberry red, with a strawberry flavor. The apple is said to be of fair size and is excellent for all purposes for which apples are used. It will be an interesting thing to see whether Missouri or California has the better "blood apple."

PERSONAL.—Messrs. Dewey & Ewer, publishers and proprietors of the *Press*, have gone to Los Angeles to attend the Southern California Horticultural and Agricultural fairs. We can recommend these gentlemen to any one whom they may meet as modest and gentle-mannered persons, generally well behaved and highly esteemed at home, and believed to be capable of withstanding a moderate amount of temptation. Therefore, we feel confident they will do themselves and us much credit by their general deportment, especially as they are going to associate with so bright and upright a people as the *Los Angeles*. May they return better than they went!

PAUL BOYTON, the swimmer, is coming to California to give exhibitions.





## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

## Notes from Tuolumne.

EDITORS PRESS:—At this writing hail is coming down freely as if winter was to be an early visitor. Rain seems to come at times and seasons unexpected. Teamsters are obliged to lay by at the road station, not being prepared for such a severe storm as is now upon us. The snow will block the Mono road for a time, and those caught on the high Sierras must suffer.

The Mono excitement has created a large teaming interest from Sonora and surrounding country. Flour is in demand, which keeps the flour mills busy, and they employ many small teams to supply the Bridgeport and Mono trade. There is much stock still on the summer pastures. Sheep are mostly in the valley; but horses and horned stock are still in the snow belt, and must suffer severely.

The County Surveyor is now engaged surveying a road to the Tioga district—near Mono lake—by way of Crater flat on the Yosemite road. This district is highly spoken of as being extensive and rich in minerals. Iron ore very pure, also black lead, is found in abundance. The only difficulty to an early and extensive settlement is the want of a good road. Next season will see the enterprise begun, which may cost some \$50,000; but just think of the amount of gold taken from a few pockets around Sonora within a few weeks—hundreds of thousands—so when a rich district is discovered, all stumbling blocks to its successful operation will be removed.

Evidences of prosperity are all around us in this county; those distant bonanzas contributing largely to the pleasing result. There is not one house to rent in Sonora or Columbia, and new buildings are being daily erected. Only a few years ago, buildings in Columbia were sold for a song, and erected on the plains for farmers' residences. Now the scale has turned, and the wealth and salubrity of these foothills are being appreciated. And the end is not yet; a few more years and the hidden wealth of this county will be better revealed, capital will seek investment with such prospects as we have of reward. Independent of its mineral capacity, our fruit crop is enormous, and being extended by additions from year to year. There has been a perfect stream of small teams to Bodie with fruit for a fruitless region. The trade has been profitable to those engaged. This storm may end this season's operations, but if possible the road will be kept open for another month. Bodie is not supplied for winter in some respects. Barley is high and scarce. Many orders for flour are still unfilled. Nelson & Son at Merced Falls have had many teams engaged in the flour business for Bodie, and others around Sonora followed suit. A few days ago a workman from Tioga district was showing some specimens of silver ore from the Briskie claim which seemed very rich. Machinery is wanted and roads to transport it. Thus is the riches of our mountains brought forth for individual and the world's wealth. Year after year new bonanzas will spring up where desolation now reigns, and new fields cultivated to supply the increasing demand of our increasing population. JOHN TAYLOR.

Mt. Pleasant, Oct. 12th.

## POULTRY YARD.

## The Demand for Fine Poultry.

EDITORS PRESS:—Many have imagined that the demand for fine poultry would, as so many have entered the business, decrease from year to year. Precisely a contrary result is the case. Even with those who raise for market purposes only, the great superiority of thoroughbred fowls over the common is so apparent, the profit so much greater, that the demand is steadily increasing. This month I have endeavored to supply an order for a few dozen Plymouth Rocks and Brown Leghorns, but I have been unable, among all my customers who I thought might have some fowls to spare to obtain even two dozen of each at the price offered, viz: \$24 per dozen. It seems to me that it should be very profitable to raise good, well-marked fowls of these breeds to sell at \$2 each. Of course those who, like myself, devote time and money to importing fresh stock and otherwise keeping the highest type, obtain better prices; but one who spends no money in advertising or in the other numerous expenses attending such yards as mine, should be paid well at \$24 per dozen for fowls raised. And yet I cannot procure a few dozen of each of these breeds I name, to fill an order at the price stated. I have written to many of my old customers, and have been unable to buy even one dozen at the price offered. All of them seem able to dispose of surplus stock at better figures. Each year I have had similar demands—requests to procure some dozens of fowls at such rates as I cannot supply my own for—but I have never yet been able to find the fowls.

The demand for really fine poultry increases each year in this State, and the day seems not

far distant when breeders of Leghorns, Brahmas and Plymouth Rocks will be compelled to sell their fowls at even double the usual market rates.

M. EYRE.

Napa, Cal.

[Col. Eyre's remarks about the continuance of the demand for high class poultry are borne out by what we hear from others. For example, T. D. Morris, of Sonoma, inserted a small advertisement in the PRESS last spring and before the time of the notice expired he had sold all his surplus, and went to work at once by hatching and importation to increase his stock for this year's trade. We doubt not the experience of others has been similar. We should expect that others of our advertisers could tell a similar story. There is no doubt that fine stock is winning its way in the poultry world.—Eds. PRESS.]

## Requirements for Egg Production.

A contributor to the *Country Gentleman* writes as follows: Egg-bound fowls are not uncommon among good layers when fed on rich, fat-producing materials, such as corn and corn meal, which, while it makes fat, creates at the same time considerable heat in the body. The difficulty is usually met with in old hens that have been heavy layers the first season. The mode of the formation of the shell can only be learned by conjecture. The egg, as it passes down the oviduct, gathers albumen or white, and farther along is enveloped in a thin, membranous skin, which forms the inner lining of the shell. The egg lies in the sack until the shell is entirely completed, when in the course of a few hours it is laid, and a second takes its place. All of these separate and different materials are drawn from the little creature's body. The ordinary weight of a Brown Leghorn is from three to four and a half pounds, and nine of her eggs on an average will weigh one pound. She will lay three consecutive days, then she will miss a day, and probably drop three or four more, so that she will lay one pound of egg in twelve days, and in a little more than a month she lays the weight of her body. In two months and a half she doubles it, and in five months she trebles her weight.

A Brown Leghorn pullet will commence laying at six months from the shell (in many instances earlier), and continue with slight intermission until the annual moult, which occurs at the age of 16 months. This gives her ten months for laying, in which she produces the weight of her body six-fold, allowing the bird to weigh three pounds, which would be an average of a pure-bred pullet. A good layer would thus produce 18 pounds or 162 single eggs, which at a cent and a half each (18 cents per dozen), comes to \$2.43 for the 10 months. She has, perhaps, consumed of food twice the weight of her body, which, when fattened thoroughly after moulting, would perhaps dress four and a half pounds. This at 11 cents per pound would pay for her bushel of corn at the present price of 50 cents per bushel, allowing that a fowl will consume a bushel of grain in a year. To accomplish this the bird must be well fed, and not on corn alone, for it is too fattening, but some corn must be allowed as a daily feed at all times.

When we consider that all the material is drawn from the bird's blood and body, we naturally arrive at the conclusion that she must be fed, and well fed, to make up the drainage. Hens that are fed scantily will not produce eggs. They require a change of diet, and always a plentiful supply of broken shells to help digest the grain, which is first moistened in the crop before going into the mill. In this process of grinding, the shells are worn smooth, and the fine substance, resembling a mixture between lime and chalk, is taken into the blood and given back in the form of eggs. Hens that are not laying manifest no eagerness for these broken shells—the system requires no such food. Hens that have passed the second moult and come into laying the following spring, are apt when fed entirely on corn to drop soft-shelled eggs. This is caused by an excess of fat that encircles the gizzard and extends along the intestines, crowding and at the same time heating the oviduct. This unusual heat creates a fever and weakness in this organ; it does not perform its office, and the egg is dropped without the shell, or sometimes the hen becomes egg-bound.

In this latter case the egg cannot pass from the body in a natural manner, but breaks from the oviduct and is retained in the abdomen, where they form into separate, hard, repugnant masses. The whole oviduct becomes knotted and diseased in extreme cases. In the early stages the hen will manifest a desire to lay, will go on the nest, but will drop no egg. She will repeat this for several days, and although appearing to obtain relief each time, is gradually increasing her difficulty, for the eggs, although passing from the oviduct, are still retained in the body. This continues until the hen will have the appearance of being very fat and heavy, while she is actually growing thinner each day with a loss of appetite. There is no cure, and it is better to bring her to the block at the outset, before fever has consumed all the flesh and health, after which she is not fit for table use. To prevent this trouble, avoid the feeding of much corn unless accompanied with some cooling diet, like sour milk or a mixture of smaller grain.

## THE FIELD.

## Sugar Possibility in San Joaquin Valley.

EDITORS PRESS:—I see there is a design to abrogate the Hawaiian treaty, as regards sugar. Well, what do we want with the Chinese-grown sugar of these islands? Have we not got thousands of acres of fertile lands in California, and climate, besides, to supply all the United States. Now, your correspondent, Mr. Gennert, has shown what can be done in Los Angeles, but does not mention or has not seen Tulare and Kern counties, and not only these two counties, but we might almost include all the San Joaquin valley, provided irrigation could be supplied, and if all is true about the Norton pump for irrigation in your last number, that might easily be done. However, as regards irrigation, there are these two immense rivers, viz: King's and Kern, running across as fine and as fertile a plain as ever was seen, and these rivers already are, to some extent, utilized for irrigation. These two rivers, having their sources in eternal snow, never fail. Their highest water, in May, June and July is supply enough for hundreds of thousands of acres. Then there is a climate superior to Louisiana, seeing that the frost of these two counties never kills full-grown orange or olive trees, whereas the frost of Louisiana has killed full-grown trees of these varieties frequently.

The farmers at present irrigating and cultivating these plains would gladly contract with sugar manufacturers to grow canes. It would be a godsend to them, and a change from the eternal wheat and barley. It is a "hog and hominy" country, but hogs will scarcely sell at any price, mutton is retailing at five cents per pound in this city, and what price they will get for their Egyptian corn this season no one knows, nor what they will do with it.

I believe it would not do for the farmers to make sugar by the old boiling and skimming process, so there is a chance for any young capitalist to make a sure fortune. Now, first of all, let the young capitalist look at the *Cyclopedia Britannica*, also *Tomlinson's Cyclopedia*, both to be found and seen at the Mercantile library, and he will see an account of the vacuum pan. Now this process by vacuum pan both manufactures and refines sugar—in fact sugar refineries are generally for cleaning and purifying sugars made by the old process. A pan eight feet in diameter has boiled 80 tons of sugar in one day. Then the new process makes from 30% to 40% more sugar, and this sugar commands from five to ten shillings per cwt. more in the London market. Then, perhaps, the young capitalist might qualify himself by making a tour to the Sandwich Islands, which is always a summer trip, and perhaps that would show, and interest, and give him more knowledge than any number of books.

Some people might propose a company. That might be well enough, but then the cost of a steam engine, cane-crusher and vacuum pan is within the means of hundreds of capitalists in San Francisco. Now, who starts first gets all the advantage of the local demand of Kern and Tulare counties, and by the time the local demand is supplied there will be a narrow-gauge railway, two-foot gauge, down the west side of the San Joaquin river.

Is it not high time we had some benefit from protection to industry on the Pacific slope? Our wine and wool have some, but look at the frightful tariff greedily Massachusetts and other Eastern States enjoy. I understand that the tariff on some kinds of woollens is equal to 100%, owing to high wages. We cannot compete with the Eastern States, therefore we ought to be favored as regards sugar. MUSSEL SLOUGH.

S. F., Oct. 14th, 1879.

[Our correspondent will do the Editor a favor by sending his full address.—Eds. PRESS.]

## Sorghum Syrup.

EDITORS PRESS:—Every pursuit that adds to the comforts of mankind is a blessing. Every industry that tends to economy is choking out the hard times. I think sorghum raising will do both, and I rejoice that the industry is spreading in California.

As Mr. McMaster, of Los Angeles, and many others, may wish to try the cane this year on a small scale, I will repeat some of my experience: I made a mill last year; two rollers of live oak, a foot in length and diameter; spindles seven inches in diameter (the one carrying the sweep still larger); cogs of oak or harder wood; frame work of pine plank two and a half inches thick; keys to key the rollers close; the spindles first made true as possible, and the rollers put into a temporary lathe, and, by use of chisel, ax and plane, made as nearly round and true as may be.

Bottom of pan of sheet-iron, galvanized, two by six feet, nailed with lath nails to pine plank two inches thick and six inches wide for sides and ends.

Arch of broken brick—mud would do—20 inches wide and deep; chimney three feet high. The ends of the pan must be protected from fire with bars of iron, upon which brick can be laid, or, in some way, that the fire does not strike the nails in the ends or sides of the pan, or the pan will soon be ruined. To mine I have sheet iron nailed on the ends of the bottom, and

turned up and nailed on the ends of the side pieces, which project two inches beyond the pan; in this space I pour water to protect the ends of the pan.

I use knots, etc., that cannot be used for the stove to boil the juice. The boiling can mostly be done with the refuse cane after it has dried a few days, but this requires constant feeding. My skimmer is made of tin, a foot square, holes an eighth of an inch in diameter, nailed to two semi-circular boards for ends of the skimmer, a strip nailed across the top from end to end; in the middle of this strip is a hole for a handle three feet long.

Now, as Prof. Sanders says, experience is very useful, but I think an ordinarily careful man can make very good syrup without any. I will not say this of sugar. I have made the syrup in Minnesota, in Iowa, Kansas and California, with a variety of canes, soils and seasons; sometimes it granulates, usually not. I never tried with an especial attempt to make sugar.

In Kansas in 1874, nearly all my syrup was thick, half-dissolved sugar in the spring. For several previous years I had made it from the same kind of cane, same soil and same method of manufacture as nearly as possible, and yet without any appearance of granulation. The same, also, in other States. I think the main reason was in the weather while growing; perhaps in the weather during winter; or it might have been from any one of a score of other reasons, too slight to attract the attention of any one but the most observing. When the process was first invented, I have taken good daguerreotypes; and immediately after tried again with the same manipulations, apparently, and produced a perfect blank.

I made a barrel of syrup last year, about as much this year—no granulation so far. I have another kind of cane which I shall work this year, which seems better, but is late.

I strain the juice, boil fast and soon, skim often, be very careful not to burn when nearly done, use no chemicals, and seldom fail to make a good article of syrup—an article that is more frequently used by every member of my family 365 days in the year, than any other kind of sauce or fruit. Indeed we could scarcely keep house without it. No one ever gets tired of it. It is excellent for sweetening some kinds of cakes, and making some kinds of sauces; it lessens the sugar bill very much, although it is not a complete substitute for sugar.

How it will pay in California I cannot yet say. I can scarcely afford to make it to sell on my rude one-horse mill. But let it be distinctly understood that there is a vast deal of difference between *buying* and *selling* on the score of economy. He who is determined to be frugal and prosperous can afford to raise almost everything that will grow on his farm for his family use and comfort; when, perhaps, he can afford to raise but two or three articles to sell. If he makes his own syrup, he will, perhaps, make it at times when he would do but little else—if he makes his own, he and his family will enjoy one added comfort—if he has it to buy, even if for sale in his vicinity, he will probably do without it. S. P. SNOW.

Santa Barbara, Oct. 14th, 1879.

## SHEEP AND WOOL.

## Prize Contest for Sheep Dogs.

The London *Live Stock Journal* gives an idea of the way they test the skill and training of sheep dogs in England: The mode of working the dogs is generally varied each year, in order to prevent owners previously training their dogs in one particular style. A properly trained dog will work just as the shepherd directs him, and the objects of the association would become nil were the dogs only taught to work in one groove. The great usefulness of an obedient and intelligent dog in a mountain sheep-run cannot be over-estimated. The dogs ascend places where the human foot could not follow, pick out the sheep belonging to their owner, and bring them down to the valley when needed.

With reference to the trials, our readers must imagine a large rough pasture, gradually rising at a distance of three-quarters of a mile to its summit. At the foot is placed a small square pen of open hurdles, the narrow entrance to which is made at a point "round the corner" from the direction in which the sheep have to approach it. At a distance of some half mile up the hill is a large pen, into which have been collected from the neighboring fells about 100 Herdwick sheep, splendid steeplechasers, a five or six foot wall being no obstacle to them; and when once they get separated from each other, it requires a fleet dog to keep pace with them in a race. "Quiet as a lamb," is a commonly accepted term; but when the wethers of Threlkeld are run into a corner, they will turn, stamp with their feet, and defy the dog to dislodge them. This pen was in view of the dogs during the trials from start to finish, and led to some difficulty; we think the reserve pen ought to be hid. The principal difficulty in the whole trial that the dog has to contend with is to keep the sheep from breaking away from each other, needing incessant watchfulness. Once broken, the dog's chance is, 99 cases out of 100, gone. The penning operation is generally a difficult one, and any rashness on the part of the dog or man, will send the sheep flying in opposite directions.



## THE STOCK YARD.

### Gabilan Ranch Short Horns.

The Short Horns of Gabilan ranch are now more than ever objects of popular interest. They won signal victories at this year's fairs, and many of our readers who saw the animals will doubtless be interested in having an outline of their breeding. The proprietor, Hon. Jesse D. Carr, of Salinas City, has made the building up of this herd one of his special labors for several years, and he is entitled to draw much satisfaction from the results obtained. He has freely expended money in getting desirable blood by importation, and his herd now shows the wisdom of the investment. We have often promised ourselves the pleasure of examining the herd upon its home ground, but have thus far failed to get a leave of absence sufficient to cover the distance. We have, however, in the *Live Stock Journal* of Chicago, a review of the breeding of the herd which we give in this connection. It will be welcome to all who have seen the animals at the fairs. The editor of the *Stock Journal* writes as follows:

The herd is made up of 37 females and 16 males. The first eight cows and heifers are of the time-honored Louan family, the precedence being given to the fine old cow Louan 44th. This animal passed from the hands of her breeder, Jeremiah Duncan, into the possession of the Hon. M. H. Cochrane, finally landing the property of Mr. Carr. She was sired by Duke of Airdrie 2,743, out of Louan 2d by the same bull, thus giving two top crosses of the blood of that famous son of the peerless old Duke. Glancing along we notice three daughters of the above cow, viz., Louan 45th, by Mr. Cochrane's celebrated Booth bull Royal Commander; Louan 47th, by the pure Oxford 6th Lord Oxford 17,585, bred by Samuel Campbell, New York Mills; and Louan 49th, by Hero of Riverbank 26,818, a Gwynne by Troilus 7,334 (a Tuberosa Princess), out of Lullaby by 6th Duke of Thorndale. This gives us three pedigrees which have the true "ring" in them, the dam being the same in each case, and the sires being animals whose pedigrees are irreproachable, and whose merits are unquestioned. Then we see Louan 46th by 6th Lord Oxford (above), and Louan 48th, by Louan's Lord Oxford 27,124, both out of Louan 45th, previously mentioned. Louan 50th, by 7,726 Maynard (a descendant of imp. Aylesby Lady), out of Louan 48th, and Louan 51st by same sire, out of Louan 46th, complete the list of females of this family, the whole forming a group of which "Gabilan" may well be proud. Five of these are solid reds, one red-roan, and two red, with little white.

In 1874, Mr. Carr bought from her breeder, Mr. C. K. Ward, Le Roy, N. Y., the four-year-old red cow Hope 22d, by Baron of Geneva 7,538 (a Duke-topped Constance), out of Hope 2d by Perfection 2,019 [a son of Duchess by Duke of Wellington (3,654)], thence through Hope by Usurper (13,928), to imp. Hopeless by Horatio (10,335). The breezes of the "Slope" seem to have been favorable to her, and we find eight of her descendants in the catalogue. The two red-and-white full sisters, Hope 24th and 25th, by 6th Lord Oxford, and Hope 27th, by Hero of Riverbank, are out of the old cow. Hope 26th, by Louan's Lord Oxford 27,124; Hope 28th, by 6,358 6th Duke of Gabilan; and Hope 31st, by 7,479 11th Duke of Gabilan, respectively, are red-and-white half-sisters, being out of Hope 24th.

Then comes Belle Morris and her four daughters, 1st Belle of Avenue Ranch, by Baron Bates 4th 13,406, the 3d and 4th Belles of Avenue Ranch, by Master Maynard 14,881, and 1st Belle of Gabilan Ranch. Belle Morris, bred by J. S. Grinnell, Deerfield, Mass., was got by Lord Mayor of Oxford 4,954, out of Augusta Morris by Oxford Duke of Fordham, thence through Prince of Wales 5,097 and Fordham Duke of Oxford (31,181), to Nightingale, by Balco (9,918).

Fairy Queen 3d is a Kentucky-bred Rosemary by the Renick Rose of Sharon bull Duke of Mason 9,898, out of Fairy Queen 2d by Duke of Nicholas 9,912, a Rosemary bull, with two crosses of imp. Duke of Airdrie on top; then follows a cross of the old Duke himself, thence Daisy, by Romulus, etc. Third Maid of Gabilan, by Mazurka Star 17,733; Fairy Queen 3d, by Hero of Riverbank 26,818; and Fairy Queen 5th, by 6,358 6th Duke of Gabilan, are three worthy daughters of the above mentioned cow.

Next we notice that elegantly-bred cow, 2d Rose of Gabilan, of the Nannie Williams sort, got by Mr. Cochrane's high-bred Louan bull Lucetius 14,810, out of Nicandra by the 6th Duke of Geneva, she by Duke of Airdrie 2,743, through Colin Campbell 3,763 to the celebrated Nannie Williams by Sir Alfred 969. She is accompanied by her yearling daughter, the 8th Rose of Gabilan by 6,358 6th Duke of Gabilan.

Pet of Geneva, with her two heifers Lady Oxford and Lady Oxford 2d, pass next in review. The Pet is by 5th Duke of Geneva, tracing through Loudon Duke 4th (a Miss Wiley) and John of Gaunt to Orange by Bascom, etc. The two heifers are by 6th Lord Oxford and 6th Duke of Gabilan.

The Young Marys are represented by Lady

Hughes, Lady Mary, and Leopardess 10th. The first named is by Royal Prince of Fairview 12,861 (a Louan, bred by Megibben), out of Jubilee Mary by Junius 6,929, thence through Princeton 4,285, Renick (32,296), Prince Albert 2d 857, and Goldfinder, to the illustrious imp. Young Mary. The second is a four-year-old cow by Horatio 17,350, out of Lady Hughes, above. Leopardess 10th is a nicely-bred red two-year-old by the Adelaide bull Oxford Duke 27,386, the next two crosses being the Rose of Sharon, Master Maynard 14,881, and Independence 14,542 (a Young Phyllis); thence follows Duke El Hakim, etc., to Judith Clark and Young Mary. This heifer has some choice blood in her veins.

Third Maid of Monterey by Romeo 15,370 (a son of the great prize-winner Dick Taylor 5,508), tracing through Effie Deans and Melissa to Young Flora by Ceelebs, is next in hand. She also has two young things, one by 6th Lord Oxford, the other by 6th Duke of Gabilan.

Passing along we notice Portulaca 2d, a descendant of Aylesby Lady, with Gen. Sheridan 5,701, Gen. Grant 4,825, Duke of Thorndale (36,549), and imp. Czar 395 on top of the imported cow. Not to be behind the rest, she furnishes one daughter, Portulaca 3d by the 6th Duke of Gabilan. May Queen (a Jessamine) by Master Maynard, and 2d Louan of Avenue Ranch by same sire, are sandwiched in between the Aylesby Ladys and the imported cow Fashion by Gen. Havelock (16,130), bred by R. Syme, Redkirk, Scotland. Ulalie (a Kentucky-bred cow) by Miss Butterfly's Son (34,860), out of Miss Morgan by Duke of Marlboro 3,866, closes the list of females.

The post of honor among the bulls belongs to the 6th Duke of Gabilan. He is a red-and-white of 1876, got by 6th Lord Oxford 17,585, out of Hope 23d by the celebrated 2d Duke of Hillhurst, she out of Hope 23d, previously spoken of. Space forbids individual mention of the many meritorious youngsters found in the catalogue, suffice it to say, they are of the same general breeding as the females which have been described.

In this connection we would remark that we are sorry to see a tendency among farmers and stock men generally to underrate the value of well-bred young bulls for use upon grades and natives. To them we would say, do not wait to get together a herd of thoroughbred cows, but buy good individual young bulls of good pedigrees and go to work, and in a short time you will have cattle of which you will be proud.

## HORTICULTURE.

### The Rambo Apple.

EDITORS PRESS:—An apple in a peddler's wagon attracted our attention a few days ago, by its beautiful proportions and color. It was deep red, and speckled like a strawberry. On inquiry we found it to be the "Rambo." Mr. Keeley, of Shaw's Flat, is the only possessor in this county of a few trees. Never hearing of the name, I suppose it must be a scarce variety in California, although it seems to be well known in the Eastern States. From appearances, I should expect it to become a favorite. It will keep well, is beautiful and of good flavor, and should be in more favor amongst horticulturists.—JOHN TAYLOR, Mt. Pleasant.

Our correspondent is right concerning the Rambo apple. In locations adapted to it it gives great satisfaction. In case others, like our Tuolumne friend, may look upon the Rambo as a stranger, we append Downing's description, as follows:

The Rambo is one of the most popular autumn or early winter fruits. It is a highly valuable apple for the table or kitchen, and the tree thrives well on light sandy soil, being a native of the banks of the Delaware. The tree is of a vigorous, rather spreading habit, quite productive.

Fruit of medium size, flat, smooth, yellowish white in the shade, streaked and marbled with pale yellow and red in the sun, and speckled with large rough dots. Stalk long, rather slender, curved to one side, and deeply planted in a smooth funnel-like cavity. Calyx closed, set in a broad basin, which is slightly plated around it. Flesh greenish white, very tender, rich, mild subacid. Very good. October to December.

There is claimed to be a distinct or sub-variety of this, called Red Rambo, the fruit of which is more red, otherwise there is no perceptible difference.

### Vegetable Growing in Moss Balls.

In the *Wiener Landwirtschaftliche Zeitung* M. F. Bilek describes his experiences in growing cucumbers, beans, peas, cauliflowers, etc., in balls of moss. In the case of cucumbers, especially as the process offers the advantages of an earlier and more certain crop, for these plants, if put out too soon, are specially apt to suffer from late frosts in a cool, damp spring, etc.; while, if put out too late, they have to develop at a warm, dry season, so that they throw out little fruit. Reared in moss balls they can be put out when sufficiently hardy, and when night frosts are no longer to be feared. In the case of beans, the crop is generally heavier the earlier it can be produced. Early beans can be easily got by starting them in moss balls, and planting out the moment the weather permits. In three weeks, or even a fortnight after, a gathering may be got, for the plants flower readily while in the moss balls. The same holds good of other crops. Biennials should be sown about the middle of September,

on an exhausted hotbed, pricked out as soon as sufficiently developed, and lifted in the middle of November, after the ground has been thoroughly watered, so that some of the soil may come away with the roots. These are then dipped in a mixture of clay, chopped moss, water and loam, and on withdrawal sprinkled over with fine dry earth. A piece of moss is then flattened by pressure on a board with the form of a plate, and sifted earth sprinkled on it. The plant is stood upon this, and the root thoroughly covered in with the sheet of moss, so that neither rootlets nor earth are anywhere visible through it. The covering is molded into a rounded form, and secured tightly with a couple of wires. Thus "balled up," the plants are arranged on boards, or at the bottom of shallow boxes, so that they can readily be moved from place to place. They may be left in a place exposed to the sun till the weather gets threatening, when they should be stored in a light cellar, at a temperature of two degrees to six degrees C., for the winter. This plan M. Bilek considers far superior to that of growing plants in pots made of cows' dung, which were so much vaunted some years ago. These latter often crumble to pieces, or dry up and admit no moisture, besides which they often get covered with fungi in winter, which attack and destroy the plants in them.

### Water as a Protection Against Frost.

Prof. Gustaf Eisen, of Fresno, Cal., writes an interesting letter to the *California Horticulturist* giving his experience and observation on the use of water as a preventive of frost injuries. The subject will probably soon be a timely one in frosty locations. We quote: The old way of covering the trees with straw mats, or any other material, to keep the frost out, is evidently the best and safest of all, but cannot always be put in practice. It is quite a job to cover 500 orange trees every year, especially if they have reached any kind of size, not, however, being large enough to withstand the frost altogether. Another safe way is to smoke the orchard constantly during frosty nights, but such a plan is both expensive and laborious. We, in Fresno, have sometimes frost, and heavy ones too, for three or four weeks in succession, and of course smoking is out of the question entirely. To smoke a vineyard or orchard in the spring, during occasional frosty nights, is very effective, and is resorted to on many places, especially in France, but to keep smoking during several weeks is not practicable. A very general practice in France and Spain is to make long heavy ropes of straw, wet the same and carry them over the trees, tying them here and there to the branches, and at last insert the ends of the rope in a large tub of water. The rope will keep constantly wet and attract the frost.

Now we have always been taught that irrigation of the trees in fall and winter is very injurious, and should never be resorted to. Alas! for the theorists; those of my neighbors who followed their advice last winter lost heavily. Myself and a friend of mine, Mr. McNeil, had better luck, and I will now shortly tell you how it was. Last summer I had planted a large circle in front of the wine cellar with rather tender trees, such as Araucarias, etc., which generally are supposed to be unable to withstand our winter climate. Not knowing any better, of course, I kept the water away from the trees from the 1st of October, and the ground got well dried up. As you know, we had very severe frosts about Christmas time, and the trees had been left uncovered. The day before the heavy frost there was a large break in our irrigation ditch near by. The water flowed down, and, to my great dismay, covered a part of circle where I had my tender trees. Of course I thought they were all gone. The water standing round the trees froze solid, and just as far as the water had reached the trees were saved. The irrigated ground kept moist the whole winter, and after every frost presented the appearance of a heavily frozen surface.

One day in the early spring I visited Mr. McNeil and incidentally told him of my experience. "Why," he said, "that is just mine too, come along and you will judge for yourself." And so we went out through the peach and almond orchard, one half a mile or so down to the orange trees. Last fall Mr. McNeil had 800 orange and lime trees alive, all budded, and about five years old. Now there were only 250 left alive. "Well," said my friend, "a day or so before the heavy frost, the boys on Chapman's 40 acres took a notion to irrigate their sheep-pasture, and did not care a bit for the big break in their ditch. Accordingly I found, to my great vexation, half of my orange trees flooded next morning. The water had run here and there in the lowest places, of course, and, look hear, you may see it plainly, wherever the water did go there the trees are alive. The dry places were occupied by trees which you now see dead to the roots." And indeed my friend was right, the water had saved our trees, no mistake about that. And now, why can not every body with facilities for irrigation do the same? My advice is keep your trees dry in early autumn, so green wood can get ripe, but give plenty of water before the fruit comes, and you, as we did, will save the trees.

WEEDS.—Prof. Gray has been led to conclude that self-fertilization is neither the cause, nor a perceptible cause of the protogeny of the European plants which are weeds in North

America. A cursory examination has brought him to a similar conclusion regarding the indigenous weeds of the Atlantic States—these herbs which, under new conditions, have propagated most abundantly and rapidly, and competed most successfully in the strife for the possession of fields that have taken the place of forests.

ORANGE GROWING IN FLORIDA.—We have received from E. A. & A. H. Manville, of the Manville nurseries, Lake George, Florida, a copy of their "New Guide to Orange Culture," which they send for 10 cents postpaid. This consists of a few pages describing the best practice under Florida conditions of soil, etc., and may be of interest to growers of the fruit in this State. They send also their price list, which enumerates 55 varieties of the citrus family as propagated by them. Californians desirous of knowing what is being done in Florida citrus culture can doubtless address to advantage the Messrs. Manville.

## THE DAIRY.

### Trials of Forage Plants.

EDITORS PRESS:—The suggestions of the PRESS have caused the people of this section to try several new forage plants within the last three years, and it would not be amiss to communicate briefly the results of our experiments and observations. We have a good, deep soil free from alkali, and are dependent upon irrigation for crops. Inasmuch as we are not very far from the coast, the coast winds prevail all summer and reduce the temperature considerably. People have been diligently looking for something that can be raised profitably on a dry soil where irrigation has to be resorted to.

Two years ago everybody was talking about Egyptian corn, and a considerable area was planted. It grows well, both the brown and the white, with comparatively little water, but stock do not like the brown and it is impossible to obtain the grain of the white on account of the swarms of birds that come to devour it. For this reason people put in only small patches of Egyptian corn for the sake of "the chickens and the cow."

Teosinte has been tried, and it seems to be a failure. It is possible that it requires more heat than it receives here.

Prickly comfrey grows quite well, but no one has experimented with it sufficiently to speak authoritatively of its merits or demerits.

Of all the forage plants that I have seen, I consider pearl millet the best. Further experience might cause me to change my opinion of course, but thus far I know of only one objection: the birds love the seed so well that they devour it by the acre. Pearl millet grows thriftily with little water and yields a fine quantity of sweet nutritious fodder.

W. R. BARBOUR.

Orange, Los Angeles Co., Cal.

OUTLOOK FOR CHEESE.—The *Prairie Farmer* says a sudden rise has lately taken place in the butter and cheese market, and shipments are now very active. From the 1st of January till the end of the first week in September the exports of cheese from New York were 105,723,428 pounds in 1879, against 112,091,084 in the corresponding term last year. During June, July and August the price of cheese was only from 5½ to 6 cents a pound this year, while it was some 8 to 8½ cents in 1878. This year has witnessed the unusual combination of low prices with a scant production. About the first of September dealers began to awake to the fact that cheese was the cheapest commodity in the market, that cool weather was coming on, in which it could be kept, and that the supply was not large. The price began to rise in consequence, and since the first of September had advanced from 5½ to 10 cents a pound. There is a strong demand now, and the prospect is that this winter the price will be high.

TIME OF CALVING AND YIELD OF MILK.—A note on this subject, from the pen of an experienced Dutch agriculturist, appears in the columns of *Biedermann's Centralblatt*. In Northern Germany it is generally arranged that cows shall calve between November and February, under the impression that the largest yield of milk is thus obtained; in Holland, on the other hand, March and April are considered the most favorable months. In order to arrive at some definite conclusion as to the respective merits of the systems, the author kept a careful record of the milk obtained from 142 cows, about the same age and condition of nourishment. One day in each week he had the milk of each cow weighed separately, and calculated the weekly yield on that basis. Until the beginning of March the cows were kept in their sheds, and thence to the beginning of November were driven out to pasture. The results obtained show clearly that, after the month of February, a constant decrease in the yield of milk and in the duration of lactation occurred, in direct proportion to the lateness of the date when the cows calved. The quality of the milk was also inferior in the later-calving animals.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### Echoes of the State Grange Meeting.

The sessions of the late State Grange meeting had such a genuine ring of good cheer and earnest fraternity, that its echoes are still sounding in the ears and warming the hearts of loyal Patrons. It was indeed a meeting to be long remembered. Many doubtless noticed, as we did, how constant members were in their attendance, how they sat hour after hour wrapped in interest in the varied proceedings, how all were moved by true respect for the feelings and beliefs of others, and even in expressing disagreement in views, how the tenderness of generous tolerance shone forth. A marked advance was noticeable on the part of many of the pioneer members in their intelligent speaking abilities and considerate and modest actions. It was gratifying, too, to notice that several of the comparatively new members of the State Grange exhibited a zeal and acquaintance with Grange principles and a readiness in discharging the trusts allotted to them, which placed them beside the veteran members as true and able promoters of Grange work and interests.

The position of women in the Grange is becoming more and more clearly defined as that of one-ship with the Brothers in the noble cause. The Sisters in this State are now discharging, with honor to themselves, the duties which devolve upon them. They are coming forward splendidly in self-reliance, and demonstrating the eminent wisdom of the distinctive feature of our Order, which gives to woman her just share of responsibility and honor in the general undertaking. Without seeming to undervalue the efforts of other Sisters, we wish to give expression to the general feeling of thanks and appreciation to Sister Flora M. Kimball, of San Diego county. Sister Kimball came a greater distance to participate in the meetings than any other delegate. She showed by her enthusiasm, by her readiness of thought and word, and by her evident devotion to the work, that she was well fitted to represent the large district of the State whence she came. A most cordial greeting was extended to her by all, and she returns to her far-off home with the stronger friendship of old associates in Grange work and the warm regards of many new friends.

Among the pleasant features of the meeting was the tribute paid to the retiring Master, Bro. I. C. Steele. The expression in formal speeches and in the frankness of conversation among members showed how fully Bro. Steele had ingratiated himself in the hearts of the Brotherhood. He has shown many noble traits of character during his administration. The work has cost him much abnegation of private business interests; it has given him much anxiety, because of his ever-present desire to act wisely and for the best interests of the Order. The charge came to his hands at a peculiar juncture, and it was borne with such zeal, whole-souled sincerity, and purity of purpose, that his influence upon the work is one which will never fade away. He leaves the Order in the hands of brave and true-hearted Patrons.

Full confidence is felt in the new Master, Bro. Spilman, whose sterling qualities are well known to the membership. He is backed by that noble veteran in the farmer's cause, Bro. Coulter, the new Overseer, who is earnest, faithful and discreet. And behind Bro. Coulter stand the others of the officer list, many of them known for years for their devotion to the cause and wisdom in maintaining it.

Bro. Spilman will go to the meeting of the National Grange, and carry with him the good wishes of all Patrons. He will earnestly represent our State Grange, and will, we doubt not, create in the general body the impression of trust and confidence which attend him here, where he is so well known. The National Grange is regarded by our Patrons with loyalty, respect and fidelity. We trust Bro. Spilman's visit at the East will be a pleasant one and his return safe and speedy.

### Ho! From the State Grange.

[Written for the RURAL PRESS by MRS. M. B. LANDER.]

Let us call to mind the old man who a few weeks since said—

"I've just come in from the meadow, wife, where the grass is tall and green."

And after some old-time poetical truths and homilies, expressed a sudden determination to hie to the "City of Oaks," there to meet fraternally the sons and daughters of the house of labor; praying with that fervor common to good old age that to them greeting might be granted with those Grangers that were "at once so near and yet so far," namely, those whose hearthfires sent blue, smoky columns from the rock-ribbed mountains of the north, or from the spicy, scented orange groves dotting the valleys of the south, as well as from those high peaks that mark the snowy golden line of the east, to the homes that fringe upon the foamy, wave-crested shores of the western Pacific. Such anticipations as brightened the sometimes lagging hours of this good old couple have not only become a reality, but have passed into day-dreams, the

memory of which has mellowed anew those quiet, peaceful tones, as they speak to the grandchildren who are fearfully listening to the "tick, tock! tick, tock!" of grandfather's clock, for those little tick-tocks bring bed-time only too soon; but ere the fated hour is told, grandpa says—

"I have seen so much on my pilgrimage through my three-score years and ten."

But only think, children, at my time of life, these old ears should be greeted with the far-off sound of a *Little Grange*; mayhap, in the good time coming, you too can go with father and mother and learn of the responsive mysteries that lie between the tiny flower and its high home upon the crest of rocks; that barren spot only scaled by winds and birds, which not only sow, but reap from these cloud-fields their own harvest of life, beauty and fragrance.

"Yes, bairnies, as I said before—

'Steady and slow in the good old way, worry and fret in the new.'

Slowly as the mill of the past might have turned the days and hours of our youthful labor, my keen old eyes could see nothing of the worry and fret of the new, for each brother and sister seemed to have time by the forelock, as the minutes grew into hours, then into days, until almost a week had written its life, and still good common-sense doings and workings of farm-life were being woven into the ever-living garb of history; and, children mine, all through these changeable, shifting, truthful word-paintings stood unbroken, above all, the good old Puritanical text of our forefathers—

"That the best thing a poor old man can do is to hold the deed of the farm."

"Wife, you and I had not much book-learning, and we could not speak knowingly of the comparative virtues of silica and alumina; but now these hard-fisted sons of toil stand on the same cultivated ground as the honorables of political forces, for know you not—

'The heavy task and the long task is now done with a machine.'

Thus leaving many a spare moment to gather the golden seed of knowledge. But, strangest of all, wife, when the spirit of this new era, namely the good time coming, moved a sister to the floor, most intelligibly did she speak of her own 'experimental farm'—why next thing, wife, they will say to lordly man, even in the words of Ruth of old, 'Where thou goest there will I go,' not only to glean the fields, but also to prepare their fatness. Grange truths, purposes and principles were well-sifted, and its culminating glory was pointed to the not very dim future, when little experimental farms, under scientific and practical eyes and hands, will dot our valleys and hillsides, and even bloom in our rocky canyons; such to be the result when liberal agricultural outgrowth of this little band is grafted into our law-frame, to be watered, nourished and sustained by those waterforces that now only play upon our vast mineral beds to scatter its debris a curse upon our lands; but in that prophesied good time coming, that which now so ruthlessly scatters desolation, will bring in its train the ever-living blessing of life and growth! Four days did these agricultural apostles kindly wrestle with each other in expounding the best laws of labor, gain and happiness, and 'gude wife,' the fact of sacrificing prejudices for the sake of harmony and its strong exemplification, which the initiate knoweth, is or should be to us a surety of that perpetuity of this Grange growth, which we have hoped, but hardly felt, was safe past the tottering steps of infancy.

"Fourth day, evening, Pomona with her hand-maidens, Ceres and Flora, claimed as her own. Over 50 applicants for her favor walked into her mystic circle to find tables of fruits and flowers strewn in all the abundance and strength of this semi-tropical clime. Master artists had been there, dropping flower-woven baskets, whose delicate floral tints were eclipsed by the stronger light imprisoned and made to garnish the mellow rosy apple, luscious grapes of every hue, golden oranges and bright scarlet pomegranate, all of which cosily nestled on a bright, green, mossy bed, which had been transferred from a far away dell to grace this basket. These same flower and fruit artists, Bro. and Sisters Deming, of Vallejo Grange, had cunningly laid in harmonizing lights and shades other floral gems into a massive cornucopia, from whose overfull mouth were rolling fruits, berries and nuts, in beautiful significance of that plenty which is California's own, which tempts the coming migrant and freights the mighty ships that lave in the waters of our open ports.

"Saturday morning these restless sons of the soil greeted the early morning hours, that they might at least see if not catch the early worm daring to feed upon our State University farm. Profs. Hilgard and Dwinelle were out betimes, giving such greeting of welcome as will be long remembered by those Patrons who stand afar off, and with watchful vigilant eyes, sometimes jealously watch the manipulations that are to make this State crib an honor or a failure to the State that nurses it.

"Over plowed ground were wiled, and, thanks to our proverbial good nature, both gratuitously and good humoredly did we crush little clods and big clods, spying in the meantime with curious eyes, both native and foreign forage plants, scanning medicinal beds, and, I in particular, greeting as childhood's friends the old mullein stalk and the 'gympon' weed, common to the 'Prairie State,' passing in the midst of apple, pear and cherry trees, into walks of roses, heliotropes and other out-door flowers to the conservatories with their wealth of gayly-tinted leaves, but dearth of flowers and fragrance.

O modern cynic! is this a just simile between the humble, uncultivated life-bud, and the pampered bot-house flowers of humanity? Every nook of this school-farm was scrutinized, and in the lecture-room Prof. Hilgard gave a practical lesson of his work to an attentive audience, calling to his aid the wondrous powers of the magic lantern; but that home genus, Our Boys, who are at once our most intense anxiety as well as greatest pride, was not reflected by these magic lenses; still, from the light thrown upon them as reflected to the mind of this teacher of agricultural science, came an earnest heartfelt appeal that, no doubt, found lodgment in every fatherly and motherly heart of this Grange circle. Feelingly and with that simple power of truth was clothed the acknowledged fact that farm-life and boy-life, or rather young man-life, is too often antagonistic. Most earnestly was said to the farming fathers and mothers of this State, send not your boys to us to inculcate that love of farm-life which should be his proudest heritage from your beautiful valley and mountain homes; for 'tis our mission to direct that love and give such knowledge to these farmers in miniature as will empower them to revise and give to these rural scenes and homes such standing of culture and success as will best fulfill the great aim of created man, namely, to further direct and expound known, and seek unknown laws of nature as will tend to make a satisfactory balance sheet between the love of gain and family happiness. Thus might be harmonized, to a great extent at least, those two great forces, earthly gain and worldly happiness, which almost if not quite control the great march of life. Most surely have we the right to hope, by this combined action of farm and school, that our loved State would reach those great agricultural heights which are now but a glorious possibility.

"Loth as we were to leave these classical grounds, the high sun admonished of other duties lying in wait. A few more hours of business brought us to the 'Grangers' Love Feast,' and in the evening's pastime of love and good will to all men was truly burned the incense of that brotherly love whose distillation keepeth bright the fires that light our subordinate Grange homes.

"Well wife, after all, the old way is not so much better than the new; and to the Granger who is so zealously bearing the Patron's cross, you and I must give evidence—

'There is one old way that they can't improve, although it has been tried  
By men who have studied and studied, and worried till they died;

It has shone undimmed for ages, like gold refined from its dross—

It's the way to the Kingdom of Heaven, by the simple way of the cross."

Martinez, Oct. 19th, 1879.

### The Open Meeting.

On Friday, October 10th, according to previous announcement, the Grange held open meeting for the discussion of important topics.

Gen. T. H. Williams, Profs. Hilgard and Dwinelle of the State University, and Congressmen Davis and Berry were among the visitors. After some minutes spent in social converse, Master Spilman called the Grange to order, and ex-Master I. C. Steele was first speaker. He stated that farmers had long felt the necessity of gathering statistics in California to show what crops would be profitable to raise. Farmers frequently raise crops for which there is no market, and obtained nothing for labor. Just now farmers of California are competing against each other to the injury of all. It is believed that agriculturists might be so directed that all agriculturists might reap the fruits of labor if they raised crops at the right time and for the right market.

Farmers are disposing of articles produced at less than cost of production. There was generally a market for wheat or wool, but there are many articles grown in California for which there is often no market. He found from statistics that \$160,000,000 worth of sweet substances were imported into the country. While the price of corn was below the cost of production, there were also large sums spent by people for tea, coffee and other articles, which, it is believed, might be raised at home, and the money thus saved; but it costs money to make the experiments necessary to determine what products could be raised with profit. Farmers were the foundation of all society, and had a right to have their interests considered.

If the subject was brought before Congress there would be no difficulty in obtaining an appropriation for the purpose of establishing experimental farms. Congressman Davis had taken great interest in the matter, and Messrs. Pacheco and Page had also expressed sympathy with the subject.

Ex-Lecturer Pilkington was the next speaker. The growth of agriculture in America had demonstrated that this was one of the best agricultural States in the Union, and so far as experimental farming is concerned, the most important. With such an institution experiments could be made whether jute, coffee and other products could be raised. It was also desirable to know what grasses would flourish in our dry and arid soil. When living in Illinois he thought he knew something about farming, but since he had settled down on a little farm in Santa Cruz, he found he knew but little. He had a neighbor named Smith next to him, and his farm is no more like mine than wine is like water. After years of hard work we have ascer-

tained that I have been raising what he should have cultivated, and he what I should have raised.

There were no two agricultural sections of the State alike. The farmers were too poor to make experiments for themselves, and it was for the interest of the country that the Government should make an appropriation for experimental farms, not alone for California, but for the whole Pacific coast.

I. C. Hoag, of Yolo, reviewed the progress of agriculture in California, and instanced the fact that wheat producing had so depleted the soil that where 40 or 50 bushels to the acre could be raised in the early days, scarce 15 bushels could now be obtained with better cultivation. An experimental farm would inform farmers what could profitably take the place of wheat, and how deterioration of the soil might be remedied. It would also be known what crops were best suited to foothills and valleys. One of the most important functions of Government was to educate the governed; particularly is this true with regard to agriculture. Farmers should be educated practically and scientifically as to capabilities of soil. Such would benefit the whole country.

Germany has long since learned that experimental farms located in every district of the country are the most paying institutions of the country.

S. Myers, of San Joaquin, was in favor of experimental farms, but doubted the expediency of going to Congress for appropriations. He remembered when in the Legislature of voting in 1862-63 for experiments in different industries, but he had never known any good from them. He thought the duty of establishing experimental farms lay with the State rather than with the general Government.

Prof. Hilgard said that two years ago he had placed himself on record in favor of experimental farms. All money spent on experimental farms would be well, but the establishment of one farm only would practically result in benefiting one district without much good to the others, on account of the variety of soil and climate.

At the University he had established an experimental station, but he could do nothing at Berkeley which would benefit Sonoma, San Joaquin or Sacramento valleys. The real work must be done in each district. Take cinchona and coffee, he was experimenting upon them at Berkeley, and had to take great care of trees there, but he could raise those trees and distribute them to those portions of the State where they could be profitably raised. There was the same reason why Congress should establish experimental farms as to endow agricultural colleges; but if Congress did not take the subject in hand the State should. If the State Grange could establish experimental stations, these would be run at small cost. This might be the simplest and most ready means of experimenting upon agriculture. He thought the University was most willing to assist in establishing local experimental stations, directed, of course, by some central station.

Mrs. Carr detailed results at an experimental station on a farm of 42 acres, six miles from Los Angeles, on the edge of an orange belt. Specimens of each variety of fruits, such as peaches, also vines, had been planted. The trees were set out in March, 1877, and already 40 varieties of fruit had been gathered. There were 40 different stations in southern California where experiments were being made with the tea plant. Coffee had been a dead failure. Tea will be a success. Experiments with the mulberry for silk had hitherto proved failures, but the first cause had been from going so extensively into the business at first. The raising of jute could not be made profitable in California because the laborers on jute plantations in India were only paid six cents per day. Mrs. Carr believed that if the women of California would plant a few mulberry trees each year, and go on gradually, sericulture would eventually become a most important industry.

A telegram was read from Senator Booth, expressing regret, through indisposition, at not being able to be present.

The debris question was then taken up. Gen. T. H. Williams was introduced to the Grange. His first experience in the State was in the mines. In later years he entered into farming, and has undertaken the reclamation of tule lands. The subject was a difficult one, and it would not do to stop hydraulic mines. Entirely too much money had been invested in it; too many men were employed in it, and too much money was added to the wealth of the country. If hydraulic mining was stopped, a large section of the State would be depopulated. On the other hand, agricultural and commercial interests must be considered. The wise statesman would endeavor to preserve both.

Hydraulic mining in its nature must be ephemeral. Agriculture was co-existent with the human race. If there was not a middle course, the alternative would be that agriculture or mining must stop. Mining must, of course, go to the wall. But it was true that debris was filling up rivers. In Steamboat slough, on the Sacramento river, there was now only four feet of water, where two years ago large vessels could navigate. Further up, as high as the Feather river, the debris from the mines had filled up to a depth of 20 to 25 feet. He was using this debris in reclamation works, and often found after taking up this debris by a suction pump that in two weeks there was just as much of it as before. Mr. Williams proceeded: "I am of the opinion that by properly penning up the debris in the mountains by diver-



sion into canyons and allowing the water to pass off after settlement, so that only the finest silt shall pass in the streams, which will not fill up the rivers. Mr. experience has taught me, also, that the best system of reclamation is by a system of dykes, keeping the waters within their natural channels. The streams thus acted with scouring properties, and but little debris is sent to fill up the stream.

The resolutions of the Yuba City Grange called upon Congress to interfere in this matter, but, as a lawyer, he did not believe that Congress had any right to do so. He thought the subject could be accomplished by the State Legislature. There should be a statute passed providing for the appointment of commissioners, whose duty it shall be to see that hydraulic miners keep the debris in the mountains, under penalty of fine and imprisonment. Then the reclamation works in this State should be done upon a uniform system. With proper arrangement, such as suggested, for keeping debris near the mines, and with a good uniform system of dykes, he believed that there need be no antagonism between agricultural and mining interests.

Mr. G. W. Hancock, of Sacramento, said: The Legislature in past years had not endeavored to help the agriculturists. In California legislation the party with the heaviest purse comes off victorious.

The Little York mining company had told the farmers of Bear river that they would keep the matter in litigation for 30 years. Eventually the city of Sacramento would be flooded. The farmers of Bear river could not remain in their homes for more than 15 years, and the city of Sacramento must certainly be ruined unless something is done. Mr. Babb stated that he lived up among the headwaters of Feather river. Up there they felt little interest in the debris question. They wanted the overflow up there to give their lands a good top dressing, seeing that the soil was thereby fertilized.

Congressman Horace Davis said with regard to mining debris that the subject did not belong to Congress but to the State Legislature. His constituency was interested in the debris question because of its effect on the commercial channels of the State. He had been told by Coast Survey officers that portions of Suisun bay, which 20 years ago had 10 to 15 feet of water, were now growing tules; also that it was difficult now to get United States war vessels to Mare Island. It might be that unless something was done, the bar of San Francisco would be seriously injured. The Coast Survey are now investigating the subject, and their report will shortly be presented.

Upon the experimental farm question he had endeavored to draw the attention of the authorities at Washington to the necessity of collecting information on the difference between agriculture on the Pacific coast and the Eastern States. It was astonishing that nothing had been done by the Department in the matter. All west of the 100th meridian was agriculture by irrigation, yet but little had been done. On the Pacific coast the conditions are reversed. It is not land but water that is most valuable. As showing how different are the conditions on this coast, it is stated that white hogs will not do well here; they must be black. People East would laugh at this, but such circumstances show how necessary it is that the Government should have some men engaged in collecting information on agriculture in California. Gen. LeDuc, the head of the Agricultural Department, favored experimental farms. It would be difficult to get an appropriation from Congress for experimental farms. The best plan is to make the State Government take the bull by the horns, and establish some such system as now prevails in Massachusetts. He thought, however, that when Congress was shown how different are the conditions on the Pacific coast, a portion of the present agricultural appropriation might be obtained for the specific benefit of the Pacific coast.

Congressman Page believed that the courts would have to deal with the question of debris. He hardly thought that Congress would legislate on what is really a local question. Whatever might be done, the Grangers, as sensible men, could hardly expect that a great interest like hydraulic mining would be shut down because a few farms on Feather river are injured. He thought that Congress, at its next session, should take the subject in hand and make liberal appropriations for improving the navigation of the Sacramento and San Joaquin rivers. He was confident that some plan could be agreed upon in dealing with the debris question satisfactory to both mining and agricultural interests. The mines of California yield about twenty millions annually, and an interest of that magnitude could not be imperilled without injury to the whole community. He believed the miners who injured farms are willing and ought to pay for all damages done. At the same time it was the duty of the general Government to keep open all rivers of the State for purposes of navigation. With regard to experimental farms, he should be always ready to support any measure calculated to benefit the agricultural interests of California.

Congressman Berry said his observation as a farmer had taught him that an experimental farm would be of great benefit to agricultural interests. He had seen that one acre of his farm was different to another, and that a knowledge of the difference of soils was important to the California farmer. The debris question was one of the most difficult that had come before him. He did not think that in America, at this age,

there was any problem which could not be solved by engineering skill. Before this could be done, it would be necessary for the miner and farmer to come to some common agreement. He had seen hundreds of acres wholly destroyed, rendered unfit for anything, by the debris from the mines. This was alluvial land, the finest in the State, if not in the world. The debris issue was a question of imperative consideration. The city of Sacramento, with its magnificent capital, is threatened.

The city of Marysville is doomed. I find my neighbors hauling freight to a railroad, paying 30% higher rates, because steamboats cannot reach them on the banks of the rivers. I do not think either Congress or the State Legislature is yet prepared to act, until there has been a thorough investigation. A few years ago I endeavored to prevail upon the State Legislature to memorialize Congress to appoint a commission to collect data. But that was fought by the mining interest. I then endeavored to obtain a State commission, but that was opposed also. At the last session we did succeed in getting the appointment of a State Engineer, and I look forward with great interest to the presentation of his report. I want a decision from the courts as early as practicable. Mr. Berry said that he expected that right would prevail, and that the farmers would get a verdict. But if the decision is against them, then the farmers must commence and get data for legislation. If it came to the point that either hydraulic mining must be discontinued or agriculture stopped, I am in favor of stopping that class of mining. I believe that portions of the debris can be diverted. It may be necessary to condemn certain sections of agricultural lands and some few mines, but a remedy can be found harmonious to both interests, and the general Government should foot the bill. The question is a serious one. You cannot dig up the channels of either your harbors or your rivers when they are once filled up. In conclusion, Mr. Berry impressed upon the Grange the necessity for immediate action.

J. V. Webster spoke at length in favor of the establishment of experimental farms.

On motion of Mr. La Rue, a vote of thanks was passed to the members of Congress, professors and other gentlemen who have attended and taken part in the debate.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### ALAMEDA.

ALMONDS AND TOBACCO.—*Times*, Oct. 14: The almond crop in this county is unusually heavy this season, and is now being gathered. W. H. Jessup raised a large crop of excellent tobacco on his farm near Haywards this season.

#### COLUSA.

RESTORING FERTILITY.—*Sun*, Oct. 18: The stubble is burned, the straw is burned, and the exhausted soil gets no recompense for its destroyed fertility. There is no country in the world where manuring the land will bring a richer reward. The best land in the State will show an increased production, and if the best will, what of the average and poor land? Men will let the manure of the barn go to waste when it will cost nothing to put it upon the land. We had an article last week on sheep-growing, in connection with saving the straw and stubble, and we believe that it will not only pay as it goes along to pasture the stubble down and feed out the straw, but that it would, in a series of years, pay largely in the increased production of the land. If we are obliged to ship so much of our soil's life giving qualities with our wheat, let us, at least, save to it all we can. Let farmers think of these matters; let them see how other countries have been impoverished; see how the fertility is being shipped from our lands, and then do something to leave California beautiful and fresh to our children.

#### FRESNO.

COTTON.—*Republican*, Oct. 18: The subject of cotton culture in the San Joaquin valley has attracted but little attention for the last few years, the last attempt in this vicinity being made by A. H. Statham, of Fresno, on his farm near Centerville. Although labor was scarce and higher than at present, it netted him more than a crop of wheat or barley.

ALMONDS.—Two tons of almonds were raised at the McNeil ranch this season.

#### HUMBOLDT.

THE POTATO CROP.—*Times*: Reports continue to reach us of the damage being done to the potato crop in this county by the blight. It seems to be confined to no peculiar locality, but attacks the vines on the high and low lands alike. A gentleman informed us yesterday that a large and thrifty field of potatoes belonging to him, the vines being in full blossom and in appearance strong and healthy, was struck by blight, and in less than twenty-four hours blackened and destroyed as if a fire had swept over the field. It begins to look as though Humboldt county would not contribute much of this article of produce to the San Francisco or any other market.

#### KERN.

THE RAIN.—*Courier*: A heavy rain fell around Bakersfield all night of Sunday, drenching the ground for the first time in two years. On plowed ground it has wet down over six inches.

#### LOS ANGELES.

A HEAVY RAIN.—*Herald*, Oct. 18: A light, misty rain commenced to fall at 9:30 on Sunday night. This kept up until 1 o'clock Monday morning, when a heavy rain set in and continued until half-past five. The pluviometer of the Signal Service office recorded 93-100ths and that of Mr. Bliss, on Alameda street, 1.18 inches as the night's rainfall. The rain, in addition to damage in other parts of the city, played havoc with the foundations of the storehouse of Messrs. Lankershim & Van Nuys, at the corner of Alameda and Commercial streets. The water came down Alameda street in a perfect torrent, and, running under the warehouse, undermined the foundations, letting a large portion of the building, in which about 50,000 sacks of wheat are stored, down to the ground. The heavy two-inch planks in the floor were snapped like pipe-stems, the sides of the building in various places were wrenched and twisted out of shape, and the weather-boarding was bulged out or bent in. The roof remained unbroken, but is somewhat bent and twisted by the sinking of the floor. Mr. Hoppersted, the miller, thinks that none of the grain sank into the water, and that it consequently escaped damage.

#### MENDOCINO.

ITEMS.—*Dispatch*, Oct. 18: The farmers are all plowing. Our wool and hop-growers have received over \$200,000 more for their commodities than they had reason to expect last January. Sheep-shearing is well under headway at Covelo. The wool crop will be comparatively small. John Healey, representing Grisar & Co., of San Francisco, was here here on Sunday, and purchased Aaron Armstrong's wool, paying 17 cents, we understand. This is the only lot we believe that has been sold of the fall clip. The wool-growers generally are holding out for 18 cents, which the buyers will not give. Green grass has just commenced to make its appearance. Thus far this has been an extra good season for all kinds of stock. The time between the spoiling of the old feed and the appearance of the new has been so short that stock has fallen away but little and is still in good condition, being fat when the first rain came.

#### MONTEREY.

SOLEDA.—Castroville *Argus*, Oct. 18: We have had .45 of an inch of rain. Active preparations are being made to put in a much larger area in grain than ever before. It is almost an every-day occurrence to see six-horse teams coming to the depot and there loading up with grain to be used as seed the coming winter, should it open favorably.

#### NAPA.

TOO RICH FOR SUMMER-FALLOWING.—*Solano Republican*, Oct. 16: Berryessa valley must be a prolific section—at least Andy Wester's place in that valley must be. His farm of 300 acres averaged this year a ton to the acre, and the grain is all plump and fine. On a 40-acre field he harvested over a ton and a quarter to the acre. His land is so rich that there is no wearing it out, and summer fallowing is entirely useless. Indeed, he is afraid to summer-fallow, for when he does his grain grows so rank that it will not stand.

HYDRAULIC WINE PRESS.—*St. Helena Star*: Brief mention has been made of the new hydraulic press for squeezing the juice out of grape pumice, recently introduced by Charles Krug, and the first application of hydraulic power to that work. The press is the work of John L. Heald, of the Vallejo foundry, and is a model of easy and powerful movement. Water is supplied from the mains of the St. Helena Water Co., at the New York creek bridge. It is conducted thence in two-inch pipe to Mr. Krug's cellar, a distance of about half a mile, and at the cellar has a fall of about 100 feet from the reservoir, on the Brewery road. A few feet from the press the pipe is narrowed to an inch-and-a-half, and through this presses on the under surface of a cylinder two feet in diameter, with a force of 50 pounds to the square inch. This force can be increased by pump auxiliary to 220 pounds to the square inch. At the top of the cylinder is a "follower," near five feet in diameter, which rises into a "cage" of the same measurement, and squeezes there a charge of pumice, reducing it from a thickness of 30 inches to 10 inches, and making the grape juice run out of it in a manner that resembles an overflow of the Mississippi. The power is no greater than can be exerted by a screw press, but the saving is in time and manual labor, the now press doing 100% more work than can be got through under the old process, and with a saving of one-half to two-thirds of the men required to attend it.

#### SACRAMENTO.

FRUIT DRYING.—*Folsom Telegraph*, Oct. 18: Large quantities of grapes are being dried into raisins of superior quality, and packed into 5, 10 and 15-pound boxes at the fruit-drying house of Livermore & Co., of this place, also a fine quality of prunes have been dried and neatly packed in boxes to suit the purchaser. For the past few weeks a large force has been employed in this establishment preserving the fruit produced in the large orchard and vineyard below town belonging to the Natoma Water & M. Co.

#### SAN BENITO.

PAJARO BEETS.—*Pajaronian*, Oct. 16: Some of the county papers have said that the Pajaro valley beet crop was a partial failure. This is not true. The acreage this year is far less than last year, and of course the aggregate yield will

be smaller than that of 1878, but the tonnage per acre is far greater.

CHEVALIER.—*Enterprise*: We were shown this week a sample of Chevalier barley. This grain is round, plump, and much larger than the common barley, and the yield is much heavier and two weeks earlier even when grown upon the same land. Its superiority for exporting and brewing purposes is well attested, and it always commands the highest price in the market. Barley sacks of ordinary size generally hold from 95 to 105 pounds of the common grain, while a sack of this variety will weigh from 120 to 140 pounds. Our farmers this year have been unable to dispose of their grain even at 60 cents per cental, but we are informed that Mr. McDonald, of San Felipe, sold this year his entire crop of Chevalier barley at \$1.80 in San Francisco.

#### SAN BERNARDINO.

LOOK OUT FOR MUD HENS.—*Index*, Oct. 17: We learn that mud hens are making destructive work in Mr. Pettitt's fish pond, devouring the young fish. The crop of one which Mr. Pettitt killed the other day, was found to be filled with small carp.

#### SANTA BARBARA.

EDITORS PRESS.—Rain night before last, wetting the ground down two or three inches. It will probably sprout the barley sown dry. Should there be no more rain soon, the result may be disastrous; but the weather is still cold, and the prospect favorable for more rain. I think there has not been much grain sown dry this season thus far. The plan seems to be rather growing out of favor. Fruit has done well in this county this year. Many young orchards are bearing for the first time, and the owners are buying and looking around among the various driers. It is hoped that a cannery will be established in Santa Barbara next season. The periodical railroad fever is again raging in our midst. Better wait till times improve a little more.—S. P. SNOW.

A FLOWING WELL.—*Guadalupe Telegraph*, Oct. 18: Mr. Fleck has just finished boring a three-inch artesian well on the farm of T. S. Brown, about four miles from town. Flowing water was struck at a depth of 78 feet, and rises in a strong, heavy volume between six and seven feet above the surface, and seems exhaustless in quantity.

#### SOLANO.

FLAX GROWING.—*Dixon Tribune*: Farmers of northern Solano are much surprised at the result of a recent experiment made in flax-raising in that section. Last year Isaac Brinkerhoff planted about 130 acres in flax. Having little experience in the matter, not enough seed was sown, and in harvesting, much of the flax was wasted. However Mr. Brinkerhoff realized 25 tons of flax seed, which he sold for \$1,500 or \$60 a ton. It is said the straw is worth \$20 a ton. The land was adobe and of a poor quality, which is said to be the best adapted to flax raising.

#### SONOMA.

NORTHERN NEWS.—*Russian River Flag*, Oct. 16: We have had a couple of heavy showers since our last issue, and now the atmosphere is clear and bracing. Rainfall for the week, .95; for the two weeks, 2.05 inches, by Prof. Thomson's gauge. Three hundred bales of extra wool were sold in Cloverdale this week at 25¢. Our granaries are bursting with wheat, and teams hauling great loads of grapes and wool are constantly passing to the wineries and warehouses.

#### STANISLAUS.

WINE.—*Independent*, Oct. 14: We are informed that the grape crop in some portions of this valley has been damaged somewhat by mildew, and that in consequence the amount of wine manufactured will be less than in some former years. A. Schell, of the Red Mountain vineyard, Knight's Ferry, will, however, manufacture in the neighborhood of 40,000 gallons this season. He has a very fine vineyard, and has every convenience for the manufacture of wine, and well arranged cellars for storing the same. The product of his vineyard is mostly shipped to New York, where Mr. Schell has established an agency for its sale.

#### TUOLUMNE.

EDITORS PRESS.—Fruit drying by sun heat has come to a watery end, but that would seem to matter very little, as prices do not give a Chinaman remuneration for labor, even though the fruit grew spontaneously. If all enterprises were as barely remunerative as fruit drying, few luxuries or even necessities of life would or could be procured. The middle-men take the lion's share. In my garden I have a young pear tree in bloom. One year last spring I grafted a young shoot with the Bartlett. The first season the growth reached eight feet. Last fall or in December it was transplanted. It grew but little this summer and now blooms as if it were spring. There are eight buds on one stem. It may be a common occurrence and not worth recording, but the sight was pleasing to the eye of your correspondent.—JOHN TAYLOR.

CANARY SEED.—John Shaw & Sons, seed merchants, of London, England, in their circular of October 1st, writes as follows: "A large business, partly speculative but mainly consumptive, has been passing in canary seed; stocks are undoubtedly light, and the crops in England and Holland most disappointing; the rise on the past week has been quite 6 shillings per quarter, and the advance still continues."





## There's Nothing Hard, but Thinking Makes it so.

[Written for RURAL PRESS by WINNIE WINTER.]

There's nothing hard, but thinking makes it so;  
On this dim orb that rolls below,  
The noble hearts who courage bear  
Shall ever live to do and dare.

There's nothing hard, but thinking makes it so;  
The huntsman liveth by the bow,  
And finds a secret joy and pride  
In roaming o'er the forest wide.

There's nothing hard, but thinking makes it so;  
To those with steadfast steps who go  
Along life's highway rough and drear,  
The rugged way shall smooth appear.

There's nothing hard, but thinking makes it so;  
The northmen in their land of snow,  
For daily food go forth in quest,  
And then contented sink to rest.

There's nothing hard, but thinking makes it so;  
Men reap whatever good they sow,  
And in earth's fields, by heat and rain,  
There comes at last the ripened grain.

There's nothing hard, but thinking makes it so;  
Thou storms and tempests beat and blow,  
They fear no loss who have no ends  
But those which perfect truth commends.

There's nothing hard, but thinking makes it so;  
As those who seek shall come to know,  
When from their lives of toil and pain,  
A rich reward at last they gain.

So in your thinking happy be,  
And you will one day come to see  
That nothing's hard, itself, to do,  
Only the thinking makes it so.

## Some Folks.

[Written for the RURAL PRESS by MRS. BELLE BALLARD.]

There is a class of people in every community, whose highest aim in life appears to be to do all the harm, and create all the misery and heart-burnings possible. We all know such persons and instinctively dread them, for do they ever spend one hour in our company without inflicting some disagreeable story upon us, or endeavoring to sow the seeds of doubt and suspicion in our minds? They approach us with professions of friendship, and under that disguise they pour into our ears their unworthy stories. We do not think it possible to meet a more thoroughly disagreeable person than this same meddler in other people's affairs. It is almost impossible to escape them or to avoid listening, even though we know the things they tell us are almost without foundation, except within their own evil imagination. They address us so confidentially; they are so much interested in all that pertains to ourselves. They don a knowing look, and whisper in the low tones of privileged friendship "something they have heard," and "I thought you ought to know it." "Well, a certain person told me that your son" (or, perhaps, your brother or your husband, as the case may be) "does not keep the best of company when he is out from home, and is often guilty of taking a drink too many and plays cards too, dreadfully. Only think of it!"

Our dear friend goes on at some length to discuss the evils of the day, and card playing and drinking in particular. Then, having no more gossip for that time, takes leave of us until her stock of scandal is replenished. But the miserable tale rankles in our heart for days, filling us with sad misgivings. Or, perhaps, the blow is aimed at the sacred shrine of wifely love, and we are told in pitying tones, accompanied with commiserating glances, that he whom we have trusted with our holiest thoughts and crowned with all the wealth of our woman's love, is false to the sacred trust. The seeds of misery thus sown, may grow and strengthen, fed by trifles, until hearts are estranged and lives embittered for all coming time.

Oh, the misery caused, the hearthstones broken by the baleful tongue of one malicious, designing creature! The lives wrecked by this tattler, this meddling busybody! No home is safe from their venomous attack, no circle too sacred for their intrusion. Many a wedded pair can date their lifelong wretchedness from this source. Ah! the power for harm wielded by a false, malicious tongue, eternity alone can tell.

We have seen this demon in disguise, in the young, fresh souls of sweet girls, just budding into womanhood, whose heart might have been a treasure for any man's coveting had the whole character not been marred by this crowning blemish. Again, we have seen the selfsame spirit rule, as with a rod of iron, the middle-aged, whose locks were frosting with years, and oh! most shameful, most utterly to be condemned by all, the seeming follower of the meek and lowly One, who went about doing good. Under the cloak of a pure Christian life they carry a deadly poison, fatal as pestilence to domestic happiness.

But why dwell on things of such everyday occurrence. All over our broad land we may see the work of such unholy creatures, and find

in many, many a home, a "skeleton" of their making. The time has come to some and may come to many more, when the words of Scripture shall be fully verified: "With what measure ye mete it shall be measured to you again." Kernville, Cal.

## Where Are Our Contributors?

EDITORS PRESS:—I have long wondered what had become of our cherished "Agnes," whose articles contributed so much to your columns. Hope she has not become overwhelmed in the "Dusty Highway of Life," but will take a fresh start in these cool fall days, and help to cheer us all, who are also traveling that same "highway." And "M. E. O. W.," too? Her dear letters were always filled with fresh ideas, and made one feel as if beside her in her beloved home in the redwoods. Your old-time contributors, "Nell Van," "Mary Mountain," and others—let us hear from them all again, and put the good editor at his wit's end to find space for us all. The children have a column, why not the women, where we can ask and answer questions of various kinds? For instance, I spilled some purple ink on my kitchen floor, which is of redwood boards. Can anyone tell me what will take out the stain? I tried sour milk, but it helped very little.

JEWELL.

Deer Ridge Farm, Sept. 27th, 1879.

## Literature in the Home.

Among the many excellent suggestions made by Mrs. Julia McNair Wright in her valuable book entitled "The Complete Home," we find the following suggestive account of a visit to a farm home:

"I was at Cousin Ann's son's farm one day, and Reed was walking about with me showing his territories; and, indeed, they were so well kept that they were a treat to see. The cattle all looked like prize cattle. He had names for them all, and one handsome young heifer he called 'Books,' and a big sheep 'Maga,' which he informed me was 'short for magazines,' and a family of black Spanish hens ran to the call of 'Papers.'

"I asked him what in the world it all meant. He told me that when he married, his mother gave him a pair of black Spanish fowls, and told him to let them keep him in newspapers. He accordingly called them 'Papers' for fun, and he found that the eggs and chickens would keep him handsomely supplied with good newspapers. When the supply exceeded the demand he would lay the surplus by to begin a fund for providing his children with reading. His wife had suggested that the heifer should be dedicated to the cause of a library; and so he, after subtracting the cost of the animal's keep, meant to use her produce in buying books. The sheep had been a pet lamb, given to his wife by her sister, and she, having paid her board, secured them their magazines.

"The truth is, we were brought up on books, and we could not live without them. I expect to make a decent fortune here, but I received all my first notions of the value and care of stock from books and papers. I noticed all that I found on that theme; it interested me; I carried out many of the suggestions, and I found them valuable."

WOMEN AT THE POLLS.—A correspondent of the *Detroit Free Press*, in Rawlins, W. T., was present during the late election for members of the Legislature, and gives some interesting data of the operations of woman suffrage. The women generally availed themselves of the privilege, or, as they themselves would put it, the right. They came to the polls in carriages; the crowd made room for them and treated them with the utmost respect and gallantry as they walked to the windows. It is not true that married ladies are entirely governed in their votes by their husbands. It has been found that the woman vote may invariably be depended upon as against candidates given to drink or immoral habits. Nor are the ladies slow to drum up the careless of their sex who ought to vote but do not take the trouble. The leaders of the political organizations went about in carriages, often driving the horses themselves, and brought these laggards to the voting-places. The correspondent particularly noted "the absence of drunken men and rows. Everything was quiet, not only at the polls but throughout the town, and there was no offensive language drawn out by the heat of discussion." Fifteen miles from Rawlins is Fort Fred Steele, where there was no voting precinct, and here the singular fact appeared that while the officers and privates were not entitled to vote their wives were. The voting precinct for the fort is in Rawlins, and a special train was run over the Union Pacific railroad to bring the ladies to town and the polls. The gentlemen warmly approved of their wives wielding the ballot.

NEW MUSIC.—"My Love's a Little Fisher Maid," by Berthold Tours, "The Rescued Colors," by Fabio Campana, and "Little Darling, Sleep Again," a cradle song by Arthur Sullivan, are the names of three superior songs sent us by O. Ditson & Co., who also favor us with "Pokcha, Grand March by Mnkhya," (pronounce the name clearly), a cornet and piano piece from "L'Eclair," and an "Idylle" by Rafael Joseffy, who is the celebrated Hungarian pianist.

## The Cranberry Swamp.

"Of course," said young Doctor Dedling, "a man has his own fortune to look to."

"Of course," said Judith Grey; and as she spoke the words a cold chill seemed to creep, like slowly-congealing ice, around her whole heart.

"If you had consulted me as to your affairs," went on the young man, "instead of taking this very extraordinary step, entirely without advice or counsel—"

"Yes, I know," hurriedly interposed Judith; "but it's over and past now, so perhaps we had better not talk about it."

The red winter sunset was blazing with sullen fire above the cedar copse in the west; the leafless woods held up their black arms in a sort of wrestling agony, toward the sky, as the bleak wind tossed them to and fro; and a solitary raven uttered his ominous croak, in the woods at the back of the house.

Dr. Dedling shuddered as he looked around him, and glanced out toward the dreary swamp that extended toward the east.

"Such a place," said he, "for a woman to elect to live in."

"It isn't very cheerful," said Judith; "but I've lived here all my life, you know."

"The more reason for wanting to get out of it now," said the doctor, impatiently.

Judith was silent. She looked at the blazing logs on the old-fashioned hearth, and tried to keep back the fast-rising tears.

Doctor Dedling rose and took up his hat.

"Then I am to consider that our engagement is quite at an end?" said the doctor.

"Yes," said Judith, in a low tone.

"I shall always wish you well," said the doctor, affably.

"I thank you!" said Judith.

"Good-by!" said Doctor Dedling.

"Good-by!" responded Judith.

The next moment she was alone with the blazing logs, and the cricket chirping on the hearth, and the strange, weird shadows that came and went on the wainscoted walls.

It was just a month to-night since they had buried old Miles Grey out of sight. Little Judith, who had worn herself out in taking care of him, had dropped a few sincere tears on the cheap coffin that incased his remains, but no one else had seemed particularly to grieve.

Mrs. Pytchley, her eldest sister, who was married to a New York grocer, had boldly declared that it was high time the old man took himself off the stage of this world, and had made no secret of her disappointment when it was discovered that a thousand dollars in gold pieces represented all his hoarded wealth, with the exception of the cranberry swamp, upon whose dreary verge stood the house; and this dreary property, by the terms of the will, was to be divided between his two nieces, Judith Grey and Maria Pytchley, as they themselves might agree.

"I'll take the ready money," said Mrs. Pytchley, hastily. "What could I do with three or four miles of cranberry-swamp?"

"Or what could Judith do with it, either?" said Hobart Pytchley, who sat whittling a pine stick beside the fire.

"I dare say she could manage very nicely," said Maria. "I've heard Uncle Miles say that he sold \$60 worth of cranberries one year out of the swamp."

"Humph!" grunted Mr. Pytchley.

"And that's legal interest on a thousand dollars, you know," added his wife. "What do you say, Judith?"

"It makes no difference to me," said Judith quietly.

"It does to me, then!" said Mrs. Pytchley. "Because, as you know very well, Hobart's business is in the city, and we could do nothing at all with a lot of swampy land down here in the backwoods."

So Mrs. Pytchley had taken the lion's share of the old man's bequest, and gone back to her city home, over Hobart's grocery store; and young Dr. Dedling, who had confidently calculated on at least \$500 to buy surgical instruments and fit up an office in the adjoining village—\$500 as the dowry of his bride-elect—broke his engagement in a fit of pique that Judith should have so deliberately flung her fortune away.

"A set of harpies!" cried he, with disgust.

"Stop, Doctor Dedling!" said Judith, coloring up. "You forget that you are speaking of my sister and her husband."

"But they had no business to impose on you thus!" exclaimed the doctor.

"I agreed to the plan, without remonstrance."

Doctor Dedling shrugged his shoulders.

"In that," said he, sharply, "you showed your lack of common sense! If you had no good regard for yourself, you might have had some for me!"

"Was it for money you wanted me?" demanded Judith, stung to the quick.

Doctor Dedling colored and hesitated.

"A man must take monetary matters into consideration," said he.

And so it came about that the engagement was canceled, and Judith Grey was sitting there, alone in the wintry twilight, with clasped hands and head drooped low upon her breast.

Doctor Dedling plodded home to the village, and as he passed the brilliant windows of the little hostelry, he paused, remembering the bitter cold of the winter air, the frosty influence of the breeze.

"I may as well go in and warm myself," he thought.

His host met him with a cheery air.

"Walk in, doctor—walk in!" said he.

"Not that room," as Dedling mechanically laid his hand upon the door-knob of the apartment he usually entered. "The railway committee is a-settin' there. This way, please!"

"The railway committee?" echoed Dedling. "What railway committee? You don't mean that they're actually taking any steps about that old idea of a railway between here and Glassville?"

"Yes, I do," said the landlord. "It's a committee of rich capitalists, as are building factories close to the Falls; and they mean to put up rows of tenement houses all along and lay down a line of rails, and—don't say as I mentioned it, doctor, because I only caught a snatch here and there, when I was carrying in the plates, and setting on the fruit, and nuts and wine—but it's to go right through old Miles Grey's cranberry-swamp, the new railway is! And the chairman of the committee is going to offer Miss Judith five thousand dollars in good, clean, hard money for her share in it!"

Doctor Dedling stared.

"Five—thousand—dollars!" repeated he, slowly.

Could it really be a fact? If so—and there seemed very little reason for doubting it—what a fatal mistake had he made in rejecting a bride who could bring the rich portion of a "cranberry-swamp" as her wedding-dower. If he had known this half an hour—one little half-hour—ago!

"Don't fret about him, Judith dear; he isn't worth it!" urged honest Marmaduke Redfield, who had stopped on his way to the post office to bring a message from his mother. "He was always a pretentious sort of a fellow, all for outward show, with a heart like a stone, and a nature as shallow as Deacon Doler's brook!"

Judith looked up at the clumsy, good-hearted, hard-handed farmer, and wondered that she had never before noticed what a true face, and what clear, frank eyes, he had.

"Forget him, Judith," pleaded Redfield; and she began seriously to think that she would at least make the trial. "Come over to our house, and stay with mother. It's too bleak and lonesome for you here—for the present, at least. Spring will be here time enough for you to come back to the cranberry-swamp."

Judith Grey looked around at the solitary room, and thought of Mrs. Redfield's big, cosy kitchen, with its bright-colored rag carpet, its windows lined with blooming geraniums, and its shrill-voiced canary bird hanging over the work-table.

"Do you think," she hesitated, "that your mother would be willing to be troubled with such a guest as me?"

Duke Redfield's face grew radiant.

"Only try her," said he. "Dear Judith, you'd be as welcome as flowers in May!"

And the next day Mrs. Redfield came over in the old farm carryall to claim her guest, and the Swamp House was left to its own dreary desolation and the driving snows of January.

Scarcely three weeks had elapsed, when young Dr. Dedling came to the Redfield farm in his new gig, with the old roan horse, that really made quite a good appearance when you didn't hurry him and the road was tolerably good, and he was free from a visitation commonly known as the "heaves."

"There ain't nobody sick here," said Julius, the hired man, who was splitting wood at the side of the house, as he eyed the doctor rather suspiciously.

"No; I know it," said Dr. Dedling; "but I've called to see Miss Grey."

"Miss Grey ain't no ways ailin' as I know of," persisted Julius, feeling the edge of his ax, and still staring hard at the medical representative of Glassville.

"I have called," said Dr. Dedling, with dignity, "as a friend."

"Oh," said Julius.

"Will you be so kind as to let me in?" persisted the doctor.

"Tain't no use," said Julius, rolling a prodigious pine-knot down from the pile, and preparing himself for a stupendous effort; "there ain't nobody to home."

"Nobody at home?" echoed the Doctor.

"They've all gone to church," explained Julius.

"To church, man? Why, it's Tuesday."

"Who said it wasn't?" retorted Julius.

"They ain't gone to hear service—they is gone to be married!"

"Who?" demanded Dr. Dedling.

"Our Marmaduke and Miss Judith!"

And down came the ax upon the end of the pine-knot, with a crash that made the man of medicine start back.

The new railroad was duly constructed, directly across the boggy depth of old Miles Grey's cranberry swamp, and the \$5,000 was placed to Mrs. Marmaduke Redfield's account in the nearest national bank; and Mrs. Pytchley thinks she has made a mistake in taking the gold eagles instead of the cranberry swamp—but young Dr. Dedling thinks his mistake was greater still.—Helen Forrest Graves.

BOYHOOD is candid, and middle age, though it may think the same thing, is reticent. "What part," asked a Sunday school teacher, "of the burial of Sir John Moore do you like the best?" He was thoughtful for a moment, and then replied, "Few and short were the prayers he said."



## Chaff.

AN IRISHMAN having bought a pair of boots that were too small for him, "Faith," said he, "I shall have to wear them three or four times before I get them on!"

"I AM afraid it is mixed goods," said the lady to the clerk. "Oh, no, madam, impossible," replied the polite gentleman. "All our camel-hair shawls are made of pure silk direct from the worm."

A FARMER writes: "I saw in a paper that a Western farmer planted flax with potatoes, and it kept the bugs off. I planted flax with potatoes, and the flax came up first, and the bugs roosted on it, waiting for the potatoes to come up."

"MARIA," said a pious husband to his wife, "them wicked Smiths are allowing their children to play in the yard on Sundays. To-morrow I'll set the dog on their chickens. The judgment of heaven must be visited on 'em in some way."

A YOUNG lady was taken to task for tight lacing, and she said that she resorted to the practice on purely economical grounds. "How is that?" asked her reprover. "Why," she replied, "I lace tightly simply to prevent waistfulness."

"PRISONER at the bar," said the judge, "is there anything you wish to say before sentence is passed upon you?" The prisoner looked wistfully toward the door, and remarked that he would like to say "Good evening," if it would be agreeable to the company.

"OH, MY love, my sweet, may heaven's angels whisper golden words as they kiss your peachy cheeks!" wrote a lover to his sweetheart only six months ago; and now he wishes the angels would whisper to him how his breach of promise suit is likely to end, and his lawyer frankly says he cannot tell.

LORD TRIGNMOUTH relates that his tutor, the Rev. Mr. Jerram, was one day preaching, when he was disturbed by snoring. He appealed more than once to the supposed sleeper, and at length peremptorily intimated that, unless the good man or woman to whom he attributed the interruption were awakened, he must discontinue his sermon. "Sir," exclaimed a man from a remote part of the church, "it's a howl!"

EVERYBODY CAN TEACH A FARMER.—The Professor sat down and thrust his hand through his hair. The President invited discussion. For some few minutes no one rose; presently, after a whispered conversation with his friend, an elderly farmer stood up from the forms at the very back of the room. He made no pretence to rounded periods, but spoke much better than might have been expected; he had a small piece of paper in his hand, on which he had made notes as the lecture proceeded. He said that the lecturer had made out a very good case. He had proved to demonstration in the most logical manner that farmers were fools. Well, no doubt, all the world agreed with him, for everybody thought he could teach the farmer. The chemist, the grocer, the baker, the banker, the wine merchant, the lawyer, the doctor, the clerk, the mechanic, the merchant, the editor, the printer, the stockbroker, the colliery owner, the ironmaster, the clergyman, and the Methodist preacher, the very cabmen and railway porters, policemen, and no doubt the crossing-sweepers, to use an expressive Americanism, all the whole "she-bang" could teach the ignorant jackass of a farmer. Some few years ago he went into a draper's shop to bring home a parcel for his wife, and happened to enter into conversation with the draper himself. The draper said he was just going to sell off the business and go into dairy farming, which was the most paying thing out. That was just when there came over from America a patent machine for milking cows. The draper's idea was to milk all his cows by one of these articles, and so dispense with labor. He saw no more of him for a long time, but had heard that morning that he went into a dairy farm, got rid of all his money, and was now tramping the country as a peddler with a pack at his back. Everybody thought he could teach the farmer till he tried farming himself, and then he found his mistake.—*Mark Lane Express.*

DOMESTIC HAPPINESS.—As the wife is the home-keeper, it is natural that her influence in making or destroying domestic happiness is greater than her husband's. By her management of small sums her husband's respectability and credit are erected or destroyed. No fortune can stand the constant leaking of extravagance and mismanagement; and more is spent in trifles than women would easily believe. Look well after the pennies, then. Then there are other matters equally important. An unfinished cruet stand, a missing key, a buttonless shirt, a soiled table cloth, a mustard pot with its old contents sticking about it, are really nothing; but can raise an angry word or cause discomfort. Depend upon it, there is a great deal of domestic happiness in a well dressed mutton-chop or a tidy breakfast-table. Men grow full of beauty, tired of music, are often too wearied for conversation, however intellectual, but they can always appreciate a well-swept hearth and smiling comfort. Domestic tasks may frequently become irksome; but, rather than run the risk of losing your husband's love, submit to them cheerfully.—*Advice to Wives.*

VICTOR HUGO thinks it is far better to be 50 years old than 40. "Fifty," he says, "is the youth of old age, while 40 is the old age of youth."

## Young Folks' Column.

## Our Puzzle Box.

## Cross-Word Enigma.

My first is in stand, but not in walk;  
My second is in knife, but not in fork;  
My third is in cloak, but not in dress;  
My fourth is in muster, but not in mess;  
My fifth is in light, but not in lamp;  
My sixth is in postage, but not in stamp;  
My seventh is in plant, but not in flower;  
My eighth is in apartment, but not in tower;  
My ninth is in round, but not in about;  
My tenth is in tarry, but not in doubt;  
My whole 'twould be hard to do without.

F. E. G.

## Concealed Couplet.

[Two words are concealed in each sentence, the whole forming a familiar quotation from Young.]

1. Even now be ye wise.
2. Notwithstanding thy faults, thou hast executed thy mission most speedily.
3. Andrew, thou art a foolish lad.
4. Thus at forty I look upon life.
5. The world is but a farce.
6. Oh, fool! what ignorance indeed encompasses us!

CLAUDE REVERE.

## Riddle.

What is twice in Amsterdam,  
In Rome but once appears.  
'Tis twice in every moment,  
Not once in twenty years.

G. W. B.

## Curtailments.

1. Curtail a weight and leave a preposition.
2. Curtail intended and leave low and vile.
3. Curtail an internal organ of the body and leave to exist.
4. Curtail a girl's name and leave a cloth measure.
5. Curtail confined and leave an instrument for writing.
6. Curtail an impression and leave to injure.

DORA.

## The Philosopher's Quiz.

Taking his grandson upon his knee, the reverend philosopher said: "My son, I this day passed a noble orchard, and in it were many great and thrifty trees. But one apple tree drew my especial attention from the manner of fruit upon it, which was neither apples, pears, peaches nor oranges. Canst thou, my son, name the fruit?"

MELANCHTON.

## Answers to Last Puzzles.

NUMERICAL ENIGMA.—E pluribus unum.  
LETTER CHANGES.—1. Hush, hush; 2. Hyson, hysop; 3. Idiom, idiot; 4. Pink, pine; 5. Jaw, jay; 6. Jog, jot.  
LETTER ARITHMETIC.—Dracontium.  
PORTAL JUMBLE.—

The purple twilight, stepping down,  
Is closing out the weary day,  
Which came in gold and crimson gown  
But steals away in somber gray.

Beautiful twilight! mystical twilight!  
Holds her short but subtle sway;  
Beautiful twilight! mystical twilight!  
Holiest part of all the day.

HIDDEN POETS.—1. Præd; 2. Shelley; 3. Akenside; 4. Shenstone; 5. Waller; 6. Hemans.

## Mine Vamily.

Dimbled cheeks mit eyes of plue  
Mou' like id vas moist mit dew,  
Und leedle teeth stuh peekin' droo—  
Dot's der baby.

Curly head, and full off glee,  
Drowers all out at der knee—  
He vas peen blayin' horse, you see—  
Dot's leedle Otto.

Von schmall young baby, full of fun,  
Von leedle pright-eyed, roguish son,  
Von frau to greet vhen work vas done—  
Dot's mine vamily.

## A Birthday Present.

It was Bessie's birthday, and the little girl was wide awake so early as 6 o'clock in the morning. She climbed out of bed, and knocked on the door next to the nursery. That was papa's and mamma's door, you know.

"Come in," said papa, and in another minute Bessie was hugged almost to death, and half smothered with loving kisses.

"I suppose," said papa, "that because it's your birthday, you think that you ought to have a present, don't you?"

"I would like one, pretty much," said Bessie, "for I've been a good girl for almost two days."

"I hope that you'd be good, present or no present," said papa.

"So I would," replied Bessie, "but I haven't had a single thing since my big doll tumbled into the water-pail and soaked her all to pieces."

"Well, I'll tell you," said mamma; "I know there's a present for you somewhere, but you must find it all alone."

"Is it in this room anywhere?" asked Bessie. "No, not in this room, and that's all I shall tell you," and mamma turned over in bed for another nap.

Bessie went back to the nursery, and after Jane had dressed her, started to look for her present.

First she went down stairs to the library. No, there couldn't be any present in that room, for there was nothing she hadn't seen before, a great many times. Then she went into the parlor, and then into the dining-room; but no present did she find.

"I don't believe there's anything at all, for I've been just everywhere!" and Bessie was just beginning to think that it was about time to cry, when she remembered the piazza.

"Perhaps it's out there," she said to herself, as she stood on tip-toe and unlocked the front door. The very minute she opened the door she saw her present. And what do you think it was? A lovely white nanny-goat, harnessed to a little red cart with a seat in it, and John, the man, all ready to lift her in, give her the reins, and lead the goat all around the yard! What do you think of that for a present? And let me tell you another thing: If you ever see a

nanny-goat drawing a little girl in a red cart, and if that little girl's name is Bessie, I'm sure as I can be that she will give you a ride if you only ask her.—*N. Y. Tribune, Jr.*

## GOOD HEALTH.

## Memory in Different People.

M. Delauney has made a communication to the *Societe de Biologie* respecting memory as studied under various biological conditions. The inferior races of mankind, such as Negroes, the Chinese, etc., have more memory than those of a higher type of civilization. Primitive races which are unacquainted with the art of writing had a wonderful memory, and were for ages in the habit of handing down from one generation to another hymns as voluminous as the Bible. Prompters and professors of declamation know that women have more memory than men. French women will learn a foreign language quicker than their husbands. Youths have more memory than adults. It is well developed in children, attains its maximum about the 14th or 15th year, and then decreases. Feeble individuals of a lymphatic temperament have more memory than the strong. Students who obtain the prize for memory and recitation chiefly belong to the former class. Parisian students have also less memory than those who come from the provinces. At the Ecole Normale and other schools, the pupils who have the best memory are not the most intelligent. The memory is more developed among the peasantry than among the citizens, and among the clergymen than among the laity. The memory remains intact in diseases of the left side of the brain, and is much affected in those of the right, from which it may be inferred that the right side is more the seat of this faculty than the left. From a physiological point of view, memory is diminished by over-feeding, by physical exercise, and by education, in this sense, that the illiterate have potentially more memory than those who know how to read and write. We remember, moreover, better in the morning than in the evening, in the summer than in the winter, and better in warm than in cold climates. Memory is, therefore, to a certain extent, in inverse proportion to nutrition, and more than that, it is in inverse proportion to evolution, since it is greatest in those individuals who are the least advanced from an evolutionary point of view—inferior races, women, children, the feeble, etc. In short, according to M. Delauney, there is an evolution of the memory, which is first sensorial, literal, and then intelligent; but memory, properly speaking, diminishes inversely as the evolution.—*Medical Press and Circular.*

INSECT STINGS.—The pain caused by the sting of a plant or insect is the result of a certain amount of acid poison injected into the blood. The first thing to be done is to press the tube of a small key from side to side, to facilitate the expulsion of the sting and its accompanying poison. The sting, if left in the wound, should be carefully extracted; otherwise it will greatly increase the local irritation. The poison of stings being acid, common sense points to the alkalies as the proper means of cure. Among the most easily procured remedies may be mentioned soft soap, liquor of ammonia (spirits of hartshorn), smelling salts, washing soda, quicklime made into a paste with water, the juice of an onion, tobacco juice, chewed tobacco, bruised dock leaves, tomato juice, wood ashes, tobacco ashes, and carbonate of soda. If the sting be severe, rest and coolness should be added to the other remedies, more especially in the case of nervous subjects. Nothing is so apt to make the poison active as heat, and nothing favors its activity less than cold. Let the body be kept cool and at rest, and the activity of the poison will be reduced to a minimum. Any active exertion whereby the circulation is quickened will increase both pain and swelling. If the swelling be severe, the part may be rubbed with sweet oil or a drop or two of laudanum. Stings in the eye, ear, mouth or throat sometimes lead to serious consequences. In such cases medical advice should always be sought as soon as possible.

## THE EVILS OF SMOKING IN EARLY YOUTH.

It appears that the German government has seriously taken this matter in hand, as smoking is practised to a great excess by the youth of that country, so that it has been considered to have damaged their constitution, and incapacitated them for the defence of their country. In certain towns in Germany the police have had orders to forbid all lads under sixteen years of age to smoke in the streets, and to punish the offence by fine and imprisonment. Moreover, a Belgian physician has found, during a journey of observation and inquiry, made at the request of the Belgian government, that the too general and excessive use of tobacco is the main cause of color blindness, an affection which is occasioning increasing anxiety, both in Belgium and Germany, from its influence upon railway and other accidents, and also upon military inefficiency.

CURE FOR BURNS.—An iron-foundry man recommends powdered pinewood charcoal as "a never-failing, speedy remedy" for burns and scalds.

## DOMESTIC ECONOMY.

## Mountain-Top Letters.—No. 5.

[Written for the RURAL PRESS by JEWELL.]

Let me tell you how I succeeded in making good bread: First, I beg of you to remember that even old bread makers sometimes fail, and it is new business to me. Of course I knew bow and I could tell any novice the whole rigamarole from beginning to end—in fact knew the process of various sorts: Milk raising, salt raising, potato yeast, and sour dough bread—besides others; but why I failed, or why I succeeded I could not explain to any one, nor to myself either.

One day a present of some flour came to us from the Merced Mills, away up on the Snelling river, and I rejoiced at the thought of having some real good graham flour for mush and gems, for it is difficult to get pure, good, fresh graham flour. The fine flour I thought would be no better than that got at our mills hereabouts, but lo! my first biscuits were bigger, handsomer and better than any of my other efforts. I thought it was my luck that time. My second attempt was even better. That night I mixed my dough as I had done (and failed) fifty times before, and in the morning it was up before me! Such cheerful, hearty rising too! I kneaded it into loaves and that came up wonderfully; in fact, by ten o'clock I had to make my fire and bake the loaves to keep them from outgrowing my pan.

My "gude mon" pronounced it first class, and praised my skill; but I know it was the flour, yet thought to wait and see how my "luck" held out.

It is a month now since those first trials, and good bread is the rule in our house. So I begin to think I did know how to make good bread, but it was the fault of the flour. While I am in the kitchen, let me ask if any of your readers, dear RURAL, have tried

## Frying-Summer Squash?

I take drippings, and when bot slice the squash thin and put in salt, and cover tight, sometimes adding a little water if in a hurry. Stir often and cook till tender. It is very nice. Deer Ridge Farm.

TO PICKLE EGGS.—Sixteen eggs, one quart of vinegar, half an ounce black pepper, half ounce Jamaica pepper, half ounce ginger. Boil the eggs for 42 minutes, then dip them into cold water and take off the shell. Put the vinegar, with the pepper and ginger, into a stewpan, and let it simmer for ten minutes. Now place the eggs in a jar, pour over them the vinegar, etc., boiling hot, and when cold tie down with a bladder to exclude the air. This pickle will be ready for use in a month.

HYGIENIC CUSTARD PIE.—Two tablespoonfuls of graham flour, one of corn starch, stirred smoothly into one-half pint of milk. Add three well-beaten eggs, another half-pint of milk, one tablespoonful of sugar and a little lemon juice. Stir all together and pour into a well-buttered plate or pie-tin, and bake in a quick oven. The flour will settle to the bottom and form a fine crust, without shortening.

TOMATO SYRUP.—Express the juices of tomatoes, add one pound of sugar to each quart of juice and bottle. In a few weeks it will have the appearance and flavor of pure wine. Mixed with water, it is a delightful drink for the sick, as it retains all the well-known properties of the fruit. It will keep for years.

TO MAKE POPCORN BALLS.—Make taffy of sugar or molasses, a pint of either to a gallon of popped corn. Make the taffy in a vessel large enough to stir the corn in it while hot, then let it cool, and make a ball of desired shape with the hand; butter the hands a little to keep from sticking.

TOMATO SAUCE.—Take full-grown tomatoes while yet green, cut out the stems and stew until tender; press through a sieve; season highly with pepper, salt, ground cloves, allspice and nutmeg; boil the pulp until thick. Worcestershire sauce may be added if liked. Nice with cold meats.

ICED FRUITS.—Nothing is easier to prepare than iced fruits, and there are few prettier dessert dishes. Dip nice bunches of any kind of fruit in gum Arabic or white of egg, sift powdered sugar over them and let them dry, being careful not to allow one bunch to lie upon another.

JOHNNY CAKE.—One quart buttermilk, one teacupful flour, two-thirds teacupful molasses, a little salt, one teaspoonful saleratus, one egg beaten; leave it so thin that it will almost run; bake in a tin. If it is not light it will be because it is made too thick.

CUCUMBER SALAD.—Peel and slice cucumbers, mix them with salt, and let them stand half an hour; mix two tablespoonfuls salad oil and the same quantity of vinegar, a teaspoonful of sugar and one of pepper for the dressing.





DEWEY &amp; CO., Publishers.

A. T. DEWEY. W. B. EWER.  
Office, 202 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.	1 week.	1 month.	3 mos.	12 mos.
Per line.....	.25	.80	\$2.00	\$5.00
Half inch (1 square).....	\$1.00	\$3.00	7.50	24.00
One inch.....	2.00	6.00	14.00	40.00

Our latest forms go to press Wednesday evening.

Quack Advertising positively declined.

The Scientific Press Patent Agency.  
DEWEY & CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. G. H. STRONG.

SAN FRANCISCO:

Saturday, October 25, 1879.

## TABLE OF CONTENTS.

**EDITORIALS.**—Crazing and "Bull-Whacking" Salt and Rust; A Red-Fleshed Apple, 257. The Week; The Era of Prosperity; The Pacific Coast and the Agricultural Department; Sunshine and Beet Sugar, 264. California Raisins; A Visitor from Alaska; Horticultural Society Meeting; Ehrenberg, Arizona; Sub-Earth Storage of Grain; Good News from the Hoosier State; The Mining Debris Question; North Carolina Agriculture, 265.

**ILLUSTRATIONS.**—Scene on a Nebraska Cattle Ranch; "Bull-Whacking" Across the Great Plains, 257. View of Ehrenberg, Arizona—Indians at Play, 265.

**QUERIES AND REPLIES.**—French Beans; Who can Beat this "Swaar"? Another Corn Pest, 264.

**CORRESPONDENCE.**—Notes from Tuolumne, 258.

**POULTRY YARD.**—The Demand for Fine Poultry; Requirements for Egg Production, 258.

**THE FIELD.**—Sugar Possibility in San Joaquin Valley; Sorghum Syrup, 258.

**SHEEP AND WOOL.**—Price Contest for Sheep Dogs, 258.

**THE STOCK YARD.**—Gabilan Ranch Short Horns, 259.

**HORTICULTURE.**—The Rambo Apple; Vegetable Growing in Moss Balls; Water as a Protection Against Frost; Weeds; Orange Growing in Florida, 259.

**THE DAIRY.**—Trials of Forage Plants; Outlook for Cheese; Time of Calving and Yield of Milk, 259.

**PATRONS OF HUSBANDRY.**—Echoes of the State Grange Meeting; Ho! From the State Grange; The Open Meeting, 260-261.

**AGRICULTURAL NOTES** from the various counties of California, 261.

**HOME CIRCLE.**—There's Nothing Hard, but Thinking Makes it So (poetry); Some Folks; Where Are Our Contributors? Literature in the Home; Women at the Polls; The Cranberry Swamp, 262. Chaff; Everybody Can Teach a Farmer; Domestic Happiness, 263.

**YOUNG FOLKS' COLUMN.**—Our Puzzle Box; Mine Family (poetry); A Birthday Present, 263.

**GOOD HEALTH.**—Memory in Different People; Insect Sting; The Evils of Smoking in Early Youth, 263.

**DOMESTIC ECONOMY.**—Mountain-Top Letters; To Pickle Eggs; Hygienic Custard Pie; Tomato Syrup; To Make Popcorn Balls; Tomato Sauce; Seed Fruits; Johnny Cake; Cucumber Salad, 263.

**NEWS IN BRIEF** on page 263 and other pages.

**MISCELLANEOUS.**—San Joaquin Valley Fair Preliminaries, 263.

## Business Announcements.

Agricultural Implements, Baker & Hamilton, S. F. Hill's Improved Granger Ganz, Sweepstake Plow Co. Wakelee's Patent Squirrel and Gopher Exterminator. Tobacco for Sheep Wash Purposes, E. T. Anthony & Co. Free Gift, Dr. N. B. Wolfe, Cincinnati, O.

## The Week.

The State is hard at work. All save our southern county friends have bid adieu to fair going and visiting, and are busily engaged in preparation for the closing in of winter. The rainfall in the northern counties has been ample to start the grass, and it is already bite high in some of the pastures. Around the bay the visitation was too slight, except where the water ran to corners, and a few days warm north wind has brought back the dust again. The stability of late advances in produce prices, and in some cases a still farther advance, has brought out many expressions of satisfaction from our readers, and the State may be said to be looking up finely. There are now full expectations of a winter full of rain, and these will be cherished, unless the clouds too long forget their coming.

The days are still drawing in at both ends, and the season of long evenings is at hand. These have always been heralded as opportunities for sowing intellectual crops, which will ripen at length into insatiable treasures. Let not these opportunities pass unimproved. Give the experience of the season a careful review, and note what new ideas and practices a summer in the garden, field or orchard, dairy, stock or poultry yard, has suggested or approved. And then, as the notes arrange themselves, transmit them for record to the PRESS. We have given our contributors a rest from appeals during the busy season, now we claim again the privilege of extending an inviting hand over your writing tables. Let us have a bright and general discussion of home and farm policies and methods during the coming months, so that all may advance together to the duties of another year.

## The Era of Prosperity.

This is so glad a theme that we cannot keep our pencil out of it. It is so delightful an occupation to anticipate good things that it is little wonder that Californians, who are reputed to be most agile in scaling the heights of hope and most ready to drop into the depths of despair, should take quick courage from the revival at the East and should regale themselves with the rosiest visions. Thus as we read our advices this week from all parts of the State, we discern a sentiment expressed in them all which leads the reader to forget himself in rapt contemplation of the activity and general good cheer which pervades the State. Of course the greater part of this improved feeling comes from anticipation. There has been solid good done by the increased money, which the rise in wheat, wool, dairy products, wine, hops, etc., has brought into producers' hands. For example, in one township, there is said to have been gained \$200,000 more for the two articles, wool and hops, than was expected. Another county reports far less money being borrowed on warehouse receipts for grain than last year; the inference being that the farmers in the county have more ready money. Still another county bids fair to improve upon her early prosperity, because her agriculture is being stimulated to furnish produce to mining-town markets which lie within reach. These are tangible results already attained, and there are many others like unto them. But the greater part of our improved feeling is the result of brightened hope and awakened ambition. It is this which inspires promises of unusual areas to be cropped next harvest. It is this which is now making local blacksmith shops ring all day and evening with repairs upon implements. It is this which will inspire generous purchases of new implements, and it is this which is giving new pertinence to efforts to introduce the culture of promising crops. The fact is that our producers are awake and taking new heart in their work. And as hope arises, visions expand. One sees whole valleys full of vineyards and another carries them well up the mountain sides. Still another sees a band of sheep in every vacant corner, or every acre of the plain rendering a good profit in grain. Each one according to his individual thought expands his vision until it passes beyond his horizon and he is full of hope and confidence and effort is easy.

The question then arises, to what extent is this new feeling a benefit, and what bounds should be set to its indulgence? In a general way, a feeling of confidence is one of the most fortunate states of mind, for it gives nerve to effort and strength to enterprise. So long as it operates in this way it is a rich possession to him who cherishes it. So long as a man masters his enthusiasm and guides it by sound judgment it will carry him into new avenues of success; but if enthusiasm masters the man, leads him into wild systems and methods, and forces him to take risks beyond those really warranted by his powers and resources, the end will be failure and disappointment. The tendency is to "lose head" in times of revival, and when a man's heart beats down his brain he will sooner or later suffer from this concussion.

It will be well in the present effluence of affairs to adopt the motto "unake baste slowly." Let the first fruits of the new regime be devoted to sweeping away old obligations rather than use them as a warrant to assume new and greater ones. It is easy in flush times and when every one expects well of an enterprise to secure more funds and to spread a wider net in the hope of a catch which shall at once lift the toiler into a fortune. While this is a fortunate stroke in some cases and when all conditions are favorable, it is generally dangerous. It would be a safer plan to uproot mortgages and close up deferred payments, even though the acres be fewer and the enterprise more modest than it might be if inflated by the speculative acts which are possible in easy times.

It is generally safer to improve than to expand. The man who seizes the present opportunity to double the size of his farm (if it be already large enough) will in the end be less fortunate than he who devotes his new strength and confidence to the improvement of culture, and facilities therefor, upon his present holding. He can thus increase and improve his products, and often gain more money, with less risk, than he could by diffusing his efforts over wider areas. Then, too, he will be in position to improve his home and give his wife and children new facilities for comfort and culture. There is no one more independent in the world than the farmer who holds his place free from encumbrance and finds a good market for his products. Then, nearly his whole surplus is free for his choice in use, and everything from facts to field signifies his prosperity. Such men are free to exercise an independent influence for the right in public affairs, because no one's lash hangs over them. Such men are the country's hope, and we trust the new era of prosperity, if such indeed is now at hand, will give us a million of them.

It is to be hoped that the days of good things will be potent to banish the disappointment of many in different parts of our State. They have suffered severely in many cases, for the too rosy view they entertained, and have learned again, what they should never have forgotten,

that in all new countries there must be a margin marked out between hope and realization. We trust that many who have been creeping along beneath heavy burdens, may soon cast them off that they may be in position to work like men for their own comforts and for the development of the regions into which they have come. As we have said, experience for the past few years must have taught us all that cool and calculating energy is the force to win, although it may be lighted up by trust and confidence. Let no one think that any era of prosperity will bring blessings to any save those who honestly work for it. It will be joyful enough if effort is adequately recompensed. This is the promise which is now outheld to American producers.

## The Pacific Coast and the Agricultural Department.

At the "open meeting" of the State Grange, of which we give a report in another column, allusion is made to the interests of Pacific Coast agriculture as not properly represented in the Department of Agriculture at Washington. Several speakers presented forcibly several facts, which are recognized by many as very pertinent. And when objection is made to the lack of intelligent efforts for this coast at Washington, it does not necessarily reflect upon the general fitness of the gentlemen in charge there for the general work they have in hand. Some of our Eastern exchanges can see nothing good in the department as at present conducted, but that is a question into which we do not propose to enter. It has no part in the issue now being made relative to our coast interests. It would not be possible for any man, whose experience lies wholly in the East, to dispense fostering care over our agriculture. The conditions, the materials, the problems to be mastered, are all so different, that it is not in the nature of human ability to grasp or understand them without a residence here and a local study of all matters involved. It would be far easier to select a commissioner from this coast who is skilled in Eastern and Western needs, for we doubt not a number could be found who have intimate agricultural experience both East and West, and could conduct the department with better reference to the wants of both sides of the continent. It would not be so easy to find a proper Eastern man with this combination of experience. Whenever, in the remote future, this present commissioner shall have accomplished his measure of usefulness, it may be thought well by the appointing power to select a man from this coast for the place. It would certainly be an experiment which all would approve and a just recognition of the importance of our coast States and Territories to the general agricultural system of the country.

But a more present way of meeting the need would be the plan of appointing a good man as assistant commissioner for this coast, who could have his office in San Francisco and could make a special study of themes proper to be considered by the general department in order to make it useful to our agriculturists. At present the reports from this coast to the commissioner are so painfully meager that the generalization from them with reference to crop prospects and results are wholly untrustworthy. What can be learned from brief notes from two or three counties of the interests of the whole State at any time? So, too, the commissioner has to act wholly in the dark concerning the needs of the State and the progress made in the acclimatization of new plants. He should be fully informed, by local study, what directions the popular mind is taking, and what lines of production should be aided by the introduction of the best varieties from foreign regions whose cultures it is proposed to cultivate. It would be quite easy for a local branch bureau to open communication with all the agricultural counties of the coast, and interest competent observers to carry on the work. It could then be felt that this side of the mountains was to be properly recognized, and some adequate return could be made to the people for the share they pay in the maintenance of the department. We doubt not this proposition would meet the approval of our representatives in Congress, for they are fully aware of the fact that something must be done to localize the work of the department on this coast before it can be worth what it costs to our people.

**BEEF AT LONG RANGE.**—The London Farmer quotes a part of our recent comments on the possibility of sending Australian cattle to England via our overland route, and adds: "The chief thing to be remarked is, that whether such a traffic as the *Queenslander* correspondent proposes is or is not possible, the serio-comic shriek of the RURAL PRESS against foreign competition, when opposed to the interests of America, is significant." The idea of shrieking against foreign competition was farthest from our thought. We did not deem the subject worth a shriek. We should think we were explicit enough on what the Farmer calls the "chief thing" when we said: "It would cost more to get an Australian steer across the United States than he would be worth in England, not to mention the cost of getting to our coasts and away from them."

## Sunshine and Beet Sugar.

Our Los Angeles friends, by the aid of Mr. Gennert, seem to have invoked something more powerful than electric light to illuminate the possibility of the beet-sugar industry in their county. They propose to enlist the sun to drive off the great percentage of water, which is one of the most undesirable factors in sugar making, in that it necessitates much time and fuel to remove it. Well-dried beets are more easily handled, and drying beets has been practiced for sugar making even where artificial heat had to be employed. Mr. Gennert got such a high idea of southern California sunshine during his visit some weeks ago, that he thought he might hitch it to his sugar mill, or, in other words, beets might be easily desiccated and sun dried in southern California and then they would become easily transportable to a manufacturing center. Mr. Gennert lost no time in putting this idea to the test, and by the aid of newly-made acquaintances in Riverside, and we think at one point in Los Angeles county, beets were exposed to the sunshine, and in 48 hours were well freed from the great part of water which they contained, and at the same time were in better condition than they could be by artificial drying. When Mr. Gennert received the proof that his preconception was true, he lost no time to set things in motion to arrange for sugaring the dried beets, and we believe succeeded in doing so in this city. We did not see him for several days before he left for a second visit to Los Angeles, so we are not fully informed what his arrangements here are. It is to be inferred, however, that they are satisfactory, for he hastened south and so thoroughly converted Gen. Shields to the superiority of the new system that the General withdrew his somewhat lunar "syndicates" and lent his hand to let the sun into the business.

This is, as we understand it, a partial history of the movement which is now firing Los Angeles with a yellower glow than that of oranges or corn—even a gleam of possible gold from beet fields. Our Los Angeles exchanges are running over with beet juice, and farmers are urged to come forward and grow beets, for which, when dried, they are to receive \$18 per ton from the company which Mr. Gennert says will be ready with the cash if the requisite amount of beets are contracted for. The following are some of the conditions of the arrangement:

The general instructions given from time to time by the company have to be observed by the parties as to planting and cultivation. The company furnishes the seed at 20 cents per pound, for which the farmer gives his obligation to pay in beets when the crop is matured. The company furnishes the root cutters, seed-drill and cultivator—one complete set for every 600 acres—to be used by the farmers in rotation, under direction of the company. No beets planted on alkali land will be accepted. The beets must not contain more than 10% of moisture. The company will furnish every facility and advice in their power to the farmers from time to time. The company will accept the beets as fast as they can be shipped, and pay \$18 per ton, cash on delivery.

Such is the news about what we shall call the "Sunshine Beet Sugar Co.," and its operations. We trust all the brightest anticipations concerning it will be fully realized.

## QUERIES AND REPLIES.

## French Beans.

**EDITORS PRESS.**—Will you please tell us, through the RURAL, what names French beans go by in the catalogue? Are they pole or bush beans?—MAY E. TREPETHEN, Westminster, Los Angeles, Cal.

The term "French bean," as we understand the name, is applied to a large semi-transparent or light yellowish string bean, which was introduced in this State a few years ago by John Kelsey, of Berkeley. It is a pole bean. It has become very popular and high priced in Paris, and we believe is popular in some parts of the East. The early efforts to place this bean upon the San Francisco market were rather discouraging. The commission merchants could not sell them, and upon reporting this fact to the grower, they were instructed to give them away to anyone who would retail them. The retailers refused the gift for fear of losing the custom they had established for "green beans," and thus the enterprise which anticipated profit from first placing this foreign delicacy upon our market, was altogether unsuccessful. We are assured that notwithstanding this queer reception, the beans were far superior to the old sort. We are not aware what the correct name of this bean is, or how it is catalogued. Perhaps some grower will tell us.

## Who Can Beat this "Swaar"?

**EDITORS PRESS.**—I send you a *Swaar* apple which our boys picked out as unusually large. I do not remember to have seen a larger one. Who can beat it?—W. W. BRIER, Centerville, Alameda Co.

This *Swaar* measures 13½ inches around the belt. Our oldest fruit merchants say it is the largest within their memory. Downing says he has seen it 12 inches in circumference. Let any one who can find a more plethoric specimen than Mr. Brier's report to us.

## Another Corn Pest.

The Los Angeles *Herald*, says that Downey farmers will commence husking corn next week. Owing to the ravages of small insects that settle upon the "shoot" and extract its juices, the crop will be short one-fifth, perhaps one-fourth. This ear matures, but it is small and light.



## California Raisins.

All evidence that has thus far come to our knowledge indicates that California will take a good step in advance in her raisin industry this year. We have seen many samples, and must boast that they all exhibited both quality in the fruit and style in the preparation for market, which makes their future sure.

There first came to our sight since our last issue, a few boxes of Muscatel, Gordo Blanco and seedless Sultana raisins, which Mr. Blowers was showing to his city friends as a foresight of what his crop would be this year. It can but be said that these samples are fresh evidence of all that we have heretofore said about the character of Mr. Blowers' fruit. The Muscatels are fairly immense, rich, with true fruity flavor and covered with a beautiful bloom. The Sultanas also were splendid of their class. Mr. Blowers' neat style of packing is too well known to need comment. He will have from 40 to 45 tons of raisins this year. Mr. Blowers informs us that the railroad companies, for the sake of fostering this branch of production in this State, have placed freights at \$300 per car to New York, while other dried fruits are charged \$400 per car. This will aid materially in placing our raisins in favorable competition with the fruit from Spain.

We also saw a very gratifying exhibit of California raisins at the office of W. S. Chapman, in this city. The raisin makers at the Central California colony, in Fresno county, had sent up sample boxes of their individual products, and the show has convinced us that the adaptability of the industry to an indefinite number of individual efforts is much greater than we thought, for we saw the boxes of four or five growers possessing the highest excellence. We doubt if anyone could have distinguished the three makes of Muscatels, if the labels had been removed. This is a most important phase of the industry, for nothing is so powerful to create a demand for the fruit of a certain locality than to make it uniformly good, so that both dealers and customers can count upon it always. The makers of Muscatel layers, whose raisins we examined, were T. C. White, Raisina vineyard; Miss M. F. Austin, Hedgerow vineyard; and D. D. Hudson, Diamond vineyard. These were packed in uniform wrappers of tasteful design and embellished with handsome lithographic cards, being alike in all, save in the monograms and full names of makers being different in each. This fruit is indisputable evidence of the adaptation of Fresno county to this line of production, and the colony system seems to foster its excellence by bringing together a number of earnest people all working toward similar ends. Other than the Muscatels, we saw a box of Muscats made by E. A. Rowe, which were rather smaller than the Muscatels.

The Riverside raisin makers are at work and turning out fine raisins, according to local reports. The Riverside Press says that "Mr. Booth, an Eastern fruit dealer, was down here last week in company with Mr. Roburts, of Old San Bernardino. He examined the raisins being made by Dr. Combs, on Shugart & Waite's place. He says, without qualification, they are the finest raisins he ever saw. He says they are fully equal to the London layers, or Dehesias, of Spain. Mr. Booth was formerly engaged in the carrying trade, bringing fruit from the Mediterranean, and his opinion is entitled to weight."

The way seems open for successful trade in California raisins at the East this year. They will enjoy their share of the brilliant revival over which all Eastern people are jubilating. They will also enjoy the advantage of a restricted production in Spain, as the season in that country has not on the whole been favorable. A leading Malaga circular of September 20th, says: "Our market has since acquired extreme stringency, owing to a thunder storm, accompanied with heavy rains, which on the morning of the 18th instant swept over Malaga and the surrounding vine districts. This incident created such anxiety for the final issue of the crop that transactions became paralyzed, and holders refused to sell, whereas buyers retired from the market, both awaiting in suspense the outcome of the present unequal weather, which places the result of the crop in great jeopardy, considering that a continuance of the same would entail considerable havoc in many late producing districts by rotting the grapes which are still on the vines. On the other hand, a respite of several sunny days would still enable curing operations to be realized with the requisite efficiency; and, happily, the weather, for the last two days lends support to the hope that such may yet be the case."

The latest report from the Eastern markets is the following, telegraphed from New York, Oct. 18th: "Foreign fruits are generally fairly active. Raisins of all descriptions are in good demand and very firm; \$2.05@2.15 for layers; \$1.25@2.40 for London layers; Valencias, 8c."

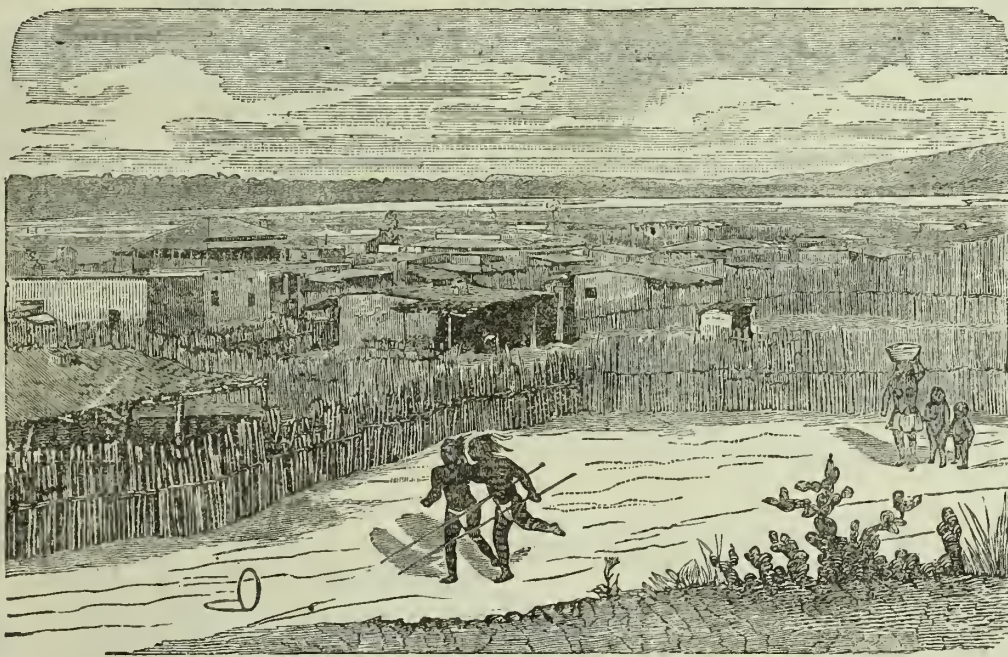
ATTENTION is called to an important advance in refined sugar and syrup. Local refiners are keeping up with the advance in the New York market. They now have the field well in hand.

## A Visitor from Alaska.

We had the pleasure of a call from E. Conklin, of New York, the representative of the American Press Association, who has just returned from a trip to Alaska. Mr. Conklin describes the scenery along the route as of surpassing beauty. The steamer is kept in a channel near the main land, and the voyage seems more like that along a beautiful river, narrowing in sometimes between high and woody cliffs, and then widening out into the semblance of a beautiful placid lake, fringed with timber and green-clad hills. Mr. Conklin says that there exist many errors about Alaska, both as to climate and resources. For instance, the Bay of Sitka is generally represented in pictures with natives spearing walrus, and a background of tremendous icebergs; a fancy picture for the reason that icebergs and walrus are unknown there. Root crops are grown to perfection. Potatoes were shown him weighing three-quarters of a pound each and 30 in a hill.

The thermometer last winter did not get below +11°, which is much warmer than New York. The Kuro Siwa, or warm Japan current which flows through Behring's straits into the Arctic ocean, exerts an astonishing influence upon the climate, the isothermal line of which would probably be about the latitude of Philadelphia.

Thirty miles from Fort Wrangel up the Stikine river, exists the only living glacier in America. It is fully 60 by 20 miles, and its progress may be watched from day to day. The whole country is immense and its climate varied. The climate of the frigid zone may be found away to the northeast, while that along the coast is moderately temperate, the interior varying as the influence of the sea diminishes. The



VIEW OF EHRENBURG, ARIZONA.—INDIANS AT PLAY.

mines are about 2½ miles from Sitka and are regarded as true fissure veins, the ore is, however, low grade. The mining is generally by means of tunnels run into the sides of the mountains. Probably 500 miners are engaged in mining, which can easily be carried on for five months of the year. Sitka is a general rendezvous for the population, which is of a floating character, prospecting in the summer and returning to the town in the winter.

A regular trade is springing up between the Pacific coast and Alaska, and its resources are gradually assuming great commercial importance. Mr. Conklin, in a new work entitled "Picturesque Northwest," to come out in May, will fully describe this region and introduce some valuable engravings of scenery, etc.

HORTICULTURAL SOCIETY MEETING.—We trust that those interested in the formation of a State horticultural society, will not forget the meeting at the Academy of Sciences building, on Saturday of this week at 1 P. M. At that time the committee will present a draft of constitution and by-laws for the consideration of those intending to organize, and it is to be hoped that these articles of association will be so simple and pertinent that but little discussion will be necessary. Upon the adoption of the constitution, the election of officers under it will claim attention, and we hope that the attendance will be so large that the choice for officers will fall upon representative men, both in their earnest enlistment in horticulture and in their residence in the different important regions of our State. To this end it is desirable that all who can will be present at the meeting on Saturday, and by their presence and counsels advance the society into a position of influence and usefulness. The place of the meeting is the Academy of Sciences building, corner California and Dupont streets.

GENERAL MERRITT has been ordered from Washington to suspend operations against the Utes, pending negotiations for peace.

## Ehrenberg, Arizona.

We offer our readers on this page a cut of the town of Ehrenberg, Arizona, taken from the Continent Stereoscopic Company's work, "Picturesque Arizona." The view looks up the Colorado river, on the left, the California side, covered with a dense cluster of willows, grease-wood and small timber. At the time the drawing was made the town of Ehrenberg was a unique settlement, composed mainly of Mexican or Indian huts, but has undoubtedly improved its appearance since 1877. The soil is very fertile, and must attract the attention of those interested in the development of the country through its agricultural features. It is difficult to conceive a correct idea of Arizona as a whole, so vast its extent, so varied its resources, and so wonderful its features, that the mind naturally selects some single attractive feature to the exclusion of all the rest. The contrasts of the Territory are immensely striking, and heget a beauty, the interest in which grows constantly.

For general and prolific productiveness the more southerly portions of Arizona probably excel; the wonderful must be accredited to the northern part, while along that peculiar river, the Colorado, the charm of mystery hangs like a cloud, which Indian traditions have generated, and it seems a pity to dispel it by the light of modern development.

SUB-EARTH STORAGE OF GRAIN.—Perhaps some of our readers, who are troubled to store their grain so as to escape the weevil, which is a great scourge in this State, would like to experiment with a method which is now being in-

troduced in France. The principle of sub-earth storage is an old one, for it is said that the Arabs have long saved their grain by storing it in tightly-closed furrows in the soil. The French are taking a hint from this method by employing oblong cases in iron, placed in the soil, but in a position to allow of the grain having a fall to run out. In these longitudinal cisterns there are two "manholes" to fill up and empty, respectively; the grain must be matured and dry before being stored, and it will keep for years, unaltered by evaporation or insects, if the external air be excluded. M. Velter, of the Central School of Arts and Manufactures, estimates at five per cent. the material loss resulting per year from grain as ordinarily stored. M. Bella extends the plan to fitting up ground floors and cellars of out-offices with rectangular and sheet iron reservoirs, and thus quadruple the capacity of granaries, while securing the grain from atmospheric and other injuries. It would be an expensive operation to fix up warehouses in this way, but perhaps some of our inventive geniuses may devise to secure the advantage of entombing grain more cheaply.

GOOD NEWS FROM THE HOOSIER STATE.—Hon J. C. New, formerly Treasurer of the United States is in this city, and has been interviewed by one of the reporters of the Call concerning the industrial outlook. He gives a charming picture of his own State in these words: In Indiana alone we have 35,000,000 of bushels of surplus wheat this year. The farmers are lifting the mortgages from their farms, and I might almost say that there will not be a farmer in the State on the 1st day of January next who will owe a cent. As a consequence, I think I am safe in saying that land has appreciated throughout the State an average of \$10 per acre within the last ninety days. This prosperity is not confined to Indiana, but extends throughout the Northern States, and I cannot see why we are not on the verge of an era of welfare and prosperity, such as our country never saw before.

## The Mining Debris Question.

The discussion of the mining debris question at the open meeting of the State Grange, of which a report is printed on page 260 of this issue, was listened to with close attention by all present. Several speakers agreed that the question is one which must be met and solved by our Legislature and not by the Congress of the United States. It was apparent also from the addresses that no fixed remedy had been reached in the minds of any one speaking, but it was put forth earnestly as an evil requiring fuller study and one which can only be justly and permanently settled after more complete investigation than has yet been made. So far, so good.

But while the subject is remanded for investigation it should not be forgotten that the necessity for some remedy for growing evils is most urgent. The position now is that the continued practice of hydraulic mining is working more and more injury upon farming lands, is impending still greater danger over some of our most flourishing towns, and is still making our navigable rivers shorter and our hays shallower. Here is certainly a great array of evils for one branch of industry to inflict upon all other branches. It is a grievous disregard for the rights of other. Upon abstract principles of right the infringement should be stopped forthwith or else full equivalent for injury should be rendered, if the injured are willing to receive it. But in order that our twin industries of mining, and agriculture should both exist and prosper, it is still hoped that some way can be devised which will avert the evil and thus permit the now transgressing industry to proceed. How this can or shall be done is the point to which all students of the subject come and hesitate before proceeding.

It is indeed a difficult question to decide, for there are points in equity as well as engineering, which must be adjusted. The courts are at work on one branch of the subject and the State Engineer upon the other. Even outside counsel has been invoked, for Capt. Eads, famed for drawing the fangs from the mouth of the Mississippi, has been invited by the Governor to look over the ground and suggest remedies for the evil. These movements are all well enough, and none like them which promises relief should be overlooked. If the remedy does not come in one form it must in another, for it is plain that hydraulic mining cannot long be allowed to proceed if it works as great evils as in the past and present.

It certainly devolves upon the aggressing party to secure the remedy, and until it is reached they must be held responsible for their injuries. But all concerned are we believe willing that the State should undertake the solution of the matter, as it rightly should do, because the prosperity of all citizens is dependent upon the progress of our great industries. If there is opposition to a just settlement of the matter; if men endeavor to avoid their true responsibility, they must be brought to their duty in the premises by just as great pressure of fact, logic and organization as they invoke to avoid the issue. The question is a vital one, and it must be met squarely and answered justly and speedily.

NORTH CAROLINA AGRICULTURE.—We have often claimed that North Carolina fairly wins a leading place among the States for her support and encouragement of scientific and practical investigation in behalf of the agricultural interest. We find the publications of Colonel Polk, the Agricultural Commissioner, to possess qualities which can only be attained by untiring industry and full devotion to the work. His latest publication is a "Book of North Carolina," which is brimming full of interesting information about the State and its resources. North Carolina can also claim distinction as possessing one of the two agricultural experiment stations in this country. The recent report of the Director, Prof. Albert R. Ledoux, contains chemical and other information which bears directly upon many branches of agricultural practice. We trust this work may go forward.

AUSTRALIAN GRAPES IN ENGLAND.—We read that the grapes shipped from South Australia in casks reached London in good condition and sold in Covent Garden market at \$1 to \$1.50 per pound. If this primal success is followed up, it will be a movement worth studying by our grape shippers.

BEAUTIFUL and luscious we found the box of choice grapes received from Dr. J. Strentzel's Alhambra ranch, Martinez. Every one of its five varieties were very toothsome. Dr. Strentzel's fruit in the Oakland market is remarkable for its freshness and presentable appearance.

THE death at Orango, N. J., of Rev. Wm. R. Whiting Hall, Episcopal Bishop of Maryland, is announced.



OCTOBER IN THE SIERRA.—Upon the above subject the Truckee Republican says: The present winter begins with unusual severity, and in mid-autumn. For an entire week furious storms and whirling masses of snow have prevailed with only brief interruptions. Snow covers the summits to a depth of at least two feet. Extreme cold has accompanied this October storm. Icicles, frost and frozen roads betoken the strangeness of the freak which nature seems to be taking. The terrified owners of herds of cattle and flocks of sheep, who are accustomed to remain in the mountains till the last of October, are hurrying their stock over the summit with all the rapidity possible. Although they know each turn and angle of the well-beaten highway, yet the passing of the snow-covered Sierra is attended with the utmost difficulty and danger. A fierce hurricane, only last week, twisted hundreds of forest pines from their roots, and hurled them crashing to the earth. Caught in such a gale, the herds and flocks of the mountains would fare badly, and many of the animals would doubtless perish. Caught on the summits in a snow-storm, without hay or feed of any kind, the danger of destruction would be most imminent. Even at best, with such cold, piercing weather as we are having, the journey must be fraught with toil, exposure and dread.

TRAVELING STONES.—Many of our readers have doubtless heard of the famous traveling stones of Australia. Similar curiosities have recently been found in Nevada, which are described as almost perfectly round, the majority of them as large as a walnut, and of an iron nature. When distributed about upon the floor, table, or other level surface, within two or three feet of each other, they immediately begin traveling toward a common center, and there lie huddled up in a bunch like a lot of eggs in a nest. A single stone, removed to a distance of three and a half feet, upon being released, at once started off, with wonderful and somewhat comical celerity, to join its fellows; taken away four or five feet, it remained motionless. They are found in a region that is comparatively level, and is nothing but bare rock. Scattered over this barren region are little basins, from a few feet to a rod or two in diameter, and it is in the bottom of those that the rolling stones are found. They are from the size of a pea to five or six inches in diameter. The cause of these stones rolling together is doubtless to be found in the material of which they are composed, which appears to be loadstone or magnetic iron ore.—Virginia City Enterprise.

PACIFIC COAST PETROLEUM.—The San Jose Mercury informs us of the successful termination of oil prospecting. It says: After many discouragements and disappointments, sufficient to have caused most people to have abandoned the undertaking, the oil-borers in the Moody gulch, in this county, in the Santa Cruz mountains, have met with grand success. A large number of wells have been bored in this and San Mateo counties, but in none of them has petroleum been found in paying quantities, until on Friday last the Dull brothers, employed by the Santa Clara Petroleum Company, at a depth of 600 feet, while boring through a stratum in which they least expected to find oil, struck a vein which spouted petroleum to a height of over 100 feet above the top of the well. Being unprepared for such a surprise, it is estimated that more than 100 barrels of oil ran to waste. After a time the flow subsided, to be resumed at regular intervals ever since. All the available help in the vicinity of the well was immediately put to work, and the second flow was prepared for and all saved. The excitement in the oil region is intense. The petroleum is of a superior quality.

ANIMAL RUBBER.—An insect which produces a species of india rubber has been recently discovered in the district of Yucatan, Central America, by an American explorer. It is called Neen, and belongs to the Coccus family; feeds on the mango tree, and swarms in these regions. It is of considerable size, yellowish brown in color, and emits a peculiar oily odor. The body of the insect contains a large proportion of grease, which is highly prized by the natives for applying to the skin on account of its medicinal properties. When exposed to great heat the lighter oils of the grease volatilize, leaving a tough wax behind which resembles shellac, and may be used for making varnish or lacquer. When burnt this wax produces a thick semi-fluid mass, like a solution of india rubber, and it is expected that this glutinous liquid will be very valuable for cement and waterproofing.

A RACE WITH THUMBS ON THEIR FEET.—Mr. Tremlett, the British Consul, at Saigon, in his report this year, mentions as a remarkable peculiarity of the natives of the country that they have the great toe of each foot separated from the others, like the thumb of the hand, and it can be used in much the same manner, though not to the same extent. This distinctive mark of an Annamite is not, however, usually seen in the vicinity of Saigon, but is now confined to the inhabitants of the more northern section of the empire, where the race has remained more distinct. This peculiarity is the meaning of the native name for the Annamite race; and that the name and peculiarity are of great antiquity is shown by the mention in Chinese annals 2300 B. C. as that (or those) of one of the "four barbarian" tribes that then formed the boundaries of the Chinese Empire.

## Secure Patents and TRADEMARKS.



Through Dewey & Co.'s Scientific Press Patent Agency.

OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library containing official American and foreign reports, files of scientific and mechanical publications, etc. All worthy inventions patented through our Agency will have the benefit of an illustration or a description in the MINING AND SCIENTIFIC PRESS. We transact every branch of Patent business, and obtain Patents in all countries which grant protection to inventors. The large majority of U. S. and Foreign Patents issued to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most reliable advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free. DEWEY & CO., PATENT AGENTS.

A. T. DEWEY. W. B. EWER. GEO. H. STRONG.

## MISSION ROCK DOCK AND GRAIN WAREHOUSES.

SAN FRANCISCO, CAL.

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

GRAIN consigned to us by water insured in open policy at Special Rates. Wheat shipped by railroads via Stockton, care of the CALIFORNIA STEAM NAVIGATION CO. will be received by them at Stockton and delivered at Mission Rock Warehouse at same rate of freight as to Oakland Wharf. Freight paid, Fire Insurance and Loans effected and proceeds forwarded free of commission. Money advanced at bottom rates, interest payable at end of loan. Fire Insurance 1% per annum. Short Rates of Storage—First month, 30 cents per ton, or 40 cents per ton if delivered. Each month thereafter 20 cents per ton. Weighing in, free. Weighing out, 10 cents per ton.

CHAS. H. SINCLAIR, Superintendent.

Or to the California Dry Dock Co., Office, No. 318 California Street. San Francisco.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

### CATTLE.

PETER SAKS & SON, 520 Bush St. S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

### SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

### POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Dora, etc. Eggs for hatching. Send for price list.

### SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Poland-China Swine and Black Cochon Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

### BEEES.

JOS. D. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

# PIANOS

LARGEST MUSIC HOUSE

On the Pacific Coast.

WHOLESALE AND RETAIL.

Lowest Prices and Best Goods.

Write for Information concerning any Musical Instrument, and terms of sale. It will be given with pleasure.

ESTABLISHED IN 1850.

KOHLER & CHASE,

137 and 139 Post Street, San Francisco.

## Educational.

# HEALD'S BUSINESS COLLEGE,

24 Post Street, Near Kearny, San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

W. E. CHAMBERLAIN, JR.

THOS. A. ROBINSON

# PACIFIC Business College,

320 POST ST. SAN FRANCISCO.

SEND FOR CIRCULAR

## R. J. TRUMBULL & CO.,

SUCCESSORS TO

R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGS, GARDEN HARDWARE.

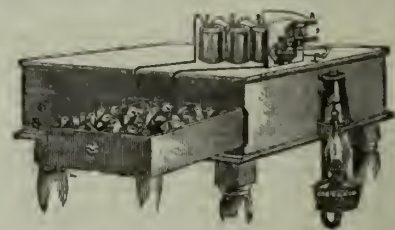
Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

\*"Guide to the Vegetable and Flower Garden," will be sent FREE TO ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL & CO.,

419 and 421 Sansome Street, S. F.

# MONEY in CHICKENS



If You Want to Make Money

By raising any number of Chickens at any season of the year without setting hens, procure an

## ECLIPSE INCUBATOR

(E. A. SAMUEL'S Patent)

In both public and private trials on this coast as elsewhere, the "ECLIPSE" has proved itself a perfect and successful Egg Hatcher. It may be examined and its merits proven to customers before they make purchases. Write for particulars and circulars to

G. G. WICKSON, 319 Market Street, S. F. Agent for the Pacific Coast.

## BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of Imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

18th and A Streets, Sacramento City, Cal.

## ALMOND HULLER.

Will Hull One Ton Per Day.

ONE OR TWO MEN CAN RUN IT.

Price, \$25. Address

A. O. RIX, Washington, Alameda Co., Cal.

## AMERICAN MACHINE AND MODEL WORKS.

Experimental and Fine Special Machinery, Planing, Gear Cutting, Patterns, Models for Inventors, etc. Printing Press and General Machine Repairing. Punches, Dies, Taps, Reamers, etc., made and repaired.

I. A. HEALD, Proprietor.

514 Commercial Street, above Sansome, San Francisco.

## MONEY TO LOAN

AT LOWEST RATES

On Country Real Estate and Grain in Warehouse.

McAFEE BROTHERS.

202 Sansome Street, San Francisco.

## Engraving

Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the MINING AND SCIENTIFIC PRESS, San Francisco, at favorable rates. Send stamp for our circular and samples.



## Lands for Sale and to Let.

## FARMS FOR SALE.

IN THE FERTILE AND HEALTHFUL

## San Pasqual Valley,

San Diego County, Cal.

## TITLES PERFECT.

The owner (an architect) having recovered his health by a residence of four years in this Valley, is desirous of returning to the city, and so offers the following farms for sale

## At a Great Sacrifice:

The Home Farm of 200 acres is well fenced and subdivided. There is beside 600 yards of movable panels,

## 50 Acres in Alfalfa,

Yielding five and six crops a year. There is an abundance of water on the place for stock, besides running water for garden, orchard, etc., and a one-sixth interest in the S. P. V. Ditch Co. House 28x36, enclosed in a lot 200x180, barn and stable, 54x35, two sheds 24x14 and 18x14, smoke-house, 20x14, with an adobe cellar under it, and every convenience as regards large tanks, etc., for making bacon. The implements are of the best, nearly all new, and in good order. They consist of two farm wagons, 10-foot header, header beds, hay rack, mower, gang plow, single do, harrow, 10-foot seeder and cultivator, small do, sulky rake, two sets of strong harness, together with a lot of other tools, bay, grain seed, etc.

Price for the whole, \$4,000; one-half cash, balance on time at 1 per cent.

## For Sale Also,

A farm under cultivation of 116 acres, adjoining the above, suitable for grain, corn or alfalfa, with a one-sixth interest in the Ditch Co., and about one and one-quarter miles of fencing, no other improvements. Price, \$1,200; one-third cash, balance on easy terms.

## For Sale Also,

A farm of 120 acres, one-quarter mile from the above ranches, mostly damp land, suitable for a nursery, alfalfa, corn, etc. There is a small house, etc., and a ditch running along its upper side. Price, \$900; one-third cash, balance on easy terms.

The neighborhood is exceedingly healthful and growing. Two schools are in the valley, one within one-quarter mile, and the postoffice within one mile, neighbors with families are all round.

My stock consists of superior brood mares, colts, hogs, etc., and they may be taken at a valuation if wanted.

For particulars apply to **W. B. STEWART,**  
San Pasqual Valley, San Diego Co., Cal.

## FOR SALE.

700 Acres. The Finest Stock and Grain Farm in Northern California.

Price, \$25,000, including Farming implements. The whole under fence.

The Stock upon this farm, all thoroughbred and graded, embracing some of the finest in the State, will be sold at private sale. Among the stock is some that has been awarded different premiums at State and County Fairs.

This is one of the finest opportunities for a man of means in the State. For full particulars apply to

**D. B. HAYS,**  
Real Estate Agent, Oroville, Cal.

**C. C. RODGERS,**  
CALIFORNIA LAND AGENCY,  
Office, 276 First St., San Jose, Cal.

GENERAL LAND, REAL ESTATE, U. S. PENSION AND BOUNTY AGENT.

Will buy and sell Land Warrants; Locate and Survey Public Government Land, Pre-emption Homesteads, Soldier's and Sailor's Homesteads, Timber and Wood Lands, Desert Lands, Etc.

## FARMING LAND

For Sale in large or small tracts, on easy terms, in the best parts of the State.

**McAFEE BROTHERS,**  
202 Sansome Street, San Francisco, Cal.

**ALMOND, RAISIN,**  
— AND —  
**Orange Land for Sale**

In lots to suit. On the line of Clear Lake Water Works Ditch. Address

**D. C. RUMSEY,**  
Head Capay Valley, Yolo county, Cal.

SEND FOR THE  
\$1.50

## Homœopathic Medicine Case.

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address **BOERICKE & TAFEL,**  
Homœopathic Pharmacy, San Francisco.

## California Inventors

Should consult **DEWEY & CO., AMERICAN AND FOREIGN PATENT SOLICITORS.** Established in 1860. Their long experience as journalists and large practice as patent attorneys enables them to offer Pacific Coast inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the **MINING AND SCIENTIFIC PRESS AND PACIFIC RURAL PRESS,** No. 202 Sansome St., San Francisco.

## PAINT YOUR ROOFS

— WITH —

## Averill Mixed Paint!



The Best, Most Durable and  
Beautiful of all Paints.

PREPARED READY FOR USE, AND OF ANY  
SHADE OR COLOR DESIRED.



**O. S. ORRICK, General Agent,**

No. 329 Market Street, opposite Front, - - San Francisco.

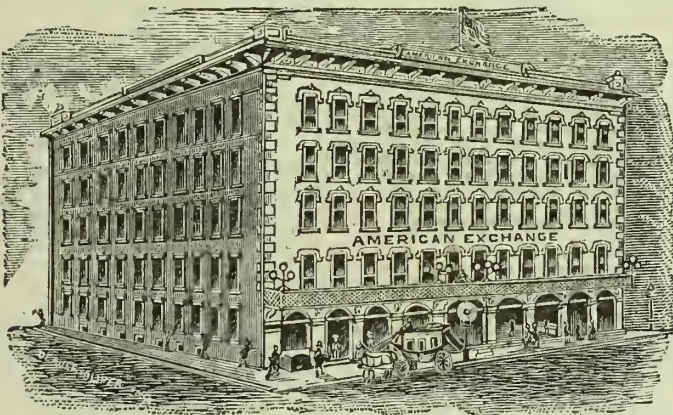
## The American Exchange Hotel,

SAN FRANCISCO, CAL.

Is situated on Sansome street, next adjoining Bank of California, and is in the very center of the great city.

Sansome Street is one of the finest and principal business streets in S. F.

The Hotel is situated within two blocks of the U. Land Office and U. S. Surveyor General's Office; also within



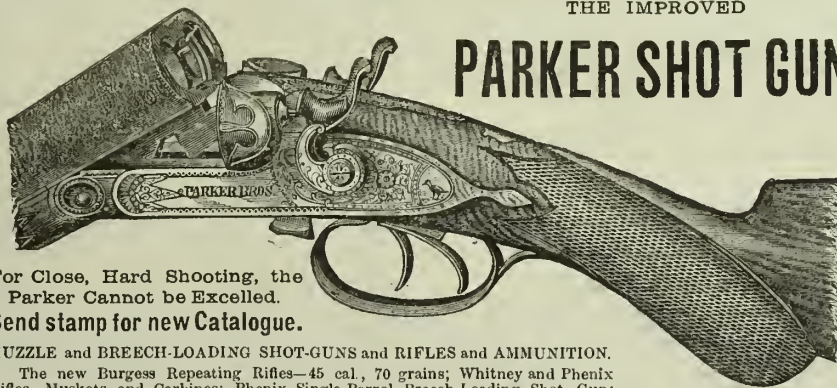
two blocks of the City Hall, Supreme Court and all the District Courts; within two blocks of the Postoffice and Custom House. All places of amusement are convenient to the Hotel. Street cars for all parts of the city pass the Hotel every minute.

## THE AMERICAN EXCHANGE HOTEL

Having been recently renovated and refurnished throughout is in every respect the BEST FAMILY HOTEL in San Francisco. It has Two Hundred Rooms, well ventilated and neatly furnished, and being easy of access, fire-proof and sunny is decidedly the Hotel for comfort and convenience for the traveling public.

## THE IMPROVED

## PARKER SHOT GUN.



For Close, Hard Shooting, the  
Parker Cannot be Excelled.  
Send stamp for new Catalogue.

MUZZLE and BREECH-LOADING SHOT-GUNS and RIFLES and AMMUNITION.

The new Burgess Repeating Rifles—45 cal., 70 grains; Whitney and Phenix Rifles, Muskets and Carbines; Phenix Single-Barrel Breech-Loading Shot Gun; Allen Rifles, 22, 32, 38 and 44 caliber, rim fire, very cheap; Lovell & Sons Revolvers, the best and the cheapest.

**E. T. ALLEN, Agent for Pacific Coast,**

NO. 515 MARKET STREET, - - - - - SAN FRANCISCO, CAL

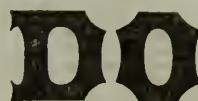
## THOROUGHbred POULTRY.

SAFE ARRIVAL UNLIMITED RANGE.  
— OF —  
FOWLS Healthy Stock  
— AND —  
EGGS 116 ACRES  
Guaranteed. Devoted to the Business.

**LANGSHANS.** I now breed this justly celebrated Fowl. Send 3c. stamp for price list and circular describing the different breeds I keep. Incubators.

**M. EYRE, Napa, Cal.**

Send Pamphlet on Breeding, Hatching, Diseases, etc., adapted especially to Pacific Coast, sent for 15c.



NOT FAIL to send for our NEW PRICE LIST. More complete than ever. Contains descriptions of every thing required for personal or family use, with over 1000 Illustrations. Send nine cents for it. (Stamps will do.) We sell all goods at wholesale prices in quantities to suit the purchaser. The only institution in America who make this their special business. Address, **MONTGOMERY WARD & CO.,**  
227 & 229 Wabash Ave., Chicago, Ill.

**Dewey & Co.** { 202 San- } Patent Ag'ts  
some St.

## Contents of Pamphlet on Public Lands of California, U. S. Land Laws, Map of California and Nevada, Etc.

Map of California and Nevada; The Public Lands; The Land Districts; Table of Rainfall in California; Counties and Their Products; Statistics of the State at Large.

Instructions of the U. S. Land Commissioners.—Different Classes of Public Lands; How Lands may be Acquired; Fees of Land Office at Location; Agricultural College Scrip; Pre-emptions; Extending the Homestead Privilege; But One Homestead Allowed; Proof of Actual Settlement Necessary; Adjoining Farm Homesteads; Lands for Soldiers and Sailors; Lands for Indians; Fees of Land Office and Commissioners; Laws to Promote Timber Culture; Concerning Appeals; Returns of the Register and Receiver; Concerning Mining Claims; Second Pre-emption Benefit.

Abstract from the U. S. Statutes.—The Law Concerning Pre-emption; Concerning Homesteads; Amendment Act Concerning Timber; Miscellaneous Provisions; Additional Surveys; Land for Pre-emption; List of California Post Offices. Price, post paid, 50 cts.

Published and sold by **DEWEY & CO., S. F.**

TRADE



MARK.

## LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price, \$2 per gallon. For directions and testimonials, apply to **FALKNER, BELL & CO.,**  
Sole Agents, 430 California Street, S. F.

## Seedsman.

## PRINCIPLE'S

## New Hybrid Wheats,

## CHAMPLAIN

— AND —

## DEFIANCE.

Heads 6 in. long—128 bushels to the acre.

These two varieties which have succeeded so wonderfully as SPRING WHEATS, have been shown by experiments to be equally valuable when sown in the Fall for WINTER WHEAT. A trial the past season has proved them the most productive varieties in cultivation.

Illustrated circulars showing different methods of cultivation by which this and other wonderful yields were produced, mailed to all applicants. Price of each variety, \$2.00 per peck, \$7.00 per bushel. Bags containing two bushels, \$13.00. Prices for larger quantities on application. Trial packages by mail, 1 lb 40 cts, 3 lbs \$1.00.

Mold's Ennobled Red and White Winter Wheats.

Two new English varieties introduced last season which we are confident will prove valuable acquisitions to this country. See circular. Price of each variety, \$2.50 per peck, \$8.00 per bushel. Trial packages by mail, 1 lb 50 cts, 3 lbs \$1.25. Address

**B. K. BLISS & SONS,**

P. O. Box 4129. 34 Barclay St., N. Y.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

**B. F. WELLINGTON,**

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.

## CUZCO CORN.

Fresh Seed Direct from Peru.

Price, \$1 per pound in 5-pound bags.

**JOHN GARDNER,**

Care Dewey & Co., 202 Sansome St.

**EXOTIC F. A. MILLER & CO., Mission St.,**  
**GARDENS.** opposite Woodward's Gardens. Send for Catalogue and Price List.

## Nurserymen.

1,000,000!

Strawberry, Raspberry, Blackberry and Cranberry Plants.

**STRAWBERRY PLANTS.**—The Essex Beauty, Crescent, Cinderella, Forest Rose, Glendale, Jugunda, Monarch of West, Langforth Proline, Triomphe d' Gand, Wilson Albany.

**RASPBERRY PLANTS.**—Cuthbert Early, Early Prolific, Reliance, Pride of the Hudson, Brandywine, Herstine, Philadelphia Red, Clark, Henrietta, Hornet, Belle de Fontenay, Delaware Bristol.

**BLACKBERRY PLANTS.**—Deering Seedling. Early and the most productive of all. I will give satisfactory proof that these Berries have realized \$750 per acre. It paid more than twice as much as the old varieties; also the Early Cluster, the Vina Seedling, Kittatiny, the Mammoth Cluster, Missouri Mammoth, Dorchester and Lawton.

**CRANBERRY PLANTS.**—The Cherry Cranberry Vines at \$10 per 1,000, by mail 64 cents more.

I will sell to responsible parties on time, part cash, 10-acre field of Cranberry vines under cultivation. Can be seen at the place. Send for Catalogue.

**H. NYLAND,**

Boulder Island, San Joaquin River.

## PEPPER'S NURSERIES.

(Established 1858.)

For sale at reduced prices, a general assortment of Fruit Trees and Small Fruits; also choice Ornamental Shrubs, Roses, etc. A limited supply of Cook's Seedling Apple, one and two years old. Catalogue and list of prices furnished on application. Address

**W. H. PEPPER,**  
Petaluma, Sonoma Co., Cal.

## STRAWBERRY PLANTS.

**E. P. ROE** offers one of the LARGEST and FINEST STOCK of Strawberry Plants ever grown in this country. Also Raspberry and Blackberry plants, currants and grapevines. Prices very reasonable. New Descriptive Catalogue free to all.

Address **E. P. ROE,**  
Cornwall-on-Hudson, N. Y.

## WANTED.

A partner to take part interest in a Nursery, or a young man, with a little capital, anxious to learn the business from an Agricultural graduate who has worked in a few of the largest Nurseries and most varied Fruit Orchards, etc., in this State. Address **NURSERMAN,**  
Care Dewey & Co., S. F.

## The New Beekeepers' Text Book.

By N. H. and H. A. KING. The latest work on the Apiculture, embodying accounts of all the newest methods and appliances. Fully illustrated. Sent by mail, post-paid, for \$1. **DEWEY & CO.,** 202 Sansome Street, S. F.

50 Perfumed, gilt-edged & chromo Cards, elegant case, name in gold, 10c. **ATLANTIC CARD CO.,** E. Wallingford, Ct.



# PATENTS AND INVENTIONS.

## List of U. S. Patents Issued to Pacific Coast Inventors.

[From Official Reports for the "Mining and Scientific Press," Dewey & Co., Publishers and U. S. and Foreign Patent Agents.]

FOR THE WEEK ENDING SEPTEMBER 23d, 1879.

219,012—AMALGAMATING PAN—Ezra Coleman, S. F.  
219,013—MULLER FOR AMALGAMATING PANS—Ezra Coleman, S. F.  
219,047—CARPENTER'S GAUGE—A. Heiran, San Leandro.  
219,055—BUNO—W. D. Scott, S. F.  
219,093—ANIMAL TRAP—W. J. Taber Wyoming Ter.  
219,837—PROPELLER FOR VESSELS—Geo. Vincent, Stockton, Cal.  
7,091—BREAD-RISING PREPARATIONS—Trademark—B. F. Barton, S. F.  
7,692—YEAST POWDER—Trademark—D. Callaghan, S. F.

FOR THE WEEK ENDING SEPT. 30TH, 1879.

220,076—WRNCH—Andrew Jackson, S. F.  
220,150—DRESSING MACHINE—S. W. Shaw, S. F.  
220,102—HAND WEEDING TOOL—H. White, Quincy, Cal.

## News in Brief.

THREE Afghan Chiefs are imprisoned at Cabul. FRENCH agriculturists are emigrating to Texas.

THE Marquis of Lorne will visit England about Christmas.

THE Chinese Spanish embassy left New York Thursday for Cuba.

RICHARD CLIFFORD, District Attorney of Trinity county, is dead.

THE Albanians are determined to resist the cession of Epirus to Greece.

STRENGTHSHIP *Periere* from Havre brought \$1,843,000 to New York on 21st.

KING ALFONSO's marriage will take place on the 27th or 28th of November.

THE recent floods in Spain were terribly destructive of life and property.

A DENSE smoke on the St. Lawrence river has entirely suspended navigation.

It is reported that the Russians have occupied Merv after several engagements.

INSURRECTIONARY movements are reported in Chihuahua and Durango, Mexico.

It is rumored in Constantinople that a crisis impends in the Turkish Ministry.

AN annexed Communist is a candidate for a seat in the Municipal Council at Lyons.

ON railways within 30 minutes of New York drinking water is being sold by the glass.

A DISTURBANCE recently occurred at Lebanon, Syria, in which several persons were killed.

A PACKAGE of papers thrown from the balloon Pathfinder has just been found at Lake, Ind.

SILVER in London, 52½; 11-16; 5% United States bonds, 105½; 4½, 105½; 4½, 109½.

AT Liverpool wheat in quoted at 11@12s for average California white, and 11s 10d@12s 6d for club.

THE severe snowstorm of Friday extended throughout Gallicia, Russia and the Alpine regions.

THE region around Milledgeville, Ga., is under the reign of a gang of murderers and incendiaries.

SNOW fell heavily in Austria October 21st, covering the ground in some places to a depth of several feet.

ALEKO PASHA, Governor of Eastern Roumelia, declines to visit Constantinople on the invitation of the Sultan.

IN the recent flood in Spain 3,500 houses and 120 mills were destroyed, causing a damage of 60,000,000 francs.

THE value of the exports of animals from the United States increased from \$389,618 in 1878 to \$8,379,200 in 1879.

AN anti-rent meeting was held Sunday at Newport, Mayo county, Ireland, at which 5,000 persons were present.

THE visiting Governors at Philadelphia visited the old Christchurch Sunday, which Washington attended while President.

UNEASINESS is expressed at New York for the safety of vessels exposed to the hurricane on the Atlantic on the 10th inst.

THE restrictions against newspaper correspondents accompanying the British army in Afghanistan have been withdrawn.

IN San Francisco half dollars are quoted at 99½ buying 100 selling; trade dollars, 93 buying, 93½ selling; Mexican dollars, 91 buying, 92 selling.

THE miners on a strike at Charleroi, Belgium, are returning to work, the Socialists advising them to defer the strike until the men in all the pits can join it.

IN New York Government bonds are quoted at 102½ for 4s of 1907; 103½ for 5s of 1881; 105½ for 4½; sterling, \$4.81½@4.83½; silver bars, 113½; silver coin, ½@1 discount.

THE steamship *Great Eastern* is to be fitted up with new boilers and machinery at a cost of £140,000, to carry cattle between London and Texas. She is capable of holding 2,000 head of cattle and 56,000 head of sheep.

THE committee of the San Francisco Chamber of Commerce appointed to the congress discussing the construction of the Darien canal, reported that the cost was estimated at 1,070 millions of francs, or \$214,000,000. It was also estimated that in ten years the annual tonnage would amount to seven and a quarter million tons. The toll of \$3 per ton was deemed too high by the committee, when articles like wheat and certain ores were considered. The report was signed by Christian Christiansen and Elie Lazard.

## San Joaquin Valley Fair Premiums.

We print below the principal awards:

### Stock.

Thoroughbred Horses—Stallion, 3 yrs and up, Partisan, D. W. Bury, \$30; spec prem recom to 12-yr-old Romulus, C. M. Creanor; stallion, 2 yrs, Jack Douglass, J. Douglass, \$15; spec prem recom to 2-yr-old Jack Gowdy, D. S. Terry; sucking colt, Latel, \$5; mare, 3 yrs and up, Mary Watson, C. Murphy, \$20; spec prem recom 3-yr-old mare La Rene, C. W. Creanor; mare, 2 yrs, Lowen R. Randall & Sheppard, \$10; spec prem recom to 2-yr-old mare Annie, C. W. Creanor; mare, 1 yr, Lily Ash, D. S. Terry, \$5; sucking filly Cecil, B. E. Harris, \$5.

Families—Dam other than thoroughbred with 3 colts, Fanny Fern, W. Johnson, \$5; spec prem recom to Beauty, J. A. McCleod.

Horses for All Purposes—Stallion, 3 yrs and up, John Miller, P. Fee, \$30; stallion, 2 yrs, Joe, D. McCarty, \$15; 1-yr-old, Major, J. Christian, \$10; sucking colt, Nephew Jr., W. Johnson, \$5; mare, 3 yrs and up, Victress, W. Johnson, \$15; spec prem recom to 6-yr-old mare Lena Hill, P. Fee; mare, 2 yrs, Fanny, P. Fee, \$10; mare, 1 yr, Flora, E. Langenhovel, \$5; sucking filly, Topsy, J. Christian, \$5; spec prem recom to yearling Dollie Clay, G. Gardner.

Roadsters—Stallion, 4 yrs and over, Ben Franklin, J. Vivian, \$30; stallion, 3 yrs, Young Hiram, D. McCarty, \$20; stallion, 2 yrs, Arthur II, B. E. Harris, \$10; mare or gelding, 4 yrs and over, Tom Palmer, T. J. Young, \$20; mare or gelding, 3 yrs, May W., W. Johnson, \$10; mare or gelding, 2 yrs, Libby B., W. Johnson, \$5; span of roadsters, Nellie and Bill, 3 and 4 yrs, F. C. Hahn, \$25; 2d span of roadsters, Silver Tail and Mate, L. U. Shippee, \$10.

Draft Horses—Stallion, 3 yrs and up, Monarch, G. W. Voorhes, \$30; stallion, 2 yrs, Prince Consort Jr., L. U. Shippee, \$15; stallion, 1 yr, Clover, M. Walrod, \$10; mare, 3 yrs and up, Dolly May, G. W. Voorhes, \$15.

Carriage Horses—Single-buggy horse, 10 yrs, Daisy, J. A. McCleod, \$10.

Sweepstakes—Stallion, 2 yrs, Joe, D. McCarty, \$40; mare, Lilly Woodburn, C. M. Creanor, \$20; walking race for stallions weighing 1,300 pounds, Honest Abe, M. Walrod, \$32.50; 2d prem to Monarch, G. W. Voorhes, \$15; 3d prem to John Miller, P. Fee, \$12.50; time, 1 mile in 13:10.

Durham Cattle—Bull, 3 yrs, Sixth Duke of Gabilan, J. D. Carr, \$25; 2d bull, 3 yrs and over, Red Thorndale, C. Younger, \$10; bull, 2 yrs, Maynard, J. D. Carr, \$20; bull, 1 yr, Thornhill, C. Younger, \$10; 2d bull, 1 yr, Second Airdrie Duke, C. Younger, \$5; bull calf, Twenty-first Duke of Gabilan, J. D. Carr, \$5; spec prem recom to bull calf, Seventh Airdrie Duke, C. Younger; cow, 3 yrs, Rosa Nell, C. Younger, \$20; 2d cow, 3 yrs, Second Rose of Forest Home, C. Younger, \$10; cow, 2 yrs, Red Dolly the Second, C. Younger, \$15; 2d cow, 2 yrs, Third Belle of Avenue Ranch, J. D. Carr, \$5; cow, 1 yr, Fourth Belle of Avenue Ranch, J. D. Carr, \$10; spec prem recom to cow 1 yr, Leopardess the Tenth, J. D. Carr; heifer calf, Sixth Rose of Forest Home, C. Younger, \$5; spec prem recom to heifer calf, Eighth Maid of Monterey, J. D. Carr.

Jersey and Alderney—Bull, 3 yrs, Mahomet, F. J. Barretto, \$25; 2d bull, 3 yrs, Prince, C. A. Stowe, \$10; bull, 2 yrs, Blythe, F. J. Barretto, \$20; 2d bull, 2 yrs, Shamun, C. A. Stowe, \$7.50; bull, 1 yr, California Gold Dust, F. J. Barretto, \$10; 2d bull, 1 yr, Toronto, S. B. Kingsley, \$5; bull calf, Blythe the Second, F. J. Barretto, \$5; bull calf, Oliver, S. B. Kingsley, spec prem recom; cow, 3 yrs, Lady Ethel, F. J. Barretto, \$20; 2d cow, 3 yrs, Fantail, F. J. Barretto, \$10; cow, 2 yrs, Mary M., F. J. Barretto, \$15; 2d cow, 2 yrs, Josephine Ludovici, F. J. Barretto, \$5; cow, 1 yr, Alfalfa, F. J. Barretto, \$10; 2d cow, 1 yr, Miss Myrtle, F. J. Barretto, spec prem recom; heifer calf, Lizzie Barretto, F. J. Barretto, \$5; spec prem recom to heifer calf, Olive Fourth, S. B. Kingsley.

Ayrshire, Herefords and Holsteins—Bull, 3 yrs, Melancthon Callahan, G. Bement, \$25; bull, 2 yrs, Laurie Todd, G. Bement, \$20; cow, 3 yrs, Lady Chapin No. 1, 4, 02, G. Bement, \$20; 2d cow, 3 yrs, Young Stella No. 3, 305, G. Bement, \$10; cow, 2 yrs, Linda Pearce No. 4, 511, G. Bement, \$15; cow, 1 yr, Stella No. 4, 510, G. Bement, framed dip.

Sweepstakes—Bull, Sixth Duke of Gabilan, J. D. Carr, \$25; cow, Red Dolly the Second, C. Younger, \$20.

Graded Cattle—Cow, 2 yrs, Fawn, S. B. Kingsley, \$5.

Herd of Cattle—Bull, Red Thorndale, cows, Rosa Nell, Golden Gate, Roan Dolly, Second Rose of Forest Home, Red Dolly the Second, C. Younger, \$40; herd of young cattle, Twenty-first Duke of Gabilan, Fourth Belle of Avenue Ranch, Leopardess the Tenth, Fairy Queen the Fourth, and Hope Twenty-seventh, J. D. Carr, \$30.

### Goats.

Cashmere and Angora—Thoroughbred buck, J. S. Harris, \$10; herd of 10, J. S. Harris, \$10.

### Swine.

Essex and Berkshire—Essex boar, L. U. Shippee, \$10; Essex sow, L. U. Shippee, \$10; Essex sow and pigs, L. U. Shippee, \$10.

Poland-China and Chester White—Boar, S. W. Sollars, \$7.50.

### Produce, Fruit, Etc.

Farm Products—Spec men for corn on stock, J. Strahle; spec men for 50 pounds wheat, samples of Australia and Proper varieties, J. Wiley; spec notice for 1 bag wheat, 1 bag do, 1 bag barley, 1 bag do Chevalier (not entered for prem), W. R. Fisher; 50 pounds wheat, J. W. Ferris, \$5; 5 pounds soft-shell almonds, J. W. Ladd, \$2; spec men, G. Bement, 1 sk barley; spec men, Stewart & Smith, 50 pounds Sonora wheat. The Committee relieve producers only entitled to premia.

Vegetables—Largest variety, J. Hale, \$10; 2d do do, G. S. Locke, \$5.

Sweepstakes—Vegetables, fruits, etc., C. V. Thompson, \$15.

Wine—Premis awarded to G. West & Co.: Grape brandy, \$5; white wine, dry, \$5; red wine, dry, \$5; white wine, sweet, \$5; port wine, sweet, \$5; Angelica wine, sweet, \$5; sherry wine, \$5; Madeira wine, \$5; sparkling wine, \$5; assortment, \$10.

Horticultural Department—Hon men to Mrs. W. L. Overhiser for assorted fruits; dried apricots, Lulu Reid, \$2; fresh figs, Robert Reid, *American Agriculturist* for 1 yr; hon men, sun-dried fruit, Mrs. J. Hale; collection of grapes, G. West, \$10; single variety of grapes, G. West, \$5; raisin grapes, G. West, \$5; 5 varieties of grapes, G. West, *American Agriculturist* for 1 yr; collection of peaches, H. Quinn, \$5; 12 peaches, any variety, H. Quinn, \$2; collection of plums, H. Quinn, \$5; 12 varieties of plums, H. Quinn, \$2; 2d collection of grapes, H. Quinn, \$5; 5 varieties of grapes, H. Quinn, \$5; dried pears, B. Lyons, \$2; dried plums, B. Lyons, \$3; collection of apples, G. S. Locke, \$10; 5 varieties of apples, G. S. Locke, *American Agriculturist* for 1 yr; collection of pears, B. Lyons, \$5; 5 varieties of pears, B. Lyons, \$3; collection of figs, Gracie Hale, \$3.

Fruits in Glass—In spirits, Mrs. J. Hale, \$5; 2d do, Mrs. J. C. Reid, \$2.50; In sugar, Mrs. J. Hale, \$10; 2d do, Mrs. J. C. Reid, \$5.

Jellies—Mrs. J. Hale, \$5; 2d, Mrs. J. C. Reid, \$2.50; pickles, Mrs. J. Hale, \$5; 2d, Mrs. J. C. Reid, \$2.50.

Home Work—Cheese, Santa Clara Cheese Co., C. V. Thompson, art, \$5.

Floral—Collection of new and rare plants, Mrs. J. W. Hart, 1 yr *American Agriculturist*; spec prem recom to bouquet of grasses, Mrs. W. B. West; collection of flowering plants in bloom, W. B. West, \$10; ornamental foliage plants, W. B. West, \$2; inschias, W. B. West, \$2; cut flowers, W. B. West, \$2; collection of plants for greenhouse, etc., W. B. West, \$2; hanging baskets containing plants, Miss A. Allen, \$2.

Culinary—Brown bread, Mrs. C. J. Smith, \$2.50; wheat bread, Mrs. J. Hale, \$3; biscuit, Mrs. J. C. Reid, \$2.50; corn bread, Mrs. W. H. Lyons, \$2.50; pound cake, Mrs. R. N. Howes, \$3; sponge cake, Mrs. W. H. Lyons, \$2.50; fruit cake, Mrs. J. Hale, \$3; coffee cake, Mrs. C. J. Smith, \$2.50; loaf of bread by a child under 13, Spooner's special \$10 photograph, May Wallace.

Manufactures—Woolen goods, Stockton Woolen Mills, \$10; wheat flour, R. B. Lane, \$5; corn meal, R. B. Lane, \$3.

### Manufactured Articles.

Machinery, Etc.—Threshing machine, "Bronson's Improved Buffalo Pitts Separator," Grangers' Union, \$10; header, "Stockton Chief," Matteson & Williamson, \$10; self-raking reaper, "Wheeler No. 6 Combined," D. M. Osborne & Co., \$5; mowing machine, "Wheeler No. 5," D. M. Osborne & Co., \$5; steel plow, Matteson & Williamson, \$5; grain plow, new model, "Eureka Sulky," Grangers' Union, \$5; grain sower, "Oliver Chilled," Grangers' Union, \$5; grain sower, "Gem Broad Cast," Grangers' Union, \$5; harrow, Matteson & Williamson, \$3; horse rake, "Lyon Sulky Self-Dump," Grangers' Union, \$3; straw cutter, "Burdick No. 3," Grangers' Union, \$3; large cultivator, Matteson & Williamson, \$5; small cultivator, H. C. Shaw Plow Co., \$5; farm gate, "Rockafellow Patent Adjustable," Grangers' Union, \$5; grain separator, J. C. Bowden, \$5; wine press, "Americus," Grangers' Union, \$5; derrick fork, Matteson & Williamson, \$5; spec prem recom to D. M. Osborne & Co. for self-binding harvester and combined header and binder; spec men to E. H. Hamilton for sub-irrigation machine and system; agricultural implements, Grangers' Union, \$10; windmill, Hall & Sperry, \$10; spec prem recom to E. J. Marsters for self-regulating windmill, "Tempest," spec men to Guttenberger & Co. for Golden Gate ground roller and clod crusher; spec men to E. J. Marsters for self-feeder for threshing machines; spec prem recom to Grangers' Union for hand fence wire.

Wheeledright Work—Carriages, Grangers' Union, \$25; 2-horse Sweepstakes iron wagon, Grangers' Union, \$5; 1-horse Sweepstakes iron wagon, \$5; single top buggy, Grangers' Union, \$7.50; single open jump-seat buggy, J. A. Binks, \$5.

Harness and Leather—Harness and saddle, H. T. Dorrance, \$10; set of carriage harness, H. T. Dorrance, \$5; single harness, H. T. Dorrance, \$5; saddle, H. T. Dorrance, \$5.

Machinery, Etc.—Horse shoes, J. Burns, \$3; hon men to J. A. Ellison, combination lift pump; lift pump, W. H. Van Vlear, \$3.

Building Material, Etc.—Pressed brick, W. Saunders, \$5; pottery, W. Saunders, \$5.

Musical Instruments—Grand or semi-grand piano-forte, Gurnsey, Allen & Barbe, \$10; parlor piano, Gurnsey, Allen & Barbe, \$5.

Sweepstakes—Pianos, organs, etc., Gurnsey, Allen & Barbe, \$10.

Sewing Machines—Family sewing machine, framed dip to H. H. Devoll for the "Domestic," variety of work, framed dip to G. F. Eckstrom for the "Davis," machines for all purposes, dip to H. H. Devoll for the "Domestic," machine for fancy work, dip to H. H. Devoll for the "Domestic."

### Miscellaneous.

Manfd paper, Cal Paper Co., \$10; stoves, J. Jackson, \$5; fire arms, Hogan & Smith, \$5; hats and caps, Lethrop & Noble, \$5; washing machine, N. C. Hardy, spec merit; spec men, C. E. Williams, squirrel poison; Miss M. Summerville, English tissue paper mats and card board mats; spec prem, J. M. Brooks, Russian polish; spec recom to Mrs. F. T. Ballwin; second prem recom to Misses H. and A. Gray, for painting on porcelain; spec men, C. Behnia, India China dinner set, glassware, cutlery and flower stands; P. Birdsall, extension step ladder; Dr. E. S. Hohlen, medicines, etc.; O. H. Cose, fancy goods; G. A. Austin, do; Mrs. E. Moore, tidies; C. Behnia, revolving bird cage; Stockton Gas Co., gas cooking and heating stoves; Miss L. Paché, silver wire work; spec prem recom to Miss L. Paché, stocking mending (2 kinds); spec men, H. W. Caldwell, Eclipse self-regulating incubator; B. B. Scott & Son, flavoring extracts; hon men, Misses H. and A. Gray, landscape painting in oil; spec prem recom to Mrs. W. H. Mott, new system of dress making; hon men, G. Chalmers, carpets, lambrequins, etc.

### Requistranship.

Miss C. L. Fanning, \$25; 2d, Miss M. Sexton, \$20.

### Books on Agriculture, Etc.

The following among other books will be sent post-paid on receipt of publishers' prices, and \$3.50—The Pasture, its culture, manufacture and use, 500 pages, \$3.50—The Pasture of Husbandry, 500 pages, \$3.75—The Women of the Bible, 72 engravings, \$1—Wells' Every Man His Own Lawyer, 612 pages, \$2.75—American Husbandry, 2 vols., \$1.50—Gray's Agricultural Essays, \$1—Langstroth's Honey Bee, \$1.50—Raudall's Sheep Husbandry, \$1.50—Agricultural Engineering, \$1.50—New Bee-keepers' Text Book, \$1—Pacific Rural Handbook, \$1—Ropp's Easy Calculator, \$1—U. S. Land Law, 50 Cts.—Woodward's Grapes, Etc., \$1—Sugar from Melons, 25 Cts.—Strawberry Culture, 50 Cts.—Layres' Belles Lettres, \$1—Holla's Map of California and Nevada, to subscribers, \$1—Back Volumes PACIFIC RURAL PRESS (bound) \$5; unbound, \$3; Picturesque Arizona, \$2. Address DEWEY & CO., Publishers, 202 Sansome St., S. F.

We have received a copy of the "Pacific Rural Handbook," from Dewey & Co., publishers, San Francisco, an elegantly written, printed and bound volume devoted to horticulture, fruit growing and kindred subjects of interest to farmers and others who have an inclination to beautify their homes. The author is Chas. H. Shinn, a gentleman who has many acquaintances and friends in this locality. Mr. Shinn brings to his aid a long experience in the matters upon which he treats, which gives his theories and ideas the advantage of being of practical worth. The book is written in a pleasant and instructive vein, and should be read by all those having a desire to receive instruction in the culture of trees, vegetables and flowers. It is a valuable addition to any library. Price only one dollar, postpaid. Address Dewey & Co., publishers.—*Haywards Journal*, April 12th, 1879.

THE PACIFIC RURAL PRESS.—Published weekly by Dewey & Co., 202 Sansome St., San Francisco, is a valuable paper. Its specialty is rural affairs, in which nearly all of us are interested as farmers or owners of smaller tracts of land down to the size of a suburban or city lot. All who desire to make improvements, of whatever nature, whether building, fencing, underdraining, planting, tilling, or a thousand other matters pertaining to the welfare of the home and family, will find the investment of \$3.50 paying high interest in returns. Its circulation is quite large in Sonoma county. We advise our friends to take it.—*Santa Rosa Times*.

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

HOW TO STOP THIS PAPER.—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate the copy sent.

JOHN RIDER, of Sacramento city, shipped on October 11th, to J. H. Orcutt, of San Luis Obispo, one pair of thoroughbred Berkshire pigs.

EXTRA COPIES can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.

THOMAS DUNSON will oblige us by sending his P. O. address to this office.

## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

### Weekly Market Review.

#### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, October 22d, 1879.

Trade still manifests the same tendencies described last week. Prices are as a rule firm, and in some lines of Produce, principally the cereals, advances have been attained, as will be noted below.

The Wheat market has shot upward to \$2.15 for the best. The foreign market is also generally advanced, as shown by the following

#### Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.			CLUB.		
Thursday....	11s	—@11s	8d	11s	7d@12s	—
Friday.....	11s	—@12s	—	11s	10d@12s	6d
Saturday....	11s	—@12s	—	11s	10d@12s	6d
Sunday.....	11s	—@12s	—	11s	10d@12s	6d
Tuesday....	11s	—@12s	—	11s	10d@12s	6d
Wednesday..	11s	—@12s	—	11s	10d@12s	6d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.			Club.		
1877.....	12s	8d@13s	1d	13s	—@13s	6d
1878.....	9s	8d@9s	3d	9s	10d@10s	1d
1879.....	11s	—@12s	—	11s	10d@12s	6d

#### The Foreign Review.

LONDON, October 21.—The *Mark Lane Express* says: Imports of foreign Wheat into London have been on a fairly liberal scale, last Monday's returns showing something over 75,000 quarters, while subsequent arrivals up to Friday amounted to 68,190 quarters. Notwithstanding the increased supplies, activity and excitement in the market prevailed. The week's sales have been large, as millers bought freely, and prices have risen three to four shillings on the week, under the stimulus of increased consumption and speculation. Maize on spot is still scarce. Mixed American was scarcely to be had at the close of the market Friday at 29s 6d per 450 pounds. Flour has risen considerably, while Oats favored sellers from a shilling to a shilling and six pence per quarter. Arrivals off-coast are moderate, and prices have shown a daily advance. For Wheat, the improvement up to Saturday was 3s to 3s 6d. Subsequently, with the prospect of considerable arrivals, there has been a decided pause. Maize is in fair demand, and prices have advanced 2s 6d. A very large but somewhat irregular business has been done in forward Wheat, and prices are 3s@4s higher on the week. A quieter tone, however, was apparent Monday, and part of the advance was lost. Not much business has been done in Barley, but prices tend in sellers' favor. Sales of English Wheat last week amounted to 26,122 quarters, at 49s 7d per quarter, against 57,562 quarters, at 39s 9d, for the corresponding week last year. Imports into the United Kingdom for the week ending October 11th, 1,019,974 cwt of Wheat and 108,572 cwt of Flour.

#### Eastern Wool Markets.

New York, October 18.—Wool continues in demand at prices very strong, and holders are very confident. Sales embrace 100 bales and 20,000 lbs Spring California at 21@21½; 36,000 lbs Fall do, private.

Boston, October 18.—The market is very active, sales for the week reaching the large aggregate of 3,707,000 lbs, an increase of 2,244 100 lbs, over the corresponding week of last year. Notwithstanding these large transactions, the market is entirely free from excitement. The only important change is in No. 1 fleeces and in desirable lots of combing and delaine, auction sales having been made as high as 46½@47c, an advance of 2 cents on previous quotations. The tendency of the market, however, is decidedly upward for all kinds. Stocks have become more plentifully reduced. There has been a quiet movement in Fall California, to arrive. Sales comprise Ohio, Pennsylvania and Virginia fleeces X, XX and No 1, at 40@47c; Michigan and Wisconsin fleeces X and No 1, at 36@43c; New Hampshire fleece, 33@34c; combing and delaine fleeces,



markets having done a big week's work and kept the ball rolling to and fro at a lively pace for a full week, seemed to stand all of the greater part of the session taking breath and deliberating on a plan of action during the coming week. Prices were generally lower in every article to-day, but closed up rather firm and with a steadier feeling. Prices during the week reached a higher point, except for Oats, than for over a year before, and the excitement has been phenomenal in this market. It is an indication of the staunch character of the trade that so few commercial disasters have resulted. Wheat sold Monday at \$1.33; on Friday at \$1.22 for November. Corn sold at 33¢@44¢; Oats at 23¢@31¢. Pork for January at \$9.22@10.50; and Lard at \$5.05@6.30 for January. Rye, for cash, at 70¢-77¢. Barley at 78¢@78¢. Closing prices: For November Wheat, \$1.18; November Corn, 42¢; November Oats, 31¢; January Pork, \$9.95 bid; January Lard, \$6.05 bid. Closing cash prices: Wheat, \$1.16@1.11 Corn, 44¢; Oats, 30¢; Rye, 76¢; Barley, 81¢; Pork, \$10.75@11; Lard, \$3.05; Whisky firm, \$1@1.05, closing at the outside.

**Receipts of Domestic Produce.**  
The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Oct. 1.	WEEK. Oct. 8.	WEEK. Oct. 15.	WEEK. Oct. 22.
Flour, quartersacks...	49,291	41,691	30,790	49,576
Wheat, centals...	712,575	416,730	582,824	483,130
Barley, centals...	70,611	78,142	73,644	66,311
Beans, sacks...	9,064	8,225	5,906	9,925
Corn, centals...	9,310	10,638	2,823	2,793
Oats, centals...	16,168	6,193	22,116	12,134
Potatoes, sacks...	21,705	16,343	22,683	26,327
Onions, sacks...	1,965	1,303	2,416	3,606
Wool, bales...	6,647	7,162	7,214	6,252
Hops, bales...	503	1,334	2,693	627
Hay, bales...	1,037	1,560	2,026	1,542

**BAGS**—Wheat Bags are now nominal at the combination rate, 11¢@12¢. Gunnies have advanced another 1¢.  
**BARLEY**—Both Feed and Brewing descriptions have improved 2¢@5¢ ctl. We note sales: 300 sks coast feed, 80¢; 200 and 100 do do, 75¢, and 400 do do, 72¢.

**BEANS**—An encouraging advance has been gained in Bayos and Pea Beans. Other varieties are unchanged. Some Beans are reported damaged by rains in the southern counties.

**CORN**—Corn has scored an improvement of 2¢ on White and 5¢@7¢ on Large and Small Yellow. We note sales: 450 sks Small Round Yellow at \$1; 2,000 do, 90¢, and 200 do do, 87¢.

**DAIRY PRODUCE**—The high price is calling out all the reserves of Pickle Roll and Firkin, and Fresh Roll is reported a little easier, although prices are not changed. Firkin is now held as high as 25¢ by some parties. Cheese has sharply advanced, and the best now reaches 15¢@16¢ lb.

**EGGS**—Eggs are unchanged.

**FEED**—The advance in Wheat adds \$1 per ton to Bran. Other ground feeds and Hay are unchanged.

**FRESH MEAT**—Prices are stationary. A car-load of Refrigerator Beef is in from Cheyenne, Wyoming Ter., in fair condition, and sold at 4¢ lb all around.

**FRUIT**—Grapes have advanced a little on ordinary kinds. Choice varieties have improved about 25¢ per box. A cargo of Cocoanuts has dropped the price to 3¢@4¢ each.

**HOPS**—There is no change in rates. We note sales of 400 bales Washington Territory at 30¢@31¢; 190 bales Oregon at 31¢; 25 bales Russian River at 32¢.

**LIVE STOCK**—We note sales as follows: 3,000 Sheep, wetters, at \$2.40 each; 2,375 Lambs at \$1.80. Wool on, delivered in S. F.; 107 Cattle at \$21.50, in country; 780 head Cattle, large fat steers, at \$28.50; 3 cars Calves at \$10.70 per head; 30 Cattle (stock) at \$16.50; 1,000 Hogs at 31¢ per lb; 220 at \$3.10 per cty; 1,120 Hogs at \$3.25 per cty; 420 stock Hogs at \$3.05 per cty.

**OATS**—There is no material change from the late advance. We note sales as follows: 245 sks choice Humboldt at \$1.35; 410 do good Feed at \$1.20; 150 do Coast at \$1.15; and 1,000 do do at \$1.

**ONIONS**—Onions are plenty, and weak at reduced rates. The Silver Skins are now only quotable at 40¢@50¢ per cty.

**POTATOES**—There is but little change, except that Sweet Potatoes are now \$1 per cty.

**PROVISIONS**—A general advance will be seen in our rates for California Bacon and Ham. The trade is active and prices firm.

**VEGETABLES**—String Beans, Cucumbers, Green Peas and Melons are higher. Marrowfat is now \$8¢@10¢ cty.

**WHEAT**—The rate has advanced 15¢ per cty, but holders still have higher views, and sales are still restricted. We note sales: 1,600 tons choice Milling at \$2.15; 207 sks do, \$2.11; 70 tons good do, \$2.10; 90 do No. 2, \$2, and 1,000 and 140 sks Coast, \$1.75.

**WOOL**—The market is about as last week. Our prices on best Northern should have been advanced to 25¢ last week, but the printer overlooked the mark. We note sales: 350,000 Northern 22¢@25¢.

LUMBER.	
WEDNESDAY M., October 22, 1879.	
CARGO PRICES OF PUGET SOUND PINE	
REDWOOD.	
Rough, M.	13.00
Refuse.	9.00
Clear.	23.00
Clear Refuse.	13.00
Rustic.	23.50
Refuse.	20.00
Surfaced.	20.00
Refuse.	14.00
Flooring.	20.00
Refuse.	12.00
Beaded Flooring.	23.00
Refuse.	13.00
Half-inch Siding.	16.00
Refuse.	14.00
Half-inch Surfaced.	20.00
Refuse.	14.00
Half-inch Battens.	16.00
Pickets, Rough.	11.00
Rough, Pointed.	12.50
Fancy, Pointed.	13.00
Shingles.	1.75

BAGS AND BAGGING.	
JOBBER PRICES.	
WEDNESDAY M., October 22, 1879.	
Eng Standard Wheat, 11	42
California Manufacture.	42
Hand Sewed, 22x36, 11	42
24x36, 11	42
22x40, 11	42
24x40, 11	42
22x40, 13	42
Machine Sewed, 22x36, 11	42
Flour Sacks, halves, 8	42
Quarters, 6	42
Eightys, 31	44
Heesian, 60 inch, 9	44
45 inch, 9	44
40 inch, 8	44
Wool Sacks, 4	44
Hand Sewed, 3 1/2 lb, 44	44
Machine Sewed, 4 1/2 lb, 44	44
Standard Gunnies, 13	44
Bean Bags, 7	44

DOMESTIC PRODUCE.	
[WHOLESALE.]	
WEDNESDAY M., October 22, 1879.	
Mayo, cts.	1.30
Butter, cts.	35
Castor, cts.	30
Pea, cts.	1.50
Red, cts.	.60
Pink, cts.	.60
Sm'l White, cts.	.40
Lima, cts.	.25
Field Peas, cts.	.85

BROOM CORN.	
Southern, cts.	2
Northern, cts.	3
CHICORY.	
California, cts.	4
German, cts.	6
DAIRY PRODUCE, ETC.	
BUTTER.	
Cal. Fresh Roll, lb	35
Fancy Brands, lb	40
Pickle Roll, lb	21
Firkin, lb	20
Western, lb	12
New York, lb	12

EGGS.	
Cal. fresh, doz.	40
Ducks, doz.	40
Oregon, doz.	40
Eastern, by exp's.	40
Pickled here.	37
Utah, doz.	37
FEED.	
Bran, ton	15
Corn Meal, ton	20
Hay, ton	7
Middlings, ton	17
Oil Cake Meal, ton	40
Straw, bale	40

FLOUR.	
Extra, City Mills, 5	25
do, Country Mills, 5	25
do, Oregon, 5	25
do, Walla Walla, 5	25
Superfine, 4	25
Extra Superfine, 4	25
FRESH MEAT.	
Beef, 1st quality, lb	5
Second, lb	4
Third, lb	3
Mutton, lb	2
Spring Lamb, lb	4
Pork, undressed, lb	3
Dressed, lb	4
Veal, lb	4
Milk Calves, lb	6
do choice, lb	6

GRAIN, ETC.	
Barley, feed, cts.	65
do, Brewing, cts.	80
Chaff, cts.	1
Buckwheat, cts.	40
Corn, White, cts.	80
Yellow, cts.	84
Small Round, cts.	95
Oats, cts.	1
Milling, cts.	1
Rye, cts.	85
Wheat, No. 1, cts.	2
do, No. 2, cts.	1
do, No. 3, cts.	1
Choice Milling, cts.	2

HIDES.	
Hides, dry, lb	18
Wet salted, lb	8
HONEY, ETC.	
Beeswax, lb	20
Honey in comb, lb	10
do, No. 2, lb	8
Dark, lb	5
Extracted, lb	8
HOPS.	
Oregon, cts.	26
California, new, cts.	26
Wash. Ter., cts.	26
Old Hops, cts.	26

NUTS—JOBBER.	
Walnuts, Cal., lb	10
do Chile, lb	6
Almonds, hd sh, lb	6
Soft sh, lb	12
Brazils, lb	15
Chestnuts, Italian, lb	37
Pecans, lb	14
FRUITS AND VEGETABLES.	
[WHOLESALE.]	
WEDNESDAY M., October 22, 1879.	
Apples, box, 40	1.00
Apricots, box, 40	1.00
Bananas, bunch, 3	0.50
Blackberries, chst, 40	1.00
Cherries, chst, 40	1.00
Citrons, Cal., 100	1.00
Cocoanuts, 100	3.00
Crab Apples, bbl	10
Cranberries, bbl	10
Currants, chest, 50	1.00
Figs, box, 50	1.00
Gooseberries, 50	1.00
Grapes, bx, 30	70
Damascus, 1	25
Muscats, 40	75
Isabella, 75	1.25
Conichon, 1	1.00
Tokay, 40	75
Limes, Mex., 8	0.12
do, Cal, box, 4	0.50
Lemons, Cal M, 25	0.30
Sicily, box, 10	0.12
Australian, 4	0.50
Nectarines, bsk, 40	1.00
Oranges, Cal M, 40	1.00
do, small, 40	1.00
do, Tahiti, 40	1.00
do, Panama, 40	1.00
Peaches, bsk, 40	1.00
do, Mountain, 40	1.00
Pears, bx, 50	1.25
Barlett, 2	0.25
Seckel, 1	0.00
Pineapples, doz, 8	0.00
Plums, box, 1	0.00
Pomegranates, lb, 5	0.00
Prunes, bsk, 40	1.00
Quinces, box, 50	0.75
Raspberries, chst, 40	0.00
St'berries, chst, 3	0.00

DRIED FRUIT.	
Apples, dried, lb	3
do, quartered, 2	2
RETAIL GROCERIES, ETC.	
WEDNESDAY M., October 22, 1879.	
Butter, California	25
Chocol, lb	25
Cheese, lb	13
Eastern, lb	13
Lard, Cal, lb	18
Eastern, lb	20
Flour, ex. fam, bbl	0.00
Corn Meal, lb, 2	3
Sugar, wh. crshd, 12	13
Light Brown, 8	9
Coffee, Green, 25	35
Tea, Fine Black, 50	0.00
Finest Japan, 55	0.00
Candles, Adm't's, 15	25
Soap, Cal., 7	10

TOBACCO	
— FOR —	
Blackberries, 15	10
Citron, 23	24
Dates, 9	10
Figs, Black, 3	4
White, 6	8
Peaches, 6	7
do pared, 15	17
Pears, 5	6
Plums, 3	4
Pineapples, 10	15
Raisins, Cal, bx	1.75
do, Halves, 2	0.00
do, Quarters, 2	25
Eighths, 3	0.00
Malaga, 2	75
Zante Currants, 8	10

VEGETABLES.	
Asparagus, box, 40	2.00
Beets, cts, 40	1.00
Beans, String, 40	3.00
Cabbage, 100 lbs	40
Carrots, 100	3.00
Cauliflower, doz	40
Chile Peppers, bx, 25	75
Cucumbers, bx, 40	50
Egg Plants, bx, 1	0.00
Garlic, New, lb, 4	4
Green Corn, lb, 4	5
Green Peas, lb, 4	5
Lettuce, doz, 10	10
Horned, lb, 1	1
Tomato, box, 40	50
Turnips, cts, 40	50
White, 40	50
Squash, Marrow, 6	0.00
fat, tin, 6	0.00
Summer, box, 40	75
Tomato, box, 40	50
Turnips, cts, 40	50
White, 40	50
Wat'm's, 10.15	0.00

GOLD, LEGAL TENDERS, EXCHANGE, ETC.	
[Corrected Weekly by SUTRO & Co.]	
SAN FRANCISCO, October 22, 3 P. M.	
SILVER, 25.	
GOLD BARS, \$90@910.	SILVER BARS, 10@13 cent. discount.
Exchange on New York, 20, on London bankers, 49 1/2	
4 1/2. Commercial, 50; Paris, five francs \$ dollar; Mexican dollars, 92.	
London Consols, 97 13-16; Bonds (4%), 105 1/2.	
QUICKSILVER in S. F., by the flask, 1/2 lb, 33 1/2.	

Signal Service Meteorological Report.									
SAN FRANCISCO.—Week ending October 21, 1879.									
HIGHEST AND LOWEST BAROMETER.									
Oct. 15	Oct. 16	Oct. 17	Oct. 18	Oct. 19	Oct. 20	Oct. 21			
30.190	30.257	30.262	30.240	30.285	30.173	30.034			
30.126	30.188	30.181	30.190	30.175	30.060	29.927			
MAXIMUM AND MINIMUM THERMOMETER.									
60	66	73	77	78	76	77			
54	54	55	58	58	57	57			
MEAN DAILY HUMIDITY.									
82.7	69.3	62	51	55	63.3	56.7			
PREVAILING WIND.									
W	W	N	NW	NW	NW	N			
236	181	130	103	112	98	59			
WIND—MILES TRAVELED.									
Fair.	Fair.	Clear.	Clear.	Clear.	Clear.	Clear.			
RAINFALL IN TWENTY-FOUR HOURS.									
Total rain during the season, from July 1, 1879. 0.81 in.									

**Commission Merchants.**  
**DAVIS & SUTTON,**  
No. 75 Warren Street, New York.  
**Commission Merchants in Cal. Produce**  
REPRESENTS.—Tradecmen's National Bank, N. Y.; Eli wanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

**BRYANT & COOK,**  
**Commission Merchants,**  
AND DEALERS IN  
**GRAIN, FLOUR, ETC.**  
No. 8 Davis St., near Market, San Francisco.  
CHARLES NAUMAN. FRANK NAUMAN.

**C. & F. NAUMAN & CO.,**  
**Wholesale Commission Merchants**  
— AND DEALERS IN —  
GRAIN, POTATOES, FRUIT, BUTTER, POULTRY, EGGS, GAME, ETC.  
227 & 229 Washington St., San Francisco.  
Consignments Solicited.

**CHEAPER YET!**  
**Tension Sewing Machines!**  
A large number of nearly new genuine SINGER, WHEELER & WILSON, HOWE, WEEB, WILSON, GROVER & BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These machines were taken in exchange from families for the "AUTOMATIC" or "NO TENSION MACHINE."

**Wilcox & Gibbs' S. M. Co.,**  
124 POST ST., SAN FRANCISCO.  
No. 361 Twelfth Street, Oakland, Cal.

**E. T. ANTHONY & CO.,**  
DEALERS IN ALL KINDS OF  
**TOBACCO**  
— FOR —  
**SHEEP WASH PURPOSES.**  
**THE NEW SHEEP DIP.**  
We invite our Wool Growers to call on us and examine the NEW OMAHA SHEEP DIP, the best preparation yet offered—one gallon dip makes 150 gallons wash.  
407 and 409 Commercial St.,  
Near Battery Street, SAN FRANCISCO.

**Pocket Map of California and Nevada.**  
Compiled from the latest authentic sources, by Chas. Drayton Gibbs, C. E. This map comprises information obtained from the U. S. Coast and Land, Whitney's State Geological, and Railroad Surveys; and from the results of explorations made by R. S. Williamson, U. S. A., Henry Degroot, C. D. Gibbs and others. The scale is 13 miles to 1 inch. It gives the Judicial and U. S. Land Districts. It distinguishes the Townships and their subdivisions; the County Seats; the Military Posts; the Railroads built and proposed, and the limits of some of them; the occurrence of gold, silver, copper, quicksilver, tin, coal and oil. It has a section showing the heights of the principal mountains. The boundaries are clear and unmistakable, and the print good. 1878. Sold by DEWEY & CO. Price, postpaid, \$2; to subscribers of this journal, until further notice, \$1.

**Geo. F. Silvester,**  
IMPORTER, WHOLESALE AND RETAIL DEALER IN  
**SEEDS,**  
**Fruit and Evergreen Trees, Plants, Etc.**  
**ALFALFA, GRASS AND CLOVER SEEDS**  
In large Quantities and offered in Lots to suit Purchasers.  
GREAT REDUCTION IN PRICES.  
Seed Warehouse, 317 Washington Street, San Francisco.

**Baling Fencing Telegraph Telephone Galvanized**  
**WIRE**

**Barbed Fence Wire.**  
All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

**A. S. HALLIDIE**  
Wire Mills.  
Office, No. 6 California St.  
SAN FRANCISCO.

**WIRE ROPE AND CORDAGE**  
Of every kind on hand or Made to Order.

**Grangers' Bank of California,**  
SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000,  
In 10,000 Shares of \$100 each.  
Capital Paid up in Gold Coin, \$400,000.

**OFFICERS:**  
G. W. COLBY, President  
JOHN LEWELLING, Vice-President  
ALBERT MONTPELLIER, Cashier and Manager  
FRANK McMULLEN, Secretary

**DIRECTORS:**  
G. W. COLBY, President  
JOHN LEWELLING, Vice-President  
J. V. WEBSTER, Napa Co.  
URIAH WOOD, Alameda Co.  
J. C. MERYFIELD, Solano Co.  
THOMAS McCONNELL, Sacramento Co.  
I. C. STEELE, San Mateo Co.  
SOLOMON JEWETT, Kern Co.  
SENECA EWER, Napa Co.  
A. D. LOGAN, Colusa Co.

The Bank was opened on the first of August, 1874, for the transaction of general banking business.  
**CURRENT ACCOUNTS** are opened and conducted in the usual way.  
**GOLD AND SILVER** deposits received.  
**CERTIFICATES OF DEPOSIT** issued for Gold and Silver.  
**TERM DEPOSITS** are received and interest allowed as follows: 6% per annum if left for 3 months; 7% per annum if left for 6 months; 8% per annum if left for 12 months.  
**EXCHANGE** on the Atlantic States bought and sold.  
**ALBERT MONTPELLIER,**  
Cashier and Manager.  
San Francisco, Oct. 15th, 1879.

**Phylloxera-Resisting Vines.**

Vineyard proprietors desiring to plant American Grape Vines, which resist the attacks of the Phylloxera, either as Grafting Stock, or for direct production, which proves to be the only salvation and means of reconstructing the destroyed Vineyards of France, will do well to address  
**BUSH & SON & MEISSNER,**  
Bushberg, Jefferson Co., Mo.

**MONEY!!**  
\$5,000 to \$50,000 Ready to Loan

On Mortgages of first-class Farms in Monterey, Santa Cruz, Santa Clara and San Mateo counties.  
Address  
**EXCHANGE & MART,**  
Santa Cruz, Cal.

**FREE GIFT!**  
A copy of my Medical Common Sense Book will be sent to any person afflicted with Consumption, Bronchitis, Asthma, Sore Throat, or Nasal Catarrh. It is elegantly printed and illustrated. 144 pages, 12mo, 1879. It has been the means in the providence of God of saving many valuable lives. Send name and post-office address, with six cents postage for mailing. The book is invaluable to persons suffering with any disease of the Nose, Throat or Lungs. Address **Dr. N. B. WOLFE, CINCINNATI, O.**



## Agricultural Articles.

## The Famous "Enterprise."

PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in habbitted boxes.

Positively self regulating, with no coilspring or springs of any kind. No little rods, joints, levers or hells to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

**HORTON & KENNEDY,**

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

**MATTESON & WILLIAMSON'S**



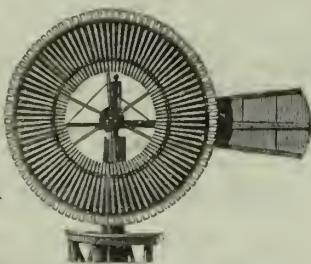
Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the sharo. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

**MATTESON & WILLIAMSON,**  
STOCKTON, CAL.

**\$50.**

The New  
**Worthington**  
**Windmill**



Manufactured by

**W. D. PARSON,**  
1364 San Pablo Avenue, Oakland, Cal.  
Also, maker of the "Colorado Wind Engine," Wind Grist Mills, Town Water Works, Irrigation and Drainage Pumps. A very heavy and superior pattern of Deep Well and Artesian Lift Pump Cylinders. Circulars free.

**Windmills!**

**HORSE POWERS!**  
**TANKS AND PUMPS**

Built and Repaired at  
No. 51 Beale street, S. F.  
Send for Circulars.  
**F. W. KROGH & CO**



**The Boss Pruner.**

Patented Jan. 8, 1878.

**ENTIRELY NEW!**

Works on a cog principle. Smallest size cuts one inch, and largest size two inches in diameter. Has been thoroughly tested, and given perfect satisfaction. Sold by

**GEORGE LARKIN,**  
Newcastle, Placer County, Cal.

**A Card to Grangers and Farmers.**

**HAY, GRAIN, HORSES AND CATTLE.**

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nos. 11 and 13 Bluxome St., San Francisco.

**JOHN ROGERS & SONS,**  
**GENERAL STOCK AND SALE YARD,**  
Corner Market and 9th Sts., San Francisco.

**HORSES and MILCH COWS** sold on commission. Also, dealers in HAY and GRAIN.  
Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

50 Pertumed, Snowflake, Chromo, Motto Cards, name in gold and jet 10c. G. A. SPRING, E. Wallingford, Ct.

**Nathaniel Curry & Bro.,**

113 Sansome Street, San Francisco,



Sole Agents for the

**Sharps Rifle Co., of Bridgeport, Conn.**

FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO.

Also Agents for W. W. GREENER'S Celebrated Wedgefast, Chokebore, Breech-loading DOUBLE GUNS; and all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America. AMMUNITION of all kinds in quantities to suit.

— OFFICE OF THE —

**BLACK POINT PACKING AND SLAUGHTER HOUSE.**

**MERRY, FAULL & CO., Proprietors.**

**TO OWNERS OF LIVE STOCK!**

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

**SQUARE DEAL and FULL MARKET PRICES**

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices.

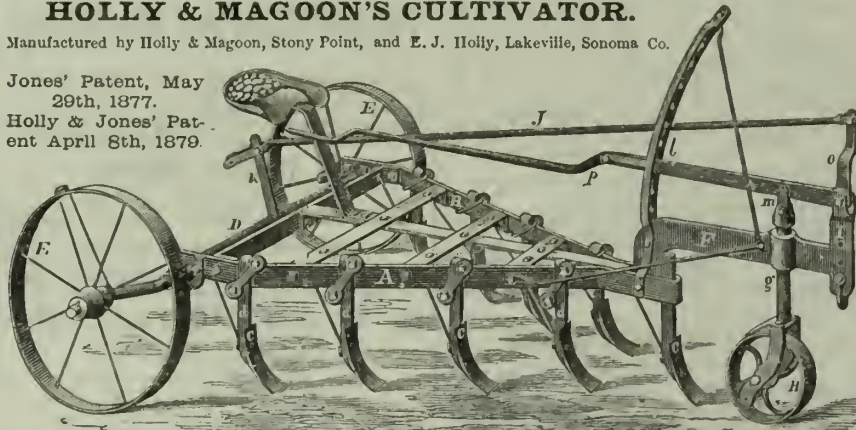
Please address our

Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.

**HOLLY & MAGOON'S CULTIVATOR.**

Manufactured by Holly & Magoon, Stony Point, and E. J. Holly, Lakeville, Sonoma Co.

Jones' Patent, May  
29th, 1877.  
Holly & Jones' Patent April 8th, 1879.



For further particulars address the Manufacturers, or M. C. HAWLEY & CO., Agents, San Francisco and Sacramento, Cal.

*In consequence of spurious imitations of*

**LEA AND PERRINS' SAUCE,**

*which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signatures thus,*

*Lea & Perrins*

*which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.*

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

**A BARGAIN IN BERKSHIRES.**

The undersigned offers for sale for the next 30 days a limited number of Pure Bred Berkshires, aged from 3 to 18 months. These pigs are all bred by myself from stock imported from some of the most noted breeders in the United States, and include several Boars fit for service, and a few choice Sows in farrow, to imported Boars. These pigs are not culls, but the choice pigs of their respective litters.



**PRICE LOW FOR CASH.**

A perfect and complete pedigree, and a written guarantee they are as represented sent with each animal sold. Correspondence solicited. Among purchasers of my stock are the following gentlemen well known as men of careful discrimination: Dr. G. A. SHURTLEFF, Superintendent State Insane Asylum; CRANT I. TAGGART, Oakland; J. D. SMITH, Prof. Livermore College; LELAND STANFORD, by L. H. COVEY; Col. PETER Saxe, San Francisco; L. U. SHIPPEE, President S. J. V. Ag. Society; W. MESSICK, Sacramento; W. C. HOPPING, P. M., Sacramento. For further particulars address

Bellota, San Joaquin Co., Cal.

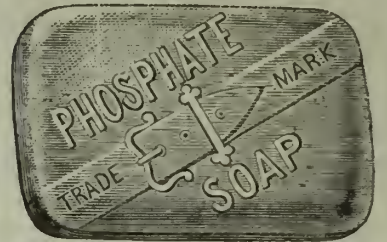
**ALFRED PARKER,**

**Agricultural Books.**

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.

**YOUR NAME PRINTED** on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

**PHOSPHATE SOAP**



THE BEST soap for toilet use ever manufactured. BEST because it contains all the excellencies of the most expensive foreign or American soaps without their defects. BEST because it combines strength with delicacy in such a way that its strong detergent qualities do not injure the skin. BEST because it is the result of years of study and experiment in the soap manufacturing business, assisted by modern chemical discoveries. BEST because it contains ingredients beneficial to the skin, which unite chemically with the soap in such a manner as to increase its saponaceous qualities. Every chemist familiar with soap manufacture knows that some ingredients which are in themselves beneficial to the skin cannot be saponified; some are partially neutralized, while others injure the quality of the soap. There are soaps in the market which are to some extent beneficial to the skin, but they are inferior articles for toilet use. PHOSPHATE SOAP is the ONLY article offered to the public which combines all the best elements of toilet soap with medical ingredients beneficial to the skin.

If your wife is in the habit of using cosmetics of any kind, advise her to give up the pernicious practice, as the most harmless face powders obstruct the pores of the skin and sooner or later injure the complexion, while PHOSPHATE SOAP removes all impurities and assists nature in developing a natural, healthy and beautiful skin.

It is an old proverb that an ounce of preventive is better than a pound of cure. Twenty-five cents invested in a cake of PHOSPHATE SOAP will save hundreds of dollars in doctors' bills. It acts as a constant disinfectant, preventing Salt Rheum and other skin diseases.

If your wife will persist in the use of cosmetics, buy her a cake of PHOSPHATE SOAP and tell her to use it every night before retiring. In that way much of the harm will be avoided, as the skin will thereby be able to retain much of its natural vigor and beauty.

No salve or ointment can heal a wound or sore of any kind. Every educated physician will tell you that nature alone can do this. PHOSPHATE SOAP, by its cleansing, soothing and purifying qualities, gives nature a chance to act freely.

Natural beauty surpasses anything which can be imparted by artificial means. PHOSPHATE SOAP gives health to the skin simply by removing impurities and eradicating the poisons which give rise to skin diseases.

Not only for daily use on the face and hands, but for bathing the entire body, there is nothing equal to PHOSPHATE SOAP. It is a thorough disinfectant and removes offensive odors of every kind.

Ladies who have injured the skin by the constant use of cosmetics may do much to restore their faces to that beauty which nature alone can give by constantly using PHOSPHATE SOAP.

For all diseases of the skin use PHOSPHATE SOAP. There is nothing like it for removing impurities and giving the skin a healthy and natural vigor.

Cheap toilet soaps manufactured from rancid and refuse grease injure the skin and are really more expensive than PHOSPHATE SOAP, which retails for 25 cents per cake.

Thousands of articles are palmed off on the public which have no genuine merit, but PHOSPHATE SOAP is the result of modern discoveries of celebrated chemists.

PHOSPHATE SOAP costs no more than other good toilet soaps, while its medicinal qualities make it worth ten times its price to every man, woman and child.

If you want a nice article of Toilet Soap and something that is beneficial to the skin, buy PHOSPHATE SOAP.



H. J. HASKELL,



MANUFACTURER OF

CARRIAGES,  
BUGGIES,

— AND —

SPRING WAGONS,

At the Lowest Rates.

Corner of Alameda and White Streets,  
SAN JOSE, CAL.

NEW OPERAS!

**Carmen.** Opera by Bizet.....\$2.00  
Carmen is an Opera that has gradually and surely won its way to a great popularity. Although the book is large, in fact what one might call a "four dollar book," it is got up in elegant style with music and all the words, English and foreign, for \$2.00.

**Fatinitza.** Opera by Suppe.....\$2.00  
Splendid new Opera that is a decided success. A large, fine book, with English and foreign words, and the opera in every way complete, for a low price.

**Doctor of Alcantara.** By Eichberg.....\$1.50  
A famous opera, now brought, by the popular price, within the reach of all. Orchestral parts, \$15.

**Bells of Corneville.** By Planquette (nearly ready).....\$1.50  
A great success. This, with the "Doctor" and the "Sorcerer" (\$1.50) are well worth adopting by Companies who have finished Pinafore (still selling well for 50 cts.), and who are looking out for new and easy Operas.

Remember our first-class Singing School and Choir Books, VOICE OF WORSHIP and THE TEMPLE, each \$9 per dozen, or \$4 each. Send for copies. Also always remember the MUSICAL RECORD, published weekly. It keeps you well posted as to musical matters, gives six or seven pages of music per week and costs but \$2 per year.

OLIVER DITSON & CO., BOSTON.

C. H. Ditson & Co., 843 Broadway, N. Y.

THE WILSON ADJUSTABLE CHAIR,

With 30 Changes of Position.

Patented in the United States and Foreign Countries.  
BEST CHAIR IN THE WORLD.

Parlor,	Combining
LIBRARY,	Beauty,
Invalid Chair	Lightness,
Rocker,	Strength,
BED or	Simplicity
LOUNGE.	and
	Comfort.



READING POSITION.

Same Chair in Cane Seating, very desirable for summer. Manufactured of the best of wrought iron and rivets. Castors made purposely for the Chair. Everything to an exact science. **IT WILL LAST A LIFE-TIME.** Has been awarded Medals, Prizes and Diplomas for its superiority and merit wherever it has been exhibited. Orders by mail promptly attended to. Goods shipped to any address, C. O. D. Send for Illustrated Circular. Address the WILSON ADJUSTABLE CHAIR MFG CO., 535 Washington St., Boston

J. P. JONES. J. THOMPSON.  
**JONES & THOMPSON,**

Wholesale and Retail Dealers in

**Hay, Grain and Feed.**

Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,  
1535 Mission St., San Francisco.

M. COOKE R. J. COOKE

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,  
AND IN SHOOKS.

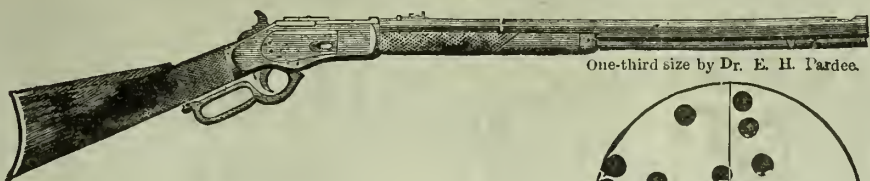
Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREGORY.

60 Elegant Perfumed Cards, Chromo, Motto, Lily, Etc., 15c. Gift with each pack. H. M. SMITH, Clintonville, Ct.

Winchester Repeating Rifle,

MODEL 1873.



One-third size by Dr. E. H. Lardee.



String measuring from center of target to center of each shot, 32 inches. Average distance of each shot, 1 9-100 inches.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder.

JOHN SKINKER, No. 115 Pine Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.

Week's Grape, Fruit and Flower Picker.

SIZE NO. 1.



Valentine's Patent, Aug. 1, 1865

any kind, it is an invaluable assistant. Sent by mail on receipt of \$1.25.

FLOWER PICKER.

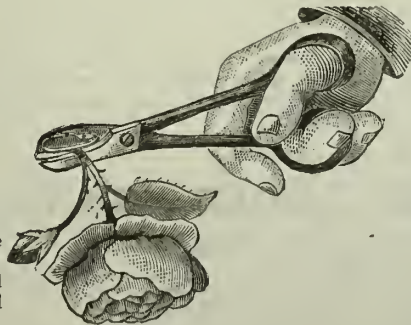
THE NO. 2, OR SMALLEST SIZE,

Is Particularly Adapted for

FLOWERS,

And will be found an invaluable assistant in the Garden or Hot-house.

THEY ARE MADE OF THE BEST MATERIAL, and finished in a workmanlike manner. Sent by mail on receipt of \$1.00.



FOR SALE BY

**Dunham, Carrigan & Co.,**

SAN FRANCISCO.

WELLS, RICHARDSON & CO'S PERFECTED BUTTER COLOR

Gives Butter the gilt-edge color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.



Pyrethrum Cinerariae Follum—A California Production.

THE MOST WONDERFUL DISCOVERY OF THE NINETEENTH CENTURY.

This wonderful Insect Powder will exterminate Flies, Weevils, Caterpillars, Mosquitoes, Midges, Crickets, Cockroaches, Spiders, Tarantulas, Scorpions, Ants, Hawk-bugs, Phylloxera, Plant Lice, Moths, Beetles, Grasshoppers, Locusts, Bed-bugs, Fleas, and every species of Insects. Remember that none is genuine unless my Trade-Mark is attached to every package.

\$100 WILL BE PAID IF IT FAILS TO KILL ANY INSECT.

Endorsed by Prof. F. W. Hilgard, of the University of California, and by Prof. C. V. Riley, Chief Entomological Commissioner at Washington, D. C., and pronounced superior to any imported article, and perfectly harmless to man and beast.

G. N. MILCO.

Patentee and Sole Manufacturer, Stockton, Cal.

CHARLES LANGLEY & CO., Wholesale Druggists, Sole Agents, S. F.

ARITHMETIC MADE EASY BY ROPP'S EASY CALCULATOR.

This valuable work is used by thousands of farmers, mechanics and business men, and is highly recommended for its practical utility and convenience.

It embodies an entirely new system of calculation, by which a vast amount of figures and mental labor—required by the ordinary methods—and fractions with their complexities, are absolutely avoided.

It is so simple and easily comprehended that even the most illiterate is enabled, in a few minutes, to reckon with absolute accuracy and speed; while its original and rapid methods, benefit and delight the most scholarly.

It shows at a glance the accurate value of wheat, corn, rye, oats, barley, cattle, hogs, hay, coal, lumber and merchandise, from one pound to a car load, and for any price the market is likely to reach.

It gives the interest, simple and compound, on any sum, or any time, at six, seven, eight, and ten per cent.; the exact measurement of boards, scantlings, timbers, saw logs, cisterns, tanks, wells, granaries, bins, wagon beds, corn cribs, etc., the wages at various rates, for hours, days, weeks and months; besides numerous other important methods, rules and tables.

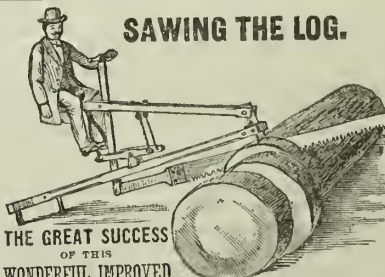
It is printed on fine tinted paper, is well and elegantly bound in pocket-book shape, and accompanied by a silicate slate, pocket for papers, and memorandum, which can be replenished in the two latter styles.

It answers the purpose of a pocket book and diary, and costs no more, although it was gotten up at great expense and labor, and is unquestionably one of the most useful publications ever issued from the press.

Price, bound in Fine English Cloth, \$1.00.

Sent direct from the Eastern publisher, postpaid, on receipt of price, by P. O. order, registered letter or receipted by express. Address

DEWEY & CO., San Francisco.



SAWING THE LOG.

THE GREAT SUCCESS

OF THIS

WONDERFUL IMPROVED Labor Saving RIDING SAW MACHINE is fully demonstrated by the number in use and the present demand for them. It saws Logs of any size. One man can saw more logs or cord wood in one day and easier than two men can the old way. It will saw a two foot log in three minutes. Every Farmer needs one. Township agents wanted. Send for Illustrated Circular and Terms. Address W. W. BOSTWICK & CO., 175 Elm St., Cincinnati, O.

Read This!

New Hotel, Just Opened on the European Plan.

ST. GEORGE HOTEL,

812 Kearny Street, near Old City Hall.

Meals served in first-class hotel style, of great variety and good quality, at all hours of the day for 25 cents. Steak and coffee 15 cents; coffee and cakes 10 cents.

Rooms from 25 cents to \$1 per night, as per size and location.

Board (per week) \$4.00

Room and Board (per week) \$5.50 to \$7.00

Accommodations for families correspondingly low.

North Beach and Mission street cars pass the door.

TIMOTHY SARGENT Manager

ROOMS TO RENT.

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.



# BAKER & HAMILTON,

## SAN FRANCISCO, CAL.

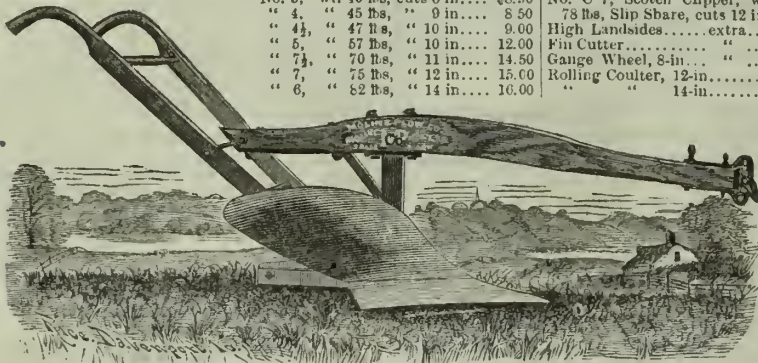
### Star Moline Plows.



Best,  
Cheapest,  
AND  
Most Durable!  
—  
Buy No Other.

**MOLINE PLOW CO.**  
**MOLINE, ILL.'S.**  
**TRADE MARK.**  
REGISTERED MAY 9 1871

We are the sole agents on this Coast for the Celebrated STAR MOLINE PLOWS. They are made EXTRA HARD, elegantly finished, and the only Plows which scour in every soil found in California and Oregon. Purchasers should see that each Plow is branded on the beam with a BRIGHT RED STAR, and our name over it. There are numerous cheap sheet-steel Moline Plows offered, which are nearly without merit excepting the name "Moline." Many of the Plows are iron which are sold for EXTRA-HARDENED STEEL, and purchasers should see that they are not imposed on by any imitation. The Star Moline Plows have been tested for the past four years, and found to wear longer than any other, draw much easier, and scour in any soil. The reputation of the EXTRA-HARDENED "STAR" MOLINE PLOW, as sold by us, has been so great, that the demand for them has induced numerous manufacturers to flood the State with sheet-steel imitations. Caution is therefore necessary in buying Plows. See that all have "BAKER & HAMILTON" on over the Star.



NO. 3, WOOD BEAM SLIP SHARE STAR MOLINE PLOW.

This Plow is made of cast steel; thoroughly hardened mold-board and landside; cuts 14 inches. The engraving also represents Nos. 7½, 4, and 4½, all being of the same shape, which cut 11, 10 and 9 inches respectively. All have Slip Shares.

SOLE AGENTS FOR

**Straub Burr Stone Grist Mills, Star Windmill Pumps,**  
**THERMOMETER AND BOX CHURNS, ETC.**

**EUREKA GANG PLOW, CORHAM SEEDERS, BAIN WAGONS.**

**Address BAKER & HAMILTON, San Francisco.**

### HILL'S IMPROVED GRANGER GANG.



The success of our Granger Gang has been unparalleled. It meets a long felt want for a CHEAP and effective Gang Plow in a very satisfactory manner. It has demonstrated conclusively that our plan of putting shares on the bottoms instead of using what are called "reversible" molds is the right one. We have proved that one of our small, thick, hard cast steel shares will last as long as both edges of a double-edged mold, and when it is worn out it can be replaced for a dollar, while it will cost nearer two dollars to replace the reversible mold.

A reversible mold is necessarily of an awkward, clumsy shape; being simply a piece of steel made concave—just as a board would warp if laid in the sun. By using shares on our bottoms we are enabled to make the mold boards of a form that will draw as easy and turn as well as those used on any Plow. We put from three to eight Plows in a Gang. They cut from eight to ten inches each, and will Plow from two to six inches deep.

This Plow is made in a style never before attempted in this State. The frames which are clear, well-seasoned lumber, are put together in the strongest manner and are handsomely painted. The wheels are provided with improved detachable hubs that can be cheaply replaced when worn out. One of the forward wheels is a caster, thus permitting the Plow to turn freely and effecting a great saving in the draft. The bottoms are provided with our chemically hardened cast steel molds, that will wear three times as long as the soft sheet steel molds used by other manufacturers. The shares, which are of double thickness near the point, can be easily and quickly sharpened when necessary.

REVERSIBLE

We also manufacture the

### REVERSIBLE MOLD GANG,

With bottom as shown in the adjoining cut.

### SEED SOWERS

Attached when ordered either for front or rear sowing to both the Granger and Reversible Mold Gangs.

SEND FOR CATALOGUE

Containing price list and full description, also illustrations of a great variety

**Farm Implements**

Manufactured by us.

**SWEEPSTAKE PLOW CO.,**  
San Leandro, Cal.

**BAKER & HAMILTON, Agents.**

### THE STAR MOLINE PLOWS

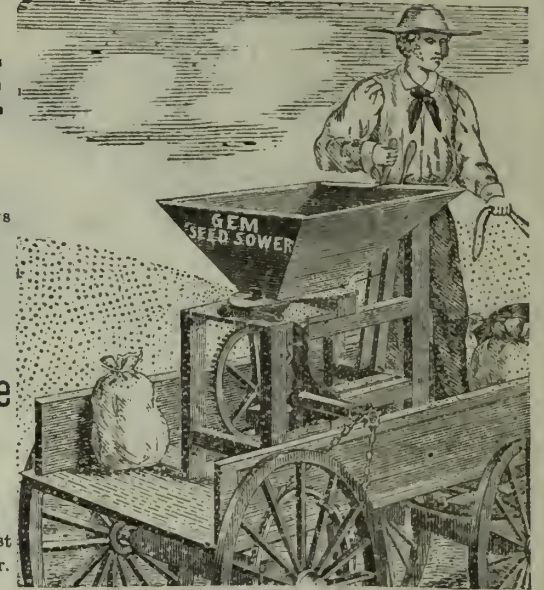
Sold by us are the best Steel Plows made. Every part can be duplicated by us. This is very important to Farmers.

ORDER THE

### Genuine Star Moline PLOW,

And Buy No Other.

The Farmer who desires the best quality of Plow will accept no other.



NO. 1 GEM SEED SOWER, \$30.

### THE GEM

Is the only SEED SOWER that has given perfect satisfaction and is the only one that the Farmer can depend upon sowing the seed evenly. It saves the price of itself in sowing 100 acres over the Old Cahoon Sower. The GEM sows Blue Stone Grain perfectly. The GEM sows about 60 feet wide.

#### PRICES:

No. 1 Gem, to run with chain and bevel gear, wt. 132 lbs. \$30 | No. 3 Gem, to run with all gears, wt. 165 lbs. \$40  
No. 2 Gem, to run with belt gear, wt. 154 lbs. \$35 | Nos. 2 and 3 only made to order.

The GEM will Sow Perfectly 75 Acres in One Day.

#### REASONS WHY THE GEM IS SUPERIOR TO THE CAHOON.

The GEM has two valves that supply the distributor with grain, one for each side of the wagon; therefore one may be closed when sowing by a fence, ditch, or land that is not to be sown. The distributor of the Gem whirls around horizontally, and throws the seed with great force to the right or left, but does not throw it up or down. The distributor of the Cahoon on the contrary whirls in a vertical plane like a windmill, and having but one valve, throws its seed equally in all directions—down, up, right and left—the result being that all the grain that is thrown up by a Cahoon Sower eventually falls in the same place as that which is thrown down, thus sowing the grain twice as thick behind the wagon as elsewhere. The Gem does not throw the seed up into the air to be blown about by the wind, but throws it sharply to the right and left.



SOLE PROPRIETORS AND MANUFACTURERS

### Celebrated Detrick "E W" 22x36 Grain Bag.

CALCUTTA, DUNDEE and PACIFIC JUTE HAND-SEWED BAGS always on hand. OUR No. 1, No. 2 and No. 3 SECOND-HAND GRAIN BAGS selected and graded with care.

**TWINES.** 3, 4 and 5-ply for Grain Bags, 6 and 8-ply for Potato Gunnies, 3-ply EXTRA FINE for Flour Bags, made expressly for our trade and QUALITY GUARANTEED.

FLOUR BAGS Printed to Order WITHOUT EXTRA CHARGE. POTATO GUNNIES, Wool, Bean, Ore and Salt and Seamless Cotton Bags.

### Tents, Awnings and Hydraulic Hose.

ORDERS PROMPTLY FILLED AT LOWEST MARKET RATES.

119, 121 and 123 Clay St., and 118 and 120 Commercial St., San Francisco.

### Wakelee's Patent Squirrel and Gopher



### EXTERMINATOR!

Sold by General Dealers and Druggists throughout the Coast.

**H. P. WAKELEE & CO., Druggists and Chemists, S. F.**

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 120 Sutter St., S. F.

**Patents** OBTAINED IN U. S. AND FOREIGN COUNTRIES; trademarks, labels and copyrights registered through DEWEY & CO.'S MINING AND SCIENTIFIC PATENT AGENCY, San Francisco. Send for free circular 60 Chromo, perfumed, Snowflake & Lace cards, name on all 10c. Game Authors, 15c. Lyman & Co., Clintonville, Ct.





Volume XVIII.]

SAN FRANCISCO, SATURDAY, NOVEMBER 1, 1879.

Number 18.

### Imported Game Birds.

EDITORS PRESS:—Can you tell us what has become of the Eastern quail and Australian pheasants, which were introduced some time ago in the hope that they would enrich our game resources, etc.—S., San Francisco.

We sought information on these points from Hon. B. B. Redding, of the California Fish Commission, as it was under the auspices of the commission that the praiseworthy attempts at acclimatization were made. The Eastern quail were set free in two localities. In the Montezeuma hills in Contra Costa county they have done well, and have become quite numerous, because they were preserved by the farmers, who would not allow them to be shot. Those liberated near Woodland, in Yolo county, were all killed and marketed within three months.

The English pheasants were set free two years ago upon Goat island, San Francisco bay. The first year they were preserved by Gen. McDowell's order prohibiting shooting on the island, and the pheasants were frequently seen, but have not been observed since then. Their loss is accounted for by two surmises. One is that the birds may have flown to the main land. Another is that they have all been captured by the great number of cats which live in a wild state upon the island. These cats are the offspring of numerous garrison felines, which were left upon the island when the soldiers were withdrawn, and which have lapsed into a wild-cat style of life. Another lot of pheasants were set free two months ago upon land owned by the Spring Valley Water Co., near one of their reservoirs. As no hunting is allowed upon this land the birds have escaped the huntsman. They have been carefully preserved and fed, and under these favorable conditions have prospered thus far. They have remained near the place where they were liberated and are occasionally seen. It is probable that they will nest next year and firmly establish themselves.

The wild turkeys of the northwest, which were placed upon Santa Cruz island by Judge Caton, have found plenty of food, and are reported to have shown signs of increase and permanent residence.

Mr. Redding suggests the great advantage of introducing the migratory quail of Europe, of which we gave a description and illustration in our issue of May 17th, 1879. This bird has been introduced by the hundreds in Vermont and Massachusetts, the stock being brought from Messina. The species is very destructive of grasshoppers and other field insects, and thus could do excellent service in our valleys, which are occasionally afflicted with such pests. As the bird is migratory in its habits, it might find congenial southern residence in Arizona and Mexico. For a northern home it could select its habitation according to its tastes, as our State from mountains to coast could somewhere suitably liking of the bird. This quail is most rapid in its multiplication, and being a good game bird would please the hunter as well as the farmer, whose crops it might help to guard from destroying insects.

Mr. Redding mentions the advisability of the appointment of a commission to secure and introduce valuable foreign birds to this State, and the suggestion is one we can heartily approve. Many competent, and public-spirited men could be found who would do the service without pecuniary compensation, merely for the satisfaction of enriching the State in the direction of feathered treasures. Their work would be analogous to that of the fish commission, and the gentlemen composing that body (although Mr. Redding did not mention it), are doing a public service, which is already showing its value by evidence which is as tangible as a man's breakfast. We trust the creation of an acclimatization commission to secure the introduction of valuable insectivorous birds will be one of the benefits conferred upon our great producing interest by the coming Legislature.

RED-FLESHED APPLE.—We notice that the Sacramento Bee acknowledges the receipt of a red-fleshed apple, presumably like that we described last week, and which it says was grown on the ranch of S. G. Lewis, near Grass Valley. From this it would seem that this fruit has already been propagated to a certain extent.

THE National fair at Washington was opened last Tuesday, 15,000 people being present.

### A Tropical Fruit.

Our engraving shows the foliage and fruit of the Tamarind, a tree of the tropics, famed for its beautiful foliage and edible fruit. The tree grows to a height of 60 to 80 feet, and casts a dense shade by its abundance of compound pinnate leaves, formed of 10 to 20 pairs of small leaflets. The blossoms of the tree are first white, turning to yellow afterward. The fruit-pods vary in length, from 3 to 6 inches, and are slightly curved. In the size of the pods lies the chief distinguishing mark between the different varieties. They consist of a brittle shell, inclosing a soft, acid, brown pulp, traversed by woody fibers. The seeds are 4 to 12 in number, and are immediately invested with a thin membranous covering. They owe their grateful acidity to the presence of citric, tartaric and other vegetable acids.

The tamarind is indigenous to various parts of Africa and India. The name is of Arabian origin, and is derived from "tamar," a palm,



THE TAMARIND—Tamarindus Indica.

and "Hindi," Indian; hence, "Indian palm, or date." The fruit is an important ingredient in its native countries, being largely used in cookery, as in the currie of India. They are also used for preserving fish, which, under the name of tamarind-fish, are considered a delicacy. Tamarinds are also used in tropical countries to prepare a refreshing drink, by pouring boiling water over the fruit. This drink is also used as a laxative and refrigerant in fevers. The wood is useful for timber, and makes a fine charcoal.

The tamarind has been introduced in most tropical countries. On this hemisphere it flourishes in some parts of Mexico and the West Indies. Shipments are made to this port from Mexico, and the fruit is exposed at our stores, but the consumption is comparatively small. It comes in a natural state and in preserved form, the shelled fruit being packed between alternate layers of sugar. In the West Indies its fruit is picked, deprived of its shell, and packed in casks, and boiling syrup is poured over them until the vessel is full; when cool, the package is headed up and is ready for market.

RUSSIAN WHEAT.—The latest advices from the south of Russia come by mail via England up to Sept. 22d. The supply of wheat on the spot was then small and lots sold at full rates. The market was reported very firm.

FLAX AS FODDER.—Last week we cited the experience of Mr. Fowler, of San Luis Obispo, as to the value of flax stems as fodder, preferring them to straw. The history of flax as fodder is a somewhat checkered one, and it can hardly be said to have a clean record. In Europe it has often been regarded as poisonous, and experiments have been instituted in Germany to test the effect of eating flax upon different animals. These experiments were conducted by Schutt. He gave large quantities of nearly ripe flax stems, from which the seed capsules had been removed, to a cow, and though the experiment was continued for a considerable time no injurious effect of any kind was noticed. A sheep fed on green flax exhibited no unfavorable symptoms beyond slight diarrhoea; but the administration of fully ripened flax, with the seed capsules attached, was followed by a quasaralytic condition, with dilated pupils, fixed eyes, and strong convulsions, terminating in death. From these symptoms, and the appearances presented on post-mortem examination, Schutt draws the conclusion that the capsules contain an acrid narcotic principle, which in-

duces inflammation of the intestines and disease of the kidneys, and probably has also a narcotic effect on the nervous system. The diarrhoea he ascribes to the mechanical irritation of the mucous membrane of the intestines, excited by the indigestible flax fibers. We should be glad to receive from any of our readers who have fed flax, a description of their experience with it, and the condition of the material at the time of feeding, in order that the subject may be set forth in its local bearings.

ONE PRUNE LESS.—Our Oregon friends find that the fine fruit which some of them have been propagating under the name of "Silver Prune," supposing it to be a new variety, is indeed Coe's Goldendrop plum. Thus it has been decided by a committee of the Oregon State Horticultural Society. It is fair to say that the fruit was honestly believed to be a new variety by the propagators. As the fruit grows to a perfection which is acknowledged, it matters little what its name, except that the good old Goldendrop should not be robbed of its laurels.

It is now stated that Sitting Bull and his entire following, numbering 6,000 persons, are waiting for the Missouri to freeze over, in order to return to the American side of the border.

### Peronospora-Proof Potatoes.

It is about time our potato-growing readers were reporting to us the result of their season's tests of different varieties of potatoes with reference to their blighting properties. Several growers have been giving this subject close attention this year, and they can do the public good service by reporting their results. Let us hear from Mr. E. H. Cheney, of Bodega, and all others who have learned something this season in their fields.

By the way of starting the discussion, we propose to cite certain results obtained abroad. It seems that in England certain varieties are doing much better than others, as has been also demonstrated by California experience. The London Farmer names the "Champion" and the "Magnum Bonum" as singularly free from disease this year. A correspondent of the London Standard, writing of the Magnum Bonum, says that he has now grown it for five years, and that this year, as in former seasons, it has come out free and untouched by disease. He has this year planted 26 acres of this variety, and but for them he says his potato crop would be a great loss. He attributes its disease-resisting qualities to "its vigorous constitution and hard woody stalk," and although this season the leaves were spotted badly by disease, "it never gets further." The halm, he says, is perfectly free from it and the "tubers invariably healthy." Similar testimony has been given in favor of other varieties. What is wanted is a potato that shall beat all others out of the field as a perfectly disease-proof plant. Possibly in this direction is to be found the means of extirpating the disease. The potato does not appear to yield to any other suggested remedies to any great extent. It is folly to plant potatoes known to be liable to the disease, when others exist that are accredited with great powers to resist it. With careful cultivation and development of the hardier varieties, we may ultimately succeed in producing potatoes that shall possess absolute immunity from *Peronospora infestans*, which will then cease throughout the land.

It is an interesting fact in this connection, that Major Hallett, of England, so widely known because of his breeding of choice cereals by selection of the best single ears, has also applied his style of breeding to the potato, and has brought out what he calls pedigree potatoes, which resist the disease. His method of proceeding is thus described: At starting, the tubers, say 20, of a perfectly healthy plant are planted whole. The best of the resultant 20 plants at digging-up time becomes plant "A" of its year, say 1870. The potatoes of the remaining 19 plants are called "B, 1870." Only the tubers of plant "A" are planted each year for further selection, producing annually plant "A;" and "B," which is used to produce seed for the general planting the year following; thus, in fact, re-starting every year with a single potato proved at the following harvest to be the best by the fact of its having produced the best plant. The results of this method of "breeding out" the disease is shown in this year's experience, as all know the year has been especially bad in England, because of the great excess of moisture. Major Hallett says: The value of each successive selection, even the latest, was most strikingly exemplified this year of almost universal blight when digging up the crop. Of the kidneys every one of the potatoes descended from plant "A, 1878," was absolutely free from the disease, while only two feet off, in the very first row of the descendants of "B, 1878," there were found four diseased tubers, and in the other rows six more; but this was only ten in a quantity sufficient to plant one-sixth of an acre, our consumption of each variety. Well might my man exclaim, "There can't be much doubt about selection after this."

Here is a hint for our potato experimenters, and while they are observing the effect upon the new varieties they introduce, it will be well to "breed up" some individual tubers of the old varieties which escape the disease.

THE body found lately on the shore of Lake Michigan has been identified as that of Burr, who accompanied Prof. Wise in the balloon Pathfinder.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eps.

### Fire-Proof Rock in California.

EDITORS PRESS:—Many years ago a stratum of peculiar clay was discovered near Milwaukee. It is from which a kiln of bricks were made as an experiment. They proved of a yellowish color and were unsalable. In the lapse of time it was noticed that wherever those yellow, worthless bricks had been used in connection with limestone in the construction of furnaces, the bricks were as uninjured by fire as were the limestones—till then the principal reliance for furnaces, forges, chimney-backs and the like.

At once the old dis-used clay-bank was revisited, large kilns of brick put up, and the city of Milwaukee had a near and ready source of great wealth.

Soon the Milwaukee fire-proof brick were in demand all over the States, and Canada; nay, more, were shipped across the Atlantic and around the Horn. Most of the steamer furnaces, hotel furnaces, mining and smelting works of the Pacific coast have been built with Milwaukee bricks imported at a cost of about 10 cents apiece!

Now, right here in Sierra county Cal., a ledge of rock exists that is singularly unaffected by the intense heat and the most sudden plunges into cold water thereafter, though repeated any number of times. The ledge is stratified just right for quarrying, water power is abundant and right at hand, in fact, crosses the ledge. No dan, even, is necessary, only a short flume. The rock is soft, yet tenacious, admirably adapted to sawing into blocks as desired.

A stage road passes within a few rods of the ledge, and the C. P. R. R., is but a half-day's drive away.

This fire-proof rock can be fashioned to suit, and laid down on the wharves of San Francisco, on the depots of the mining towns of California for one-quarter the cost of imported bricks, while in many respects it is 10 times better, as large blocks or peculiar shaped ones can be made at pleasure, thus saving expense of mortar while securing greater strength and durability.

What enterprising man or firm will take hold of and develop the new source of wealth? Consider what Milwaukee bricks have cost this coast, and, if this fire-proof rock is equally as good, it is easy to see that "there is millions in it."

J. G. LEMMON.

Sierra Valley, Oct. 22d, 1879.

## POULTRY YARD.

### Stimulants for Sitting Hens.

EDITORS PRESS:—Have you room for one more "Sitting Hens" item? When a hen has finished her litter of eggs she needs a little rest and chance to recuperate. Neither a cold foot-bath nor a red rag tied to her tail will furnish this, though both rag and bath may be justifiable in obstinate cases. It is better to make a hen feel gay than to put gay adornments on her tail. A warm, comfortable coop with clean roosts, plenty of rich food to eat, and iron water to drink, will soon invigorate her so that she will prefer to sing and lay rather than to cluck and sit. It is difficult to make "old sitting hens," of either people or poultry, when they feel rich blood and vigorous animal spirits bonnding through their veins.

I prize sunflower seeds above any other feed for sitting hens. The hen that insists on sitting after a three or four days' rest and a diet of rich blood-making food and drink may well have a prolonged hot bath in her owner's soup kettle.

C. A. W.

Cosy Nook, October 10th, 1879.

We find in the *Country Gentleman* the following remarks on "broodiness" in fowls, which is interesting in this connection:

In the dissection of laying hens, there will be found a cluster of small ova, varying in size from a shot to a large pea, and some ova still larger, owing to the nearness of the fowl to laying. These are situated at the junction of the rump-bone or saddle, and the back, just forward of the kidneys. This mass of ova is usually either in a perfect or imperfect state, according to the keeping and health of the bird. There are cases where no ova are apparent, and the hen is entirely barren, but it is not common, and oftener occurs with moults than with pure breeds. In hens which brood much, this mass is voided, much resembling air-slaked lime, mixed with a watery secretion, in the first stages of brooding. The state of broodiness is of immense help to the hen, for in it she receives not only that rest from the drain of egg-production, but the whole system undergoes a change, and when she comes up to laying again after this period, is in appearance young, and a new being. The season of incubation gives entire rest and repose, and it has often been a question whether these very sitters, in the long run, if rightly managed, are not the more profit-

able, where both eggs and chickens are required. It most certainly is natural for a hen to brood her own eggs. I am not writing with any reference to the Asiatics, but simply mean the common small breeds, among which may be reckoned the Dorkins, Games and Dominiques. They do not manifest the frequent desire to sit as witnessed with the larger bird, and lay larger clutches before the fever comes on.

There are also frequent manifestations of broodiness among the so-called non-sitters. I have seen the prettiest White Leghorn prove the most inveterate and persistent sitter. She is a prize bird, and always in order. She has been in condition for the fall shows for two successive years, owing to her sitting early in the season. Of course she was not allowed to sit on eggs, for the idea of allowing so fine a bird to brood chicks was out of the question. She was allowed, as special favor, to brood on the empty nest, since it suited her, until she was satisfied. She dropped her feathers, and gained in their place a beautiful coat, sleek and smooth as a pigeon's breast. She has the largest comb, the finest white ear-lobe, the yellowest legs and beak of any of the flock; lays the largest egg, and commences in September and continues throughout the fall and winter. She is all right every way except this one trick of sitting throughout May and the most of June. This fault has excluded her from the breeding pen heretofore, but her longevity and healthfulness more than outweigh this failing, and in future she has been promised the brooding of her own eggs. I think it good and healthful for a hen to sit now and then, even if she is of a variety usually excluded from this right of the feathered tribe. It is natural. Her chicks may not manifest the desire to any great extent.

We all know that any long-continued draft on the system reduces it, and as by thorough feeding the body of the hen becomes a mere egg-machine for the time being, it is only natural to suppose that the wear must tell, sooner or later, on the strength and vital resources. For this reason I think it is well for hens to have periods of sitting. It gives the organs of reproduction a rest, which they would not otherwise have, and which they require. It is for this reason that so few of the eggs of the non-sitter hatch. They lack fertilization, and the fault is with the hen many times, especially late in the season. She is worn out with egg production. She seldom survives the annual moult, and if she does, becomes nearly worthless the following season. Therefore, although it is desirable many times to have a hen perpetual layers as possible, I have arrived at the conclusion that it is better for the well-being of fowls to have a season of rest in sitting.

### Embryology of Incubation.

Now that many poultry breeders in this State are beginning to work with artificial incubation there will be renewed interest in the gradual change taking place in the egg during hatching: The People's Practical Poultry Book says of incubation: "The hen has scarcely set on her eggs 12 hours before some lineaments of the head and body of the chicken appear. The heart may be seen to beat at the end of the second day of incubation. It has at this time somewhat the form of a horse-shoe; but no blood appears. At the end of two days two vessels of blood are to be distinguished, the pulsation of which is very visible, one of these is the left ventricle and the other the root of the great artery. At the fiftieth hour one auricle of the heart appears, resembling a noose folded down upon itself. The beating of the heart is first observed in the auricle, afterwards in the ventricle. At the end of 70 hours the wings are distinguishable; and on the head two bubbles are seen for the brain, and one for the bill, and two for the fore and hind part of the head. Toward the end of the fourth day the two auricles already visible draw nearer to the heart than before. The liver appears toward the end of the fifth day. At the end of 131 hours the first voluntary motion is observed. At the end of seven hours more the lungs and stomach become visible, and four hours afterward the intestines and loins and upper jaw. At the 144th hour the ventricles are visible, and two drops of blood instead of the single one that was seen before. On the seventh day the brain begins to have some consistency. At the 290th hour the bill opens and the flesh appears on the breast. In four hours more the breast bone is seen. In six hours after this the ribs appear forming from the back, and the bill is clearly visible, as well as the gall-bladder. The bill becomes green at the end of 236 hours, and if the chicken be taken out of its covering at this period it evidently moves itself. The feathers begin to shoot out towards the end of the 240 hour, and the skull becomes gristly. At the 264th hour the eyes appear. At the 288th hour the ribs are perfect. At the 331st the spleen draws near the stomach, and the lungs to the chest. At the end of 355 hours the bill frequently opens and shuts; and at the end of the 18th day the first cry of the chicken is heard. It afterwards gets more strength and grows continually, till at length it is enabled to set itself free from its confinement.

"In the whole process we must remark that every part appears in its proper time. If, for example, the liver is formed on the fifth day, it is founded on the preceding situation of the chicken, and on the changes that are to follow. No part of the body could possibly appear either sooner or later without the whole embryo suffering."

## THE APIARY.

### Beginnings in Beekeeping.—No. 1.

EDITORS PRESS:—When I think of the many years that have passed by during which I might have, should have and would have kept bees had it been made plain to me through some of the agricultural journals that we have been reading, how easy, simple, interesting and profitable a thing it was to do, I am inclined to take up my pen to give a little of my experience from time to time for the benefit of your readers, plenty of whom like myself are living where a few hives would furnish them with a luxury that no table of either poor or rich ought to be without, and one which when we notice the saving in the sugar barrel no poor man can afford to dispense with. Better, far better in a warm climate let the pig-pen go empty than fail to have a few stands of bees.

"Oh, I am so afraid of them," says one; "I would not touch them; just think of having one's eyes closed up from the effect of a sting or the risk one runs when they go for the honey." Yes, my friend, so I thought until last spring when an apiarian came along who wished to trade two good swarms for trees from the nursery. I was too much Yankee to refuse the trade, as economy said make your own sweet, and he agreed to replace them if they died, so he put them on the bench and being in Harbison hives he opened the door of one so I could see through the glass that were plenty of workers and honey. The other he forgot to exhibit or explain that the strip was off so they could go into the room above, and no glass to keep them in if the door should be opened.

Next day, wishing to look at them and show how nicely we could examine them through the glass without danger, I opened the door of hive No. 2. As a matter of course they came out in numbers, to stop which we shut the door quickly, killing many, and fled. What shall we do? See the *Apiarian*; also look for something to read on the subject. The gentleman had forgotten to tell us to never do anything with the bees without first blowing smoke on them, either from a roll of cotton rags, or, better, get a tin-smoker made on purpose. The smoke makes them quiet and harmless if used before they get their "fight up." Beside using smoke, it is as well to have a bee-hat made of either fine wire cloth, black tarleton, or mosquito netting. Thus protected, you need never be stung, and will soon find it interesting as well as profitable to examine them often.

Since they came, little over six months ago, they have given us over 200 pounds nice comb honey and three new swarms, and would no doubt have done better but for want of experienced handling and having to be all transferred to new hives of a simpler make, so we could have a better chance to examine and handle them. They have also opened up to us an interesting subject to read about, thus furnishing the pleasure of reading five books beside magazines, etc.; but we intend to make beekeeping simple and profitable and give you the result.

But how about the worms—do they not trouble us? Well, they got into one weak, queenless hive and were rapidly using up the comb when discovered. I then began examining them every day about noon, when most of the workers were in the fields. I took out each frame, brushed off the bees with a large feather, and picked out the worms, sticking the point of a pen-knife into every place that showed any sign of a worm, and often found them in very unexpected places; but a little perseverance and a little time at noon each day soon cleared them of worms; and some frames of brood moved from the strong into the weak colonies, strengthened them up so they could better protect themselves. I have never since failed to look them over once or twice each week. Some say strong colonies, with queens, will always protect themselves, but one neighbor who had five swarms in box hives, lost them all this summer, and another who had fifteen was soon reduced to six. When I took charge of them I found one large swarm, with a good queen, in a two-story hive, the lower part full and storing above, which had been nearly destroyed in two weeks, thus showing that the only safety is in thorough examination. Worms were around there by the thousand, but by taking out and examining every frame twice a week, we have saved the rest, and they are still storing honey.

So let me repeat, keep bees, but keep them in movable frame hives, and examine them once a week, or oftener—every day, if you like—and you need not be afraid of worms. I believe, by being frequently handled, the bees become less inclined to fight; but never fail to have the smoker ready and give them a little to quiet them. If you will send your name to A. I. Root, Medina, Ohio, and to J. H. Nellis, Canajoharie, New York, on postal cards, they will no doubt send you valuable information about how to get smokes, etc., which everyone ought to have. And it will pay you well to buy and study one or more books like Quinby's "New Beekeeping;" but for such as are not prepared to thus study the subject, I will give in my next notes a description of the style of hive we use and how to make it, by the use of which we hope to secure a large yield of pure extracted honey, the only kind that ought to be used, as it is not only better and more wholesome than

comb honey to use, but the saving of wax, which it costs so much time for the bees to manufacture, is quite an item when they can be induced to spend that time in bringing home almost as much more honey.

J. B. R.  
Bakersfield, Cal.

CULTIVATING THE SAGE FOR BEE FEED.—San Diego News, Oct. 17: Mr. Pryal, of North Temescal, contributes an article to the *RURAL* in which he takes ground in favor of cultivating the sages for bee feed, as being the best honey producers on this coast. He introduces a comparison between the several sages and the articles usually planted for bee feed here and at the East, and declares in favor of our native sages, stating that they produce more and better honey than any other known article, which is no doubt quite true. The writer alludes to the fact that Mr. J. H. Harbison had pioneered the bee keepers to the honey belt of California. He might have added also that Mr. Harbison had, several years ago, suggested the planting of the sage for the purpose in question. We are not certain that he made any considerable experiment in that way, and although he resides in this town, he is not present to answer the question. But we know that he had persons out gathering the seeds; and we know that at one of his apiaries we have seen the sage growing in plowed ground to a limited extent, and marked how well it did compare with this volunteer growth near by; and we have noticed this in other localities, noticeably at Mel Sargent's place in San Vicente. Wherever a sage bush gets a planting in soft plowed earth, it does much better. But then the failure of the honey crop occasionally, even here in the most favored locality for the bee and for honey making, does not seem to depend more on the supply of the sages and other flowers, than on the character of the season itself. The year just closing exhibited perhaps flowers enough, but there was an absence of moisture necessary to reduce the solids of the flowers to a fluid. No amount of planting of sage could be expected to remedy such a trouble. The planting of trees near by might, but even that is an open question subject to a good deal of experiment before it is solved.

## THE STABLE.

### A California Horse Trots in 2:12½.

This year witnesses another notable reduction in the time required to trot a mile, and the figure is now 2:12½. This feat was accomplished by St. Julien, owned by Robert F. Morrow and O. A. Hickok. He was purchased in the East nearly three years ago, the price paid being \$18,000. He had then a record of 2:22, which was his best time until he trotted in 2:17 at the San Joaquin valley fair. He is a fine looking bay gelding, about 16 hands high, with nearly as much quality as a thoroughbred. He is by Volunteer, his dam a Clay mare.

The races at which St. Julien won were held at Oakland Driving Park on Saturday, October 25th, and Gen. Grant was present. The *Call* gives the following information about the race: St. Julien was called, and when he made his appearance he was greeted with a round of cheers. He was to trot for a purse of \$500, the conditions being that he was to beat the time of Rarus—2:13½. It was considered so hopeless a task that there was no one rash enough to take the longest odds that he would accomplish it. Fifty to twenty, fifty to ten, fifty to five, was vociferated, without eliciting a response, and all the eloquence of the pool-seller was wasted to find a customer on even slower time. Rarus attempted the same feat on the same track, and was forced to succumb, though he reached within three-quarters of a second of it, and many held it a superior performance to that made at Buffalo. In order that every safeguard should surround old Father Tempus, and there might not be a shadow of doubt cast on the performance, additional timers were appointed. The timers were C. W. Kellogg, H. A. Mayhew, C. G. Clinch, Eli Denison and J. R. Martiu. In addition to these there were others in the stand and on the ground directly under the wire who were as careful in making the time as were the officials. A few times St. Julien came rushing past in the final limbering of the muscles, and steeling the nerves for a great task. Hickok decided to have him trot this heat without a runner to accompany him, confident his own high spirit would be stimulus enough in the first trial, and that he would reserve the companion for the next. At last Hickok nodded his head to signify his readiness for the start, and away he swept at a rate which even the unpracticed eye could see was very fast. A clear, clean stroke. No clambering, dwelling or sprawling, the very perfection of trotting action, and with such a gallant bearing that old frequenters of the track, men who had seen trotting from the time ante-dating Lady Suffolk's days, pronounced him the beau ideal of the American trotters. He reached the quarter pole in 33 seconds, and it was evident this tremendous rate of speed was accelerated when going down the grade on the back quarter, and he flew past the fence posts like the black horse through the forests of the Hartz mountains. The half-mile was made in 1:05½, the



regular stride still being retained, no attempt to change his feet, or a wobble which would suggest a break. It is difficult to tell exactly the time of the three-quarters from the judges' stand, though 1:40 was given, which was probably nearly right. Down the homestretch he kept up the uniform stride, until he reached the grand stand, when the cheers exhilarated him to still greater exertions, and from the distance post in, no one ever witnessed a greater flight of trotting. The thousands present hurled cheer upon cheer as the driver came back to dismount. Those were anxious moments as Hickok dismounted from the sulky and came to the weighing stand, for all of this glory would be worthless if he lacked one pound of the 150 which the rules require. Up went the beam, one and a half pounds overweight; the presiding judge announces the feat accomplished—St. Julien has won. When the blackboard was hung out with the magical figures—2:12½—blazoned on it, the cheers were redoubled, and it was minutes before the welcoming shouts came to an end. Here was a fitting testimonial to the chieftain who had received the plaudits of a world, and those who believe in the doctrine of metempsychosis—if such were there—must have recognized some grand old time spirit animating St. Julien on this occasion. The gallant horse stood quietly in front of the judges' stand, as though he was fully aware of the distinction he had gained. The emperor of the tracks was dethroned, and the scepter held on the shores of the Pacific.

Feeding-Value of Oats, Beans, Maize, and Bran.

The London Live Stock Journal gives the following, which may help to raise the price of beans in this State if horse-feeders perceive their value for working animals:

Every good groom knows that sound oats and beans, in due proportion and at least a year old, are the very best food for a galloping horse; the only food on which it is possible to get the very best condition out of a race horse or a hunter. It has also recently become known that horses do slow work and get fat—indeed, too fat—on maize, Indian corn, which is frequently one-third cheaper than the best oats. In the East, horses are fed on barley, and it is a popular idea with English officers who have lived in Persia and Syria, that the change of food from barley to oats often, when imported, produces blindness in Arab horses.

Now, although no men understand better or so well how to get blood horses into galloping condition as English grooms, they do not, and few of their masters do, know the reason why oats and beans are the best food for putting muscular flesh on a horse. The agricultural chemist steps in here, makes the matter very plain, and shows that if you want pace, Indian corn, although nominally cheaper, is not cheap at all. According to Dr. Voelcker's and other chemists' analyses, we find in round numbers, in oats, beans, barley, and maize the following constituents:

	Oats.	Beans.	Barley.	Maize.
Water.....	14.3	14.5	14.3	14.4
Nitrogenous or muscle-producing compounds.....	12.0	26.5	9.5	10.5
Starch and other non-nitrogenous heat and fat-producing compounds.....	54.4	43.0	64.1	61.0
Oil, as ready-made fat.....	8.0	2.0	2.5	7.0
Indigestible woody fiber.....	10.3	11.5	7.0	5.5
Mineral matter (ash).....	3.0	3.5	2.6	2.1
Total.....	100.0	100.0	100.0	100.0

It was a common saying in Leicestershire, before deep draining, clean-cut fences, increased sheep-feeding, had improved agriculture at the expense of fox-hunting, after one of those five-and-forty minute runs at best pace that are now so rare, "It found out the horse that cat old beans and best oats." In fact, they made experiments they did not understand, which it was left for the modern chemist to explain.

When we feed a bullock, a sheep, or a pig for sale, after it has passed the store stage we want to make it fat as quickly and as cheaply as possible, but with a horse for work the object is, give him muscle, in common language, hard flesh.

When from any cause there is difficulty in getting a supply of the best oats, an excellent mixture may be made of crushed maize and beans in the proportion of two-thirds of maize and one of beans, which exactly afford the proportions of flesh-forming and fat-forming food.

Bran is a very valuable food in a stable for reducing the inflammatory effect of oats and beans. Made into mash, it has a cooling and laxative effect; but used in excess, especially in a dry state, it is apt to form stony secretions in the bowels of the horse. Stones produced from the excessive use of bran have been taken out of horses after death, weighing many pounds. When sawn through, they appear to be composed of a hard, crystalline mass, deposited in regular annular rings, resembling in appearance the concentric yearly rings of wood; they prove to be composed of phosphate of magnesia, and ammonia. Millers' horses are particularly subject to this malady. The best way to guard against it is to add half a pint to a pint of linseed, boiled until quite soft, to the mash of each horse.

THE FIELD.

Potato Growing in California.

Luther Burbank, of Sonoma county, gives the Rural New Yorker an article on potato growing in California, which contains main points of the business although many more might be added. The facts will be familiar to local readers, but may be of interest to our subscribers abroad:

In California we have so many varieties of climate and soil that what thrives in one place may fail in another when the conditions appear to be about the same, yet the potato, like most robust-growing vegetables, may be grown from one end of the State to the other, and from the mountains to the sea; but the best results in its culture are always obtained on a loose, sandy or loamy soil and in a cool climate. These conditions are found along the coast where potato culture and dairying are profitably carried on together. There the cool, moist trade-winds and fogs from the Pacific aid in retaining in the soil the moisture so necessary to the potato and in keeping the grass fresh and green for the dairy.

The markets of San Francisco are furnished with large quantities of early potatoes from the islands and banks of the Sacramento river, and from the land around the city and Half Moon Bay, but the larger portion of the main crop comes from near Humboldt, Bodega, and Tomales bays. Potatoes of excellent quality are also produced among the foothills of the Sierra Nevada and in various places in the central part of the State. In the warm, fertile valleys which produce the best corn and wheat, the yield of potatoes is usually small, though good crops of some of the early kinds may be raised if planted early enough to complete their growth between winter frosts and the hot, dry weather of June.

Potato culture here differs but little from that in the East. For the main crop the ground is plowed rather deep soon after the winter rains are over. As the plowing proceeds, pieces of potato are dropped along every fourth furrow; the ground is afterwards thoroughly harrowed and, if still rough or lumpy, is rolled or "clod-smashed." A light harrowing as the vines are coming up, and one cultivating are usually about all the attention the crop receives until digging time.

The digging, which is always done with a long-handled shovel, is mostly performed by Chinamen who go from field to field pitching their tents near by, where they board and lodge themselves until the season is over.

It is rather astonishing to see the dexterity and economy of muscle with which "John" inserts the shovel under a hill, usually exposing the whole lot at the first scoop. As soon as dug, the potatoes are stored in bulk in the field, or, more commonly, assorted and placed in gunny sacks and packed away in warehouses ready for shipment.

The varieties which do well here are not as numerous as they are east of the mountains. The Bodega Red, a hardy, strong-growing kind, is the one almost universally planted for the main crop. It requires a longer season than any other potato grown. Of it there is a sub-variety (sport) having a white skin; the Red, however, is preferred by growers because, if exposed to sun and air, the injury is less apparent to the eye, although it is none the less apparent to the taste.

In the old potato-growing sections, both these sorts seem to be failing; perhaps from old age, but more probably from planting small ones from year to year and a lack of potash in the soil, which is sure to occur when land is long cultivated to potatoes. Most growers have found that a load or two of ashes or a few loads of well-rotted straw-stack per acre, will double the yield. Both these fertilizers used to be thought worthless, but they are now carefully saved for this purpose.

Most of the new varieties have been tried here, yet only a few of them have been found profitable. Each locality has its favorite; the Indiana Premium and Late Rose are the best for dry land, Peerless, Snowflake, Jersey Peach-blow and Burbank yield heavily on moist land. The potato beetle has not yet made its appearance in the State, or, if it has, no damage has been reported.

The late spring showers of this year gave an opportunity to plant later than usual; in many places fine fields may be seen growing, which were planted after removing a crop of hay or grain.

Early potatoes have been so low as hardly to pay for digging; prices are better now, but there is little prospect for any great improvement, for there is more land planted to potatoes here this year than ever before.

Is this Truth at the Bottom of a Well?

EDITORS PRESS:—I have heard of some Indians raising corn without plowing the ground. They planted in holes, 18 or 20 inches deep, made by driving a sharp stick into the ground. This suggests raising corn, potatoes, and perhaps other crops by the same method on alkali ground, which is well known to be rich in plant food, but very hard to start plants on. The alkali is much stronger at the surface than farther

down, and it seems that if the plant could get a good start from roots well down, it might stand the alkali at the surface. A small amount of stimulant or corrective dry hen manure, dropped in the hole with the seed, might be well.

In case there was danger of surface water filling the holes, back furrowing could be done, and the holes be made on the furrows, this would have a tendency to keep the surface alkali from the plant whilst it was young.

Are there not among your thousands of readers some who can try this experiment, and report to the PRESS, which, if successful would add thousand of dollars to the value of this class of lands. C. A. W. Cosy Nook, Oct. 10th, 1879.

FLORICULTURE.

Growth of the Maiden-Hair Fern.

Although this beautiful plant cannot lay claim to floriferous power, its close alliance to flowers in the bouquet and floral decoration entitle it to this classification. We notice that the last meeting of the San Mateo Horticultural Society (and we wish there was one in every county of the State) Mr J. Burr, of Menlo Park read an essay on the propagation of *Adiantum cuneatum*, or Maiden's-Hair fern, which was listened to with close attention and elicited most favorable comments. We reprint the essay from the Redwood Times, as follows:

The culture of this fine variety of *Adiantum* I presume is generally understood by the most of you here, but a brief outline of my experience in the propagation and general management of this most beautiful of ferns may be of benefit to some, and if followed, I think will be rewarded with very good success.

Its propagation may be effected by seed and division of the stools. If by seed (spores) procure a frond that is well ripened before taken off the plant. Wrap in a piece of paper and hang it up until perfectly dry, so that when ready to sow you can rub it through your hands without bruising the seed. A great deal of controversy has taken place amongst able and practiced gardeners in regard to how, and in what manner to sow them. Some recommend sowing on soft bricks and covering the seed with moss; some in seed pans two-thirds filled with sandstone and peat, and covered with moss; others on pieces of soft, thick tree bark. But the most successful sowing I have seen was done as follows: We got some pieces of sandstone and broke them into pieces about the size of marbles, and two-thirds filled a seed pan. Then we got some fine peat and filled up the spaces between the sandstone until it was one compact body; then sowed the seed and covered it over with a thin layer of moss. We scraped off a stone (exposing the same surface of the moss as before), then watered and placed in an orchid house, and covered with a piece of glass so that the pan would retain the close humid atmosphere. The result was a fine crop of young *Adiantums*. I may say that soft bricks can be used in place of the sandstone, and fine, porous, leaf mold in place of the peat. Keep in a close atmosphere, and never allow the seed to get dry after they have commenced to germinate; if you do, failure is sure to be the result.

On division of the stools. About the month of January, is the best time to do this. On shaking out of the pot you find the hall one mass of roots; these you need have no fear of cutting up into four plants, providing you leave a crown to each plant, if in a six-inch pot; but if in a larger pot, say eight-inch, you can cut into more pieces. On repotting be careful not to put them in too large pots, as the crowns will not push until the roots touch the sides of the pot. Give a good watering when potted, but care must be taken not to give them too much until they commence to throw out fronds; then give them a good supply of water.

The best plants I ever saw exhibited measured nearly four feet through, single plants, and were grown in the following compost: Peat, two-thirds; friable loam, sand and well rotted manure, one-third, with a good sprinkling of sandstone, all mixed up together. But as it is almost an impossibility to get peat in this State, I have used the following mixture with good success: Leaf mold, two-thirds; creek sand, light soil, and a little well rotted manure, one-third, and in place of the sandstone, I use soft broken bricks and a little charcoal, well mixed up together, using plenty of drainage in the bottom of the pot.

In the month of January when repotting, when shaking out of the pots you find the pots are not well filled with roots, examine the drainage and put them back in the same pots, as it is a great mistake in potting before they are actually in want of it. If they are in want of potting then shift into a size larger pot, giving the soil and drainage as above, being careful not to give them too much water until the crowns commence to throw out free growths, then use the watering pot freely, giving a sprinkling overhead once or twice a week, using plenty of shade; and about the month of July give a watering of weak liquid manure once a week, unless you wish to have a good growth in them for the winter months. If so, instead of giving liquid manure water to encourage their growth, withhold the watering, only giving enough to keep the plant plump and sound. Then about

the end of August report as before and you will have useful plants for cutting from when flowers and foliage are scarce. I don't believe in keeping in a high temperature, as the growth is soft with no substance to it. I consider an ordinary greenhouse temperature is warm enough, unless those you wish to make growth in winter, then they will require a little artificial heat.

Making a Lawn.

Also by a member of the San Mateo Horticultural Society, and also not upon a strictly floral subject, but closely allied thereto, was a paper read last week on lawn making and preserving. The writer was T. W., a practical gardener, and this is the fullest clue to authorship given by the Times and Gazette. We quote as follows:

In obtaining a good substantial lawn, the first consideration is the preparing of the soil, the best time for which is just before heavy rains in the autumn. First get the desired grade or level of the intended lawn by leveling any inequalities in the surface which may assist, then trench the ground through to the depth of not less than 18 inches. By leveling the ground previous to trenching, it is easy then to work it through to a regular depth, which is a great point when the ground settles down; because if trenched deep in one place and shallow in another it will sink irregularly, and by trenching deep all weed seeds are buried too deep to germinate. Should the ground be poor, manure may be trenched in, but care should be taken that it is placed near the bottom of the trench, or sufficiently deep to prevent any weeds from coming up. Make the surface of the lands as level as possible as the work progresses. When it is finished, let it remain till there has been a few days' rain upon it, which will settle it far better than any other means. Then when it is sufficiently dry to work upon it, slightly stir the surface and make it as level as possible, then sow the seed; rake it nicely in and cover it a quarter of an inch thick with fine, well-prepared manure.

The seed may be sown at any time of the year, but the best time is from the beginning of November to the beginning of April, as then it requires but little artificial watering. Still care must be taken that it never gets dry after the seed has germinated, because if it does it will perish. It is not advisable to sow under shade trees before the middle of March, because the rain dripping from the trees sours and hardens the soil, and leaves it in a bad state for the seed. What little comes up, comes up weak and will never make a good turf. As soon as the grass is up, look out for weeds, which must be pulled up as soon as they make their appearance. When the grass is three inches high it should be mown. A sharp scythe is the best tool to cut it with the first time, but afterwards a machine may be used; and the best machines are those which collect the grass as they cut it, instead of scattering it about. The grass should be cut once a week.

The after care is to keep it well watered from the time of commencing watering in the spring until the beginning of September, then gradually diminish the quantity, so that by the end of October little or no more watering will be required. Through the winter mow when required and keep clear of all leaves, sticks and the like. In the spring it should be kept rolled, and if not in a very thriving condition, should be top-dressed, a good compost for which is thoroughly rotted manure, well decayed vegetable matter, wood ashes and a little lime, all well mixed together and sifted, and spread over the lawn.

Undoubtedly the best kind of grass for an open lawn is Kentucky blue grass; still it has its drawbacks. It is a long time coming up, and if not closely watched the weeds will get ahead of it. The Australian rye grass is good also—better than the blue grass in the shade. It is also easy to raise; still very tough to cut, and requires mowing three times to the blue grass' twice, and rarely, if ever makes so good and compact a lawn in the open as the blue grass.

ELECTRICITY IN FLOWERS.—Last evening a gentleman of this city accidentally made a most singular discovery respecting the electrical influence of the ordinary morning glory vines. Seated near the lattice work, over which the vine was trained, his attention was attracted to a single little branch tipped with a growing line extending straight out from the rest, and speculated within himself whether the tiny hairs with which the stem was clothed were not placed there for the purpose of conducting the electric fluid of the atmosphere to the plant. In order to continue this investigation he approached his finger within a half inch of it, and was amazed to observe a slight—almost imperceptible—yet unmistakable motion of the stem. As he pushed his finger a little nearer the stem trembled very visibly and was seemingly attracted and repelled from him. The hairs which he noticed before did not move, but remained erect. There was no wind at the time and the motion was purely an induced one. After this interesting experiment he placed the end of his finger within a short distance of the growing bud and slowly moved in a circular direction. The stem followed the motion until it was bent in the shape of a letter C, and when the finger was withdrawn instantly regained its former straight position. This last experiment was witnessed by several persons, all of whom tried it with varying success.—Lafayette (Ind.) Courier.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### To the Memory of Sister Carrie A. Colby.

[Written for the Rural Press by Mrs. M. B. LANDER.]

Bright and beautiful as was this 26th day of October, 1879, its autumn loveliness, we Grangers of Alhambra were called to dedicate to the sad burial rites of our beloved sister Caroline A. Colby. As this little knot of our immediate brothers and sisters gathered so sadly in fraternal love and trust about her open grave, there was born a consciousness, that by this sore trouble and loss was tightened the bond of sympathy that held as one Brotherhood hundreds of California's stout yeoman hearts. That by her demise we all have lost a champion, not less valiant and bold than was the acknowledged strength of the true womanly instinct that permeated her life, was shown by every act, and stands recorded evermore in her own living written words.

Sister Colby was a native of the State of Maine, and in firmness of principle was a fit daughter of that Limestone State. She was a graduate from one of Maine's best schools, and though finished in a prescribed course, she ceased not her studious habits and eager search for knowledge. Leaving school in the year 1856, she soon afterwards turned westward; coming to California, and soon thereafter found a teacher's home in Miss Mary Atkins' now Mrs. M. Atkins Lynch's Seminary, Benicia, where for four years she commanded the respect of principal and teachers, as well as won the love and esteem of many hundreds of California girls and young ladies that drank of the well of knowledge in this popular pioneer institution. The writer of this feeble eulogy being, a part of this time, a pupil of this *Home School*, knowingly and reverently testifies of her peculiar fitness for this chosen work, as well as for ministrations of love and kindness to homesick hearts. It was in these school labors that she met Miss Julia Rappleye, also a teacher, and now a missionary in Turkey. Friendship, strong and steadfast, linked their lives in one common cause of humanity, and while Miss Rappleye, with heroic heart, battled for God and Religion in a far distant foreign land, her friend, Carrie A. Smith, had in the meantime married George W. Colby, and in her adopted State still carried on the noble work by sending to her distant friend not only words of appreciation and encouragement, but the more tangible grains of gold she zealously made it her mission to gather. Most beautifully and touchingly were these traits of character dwelt upon by Reverend Mr. Dickerman, who made her funeral oration. His were more the words of a friend than of her minister; and the silent dead of the flower-strewn casket before us, was, as it were, made to speak, as were read her last written words for the missionary column of the *Pacific* (which she so ably and acceptably conducted), strongly showing her zeal in the cause of truth and progression, and particularly exemplifying her love for advancement and true refinement of woman. And to still further show our sister's exemplary Christian character, were quoted the words of her respected friend and principal, "she was ever and always a soother of pain and sorrow."

While Sister Colby's hand and heart were overflowing with manifold duties of home and Christian work, her well-balanced, active mind made the pen a ministering agent of her loved Grange work; its windings, together with the indomitable will, energy and perseverance of Bros. Steele, Adams and Pilkington, made the *California Patron* a welcome visitor to many a fireside, where her's is a familiar and revered name. These brothers and associate editors, with Bros. Lewelling, Deming, Gardner and others I cannot now name, were the honored pall-bearers who so tenderly and reverently lowered this loved inanimate form to its quiet grave-home upon the summit of Hill cemetery, Benicia. Silent tear-drops told the unspeakable sorrow of a large concourse of mourning friends, while the Grangers' symbolic sprig of evergreen shone with glistening tears, as the coffin-bed was strewn with this flower-token of everlasting remembrance.

Promising girlhood, maturing womanhood, happy wifehood and complete motherhood, all told in the short space of 42 years, when seemingly to mortal and friendly eyes our sister had hardly reached the meridian of usefulness, nor yet attained half the completeness of that armory of good and pure things which her whole life had been dedicated to storing, when that merciless arrow of death with his unerring shaft of disease pierced vitally that delicate frame, which in the past had so oft successfully parried his thrusts, rudely snapped in twain those links of affection, love and esteem so perfectly formed and cemented by almost every act of a well-spent life.

In health our sister had ever been an attendant of Grange meetings, though the last few months, on account of feeble health, her visits had been irregular; though in our well-remembered "Grange Reunion" of August last, we were favored for a few hours only with her usual quiet presence and cheerful smiles. Scarce

had the echoes of her gentle voice and light footfalls passed from Alhambra Hall, ere we were again apprised of her sufferings, and when at the annual meeting of the State Grange was felt the creeping shadows of a vacant chair, sorrowful words and vain regrets of brotherly and sisterly hearts were glowing indications of those living influences that had crowned the words, works and cheerful labors of this absent sick sister with immortelles of memory, cherished by all those lives whose chosen cause she had consecrated to them anew, by her earnest sympathetic words of cheer and good-will to all!

While we, the stranger, can so feebly testify to the spell of our sister's life, what can be said of the hereavement of our brother—him, who for the short period of their married life has been "thought of her thought," "life of her life?" And again, of the loss of those four motherless babes; to two of which time has kindly left the blessed heritage of a realizing mother-love; the other two deprived of even a conscious memory of that kindly spirit that has so far brightened their babyhood into a fullness of that love that indeed made the home of her and hers an everliving wellspring of joy and happiness. Sorrowing family, friends, brothers and sisters, she hath passed away; gone to meet that spirit-babe, her first-born, whose baby-smiles and tears were called to brighten that Higher sphere, whose existence, to her, we are led to believe is now no exalted spiritual dream, but an ever conscious reality. Hers but another life-page written and rolled into that scroll, which the irrevocable past has stamped with his golden seal—well done.

To the stricken family whose home-light is dimmed, to that church whose most active member has in her own dying words "gone to be with Jesus;" to society whose tone and temper was ever ennobled and made purer and brighter by her presence; to friends who have lost a comforter and counselor, as well as to those casual readers who have reached higher because of her inspired pen thoughts, of all, may we not ask, has not your life become richer and fuller in conceptions of love, friendship and brotherly feeling because of the far-reaching fullness of this one life, and is there one to say me nay when is given that highest of all tributes to loved ones passed away—"she hath done what she could?"

Martinez, Oct. 27th 1879.

### The Establishment of Experimental Farms.

EDITORS PRESS:—I noticed with pleasure the call for an open Grange meeting for the consideration of the "propriety and feasibility of asking the general Government to establish an experimental farm in California," and regretted my inability to be present. The establishment of experimental farms, with proper and judicious management, would be of incalculable value to the State, tending in the course of a few years to increase our production and wealth, and to encourage the settlement of the State by good industrial classes to such a degree that it would be a paying investment. It would afford the practical industrial education that we very much need.

A few years ago, by Act of Congress, a donation was made to this State of 150,000 acres of land "for the benefit of agriculture and the mechanic arts, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." The manner in which that donation has been appropriated and managed in our State, and the meager results, comparatively, which have been obtained for the benefit of agriculture and the mechanic arts, may militate somewhat against a future application to Congress for a similar object; yet I believe, considering our peculiar situation, climates, etc., that we will be justified in asking it, and that Congress will do well to grant it.

There are those who have claimed that the grant of 1862 has, strictly speaking, been forfeited. The following are some of the reasons: In disposing of it the State did not provide that the terms of the grant should be complied with. It did not provide that the fund derived from the grant should be maintained intact and the interest inviolably appropriated in accordance with the specific purposes of the grant. The expenses of selecting and disposing of the lands, etc. have not been paid out of the State Treasury, as required by the terms of the grant. The interest has been used for general University purposes and not specifically for the agricultural and mechanical department, or for the leading object of practical industrial education.

Certain it is, in the opinion of leading agriculturists, that the custodians of the grant in this State have not had a just appreciation of the intent of the Act of Congress, but have construed it according to their own peculiar views. All those defects it is believed can be and will be in time corrected, and further, that the regents will be willing to extend aid in the establishment of experimental stations under the guidance of the Professor of Agriculture, whose sympathies are known to be with the industrial classes, and in harmony with such a movement.

To secure an experimental farm, stock it and put it in thorough operation, would require a considerable outlay, but in a few years it should be made to return a direct profit in dollars and

cents, because that is the proper way to give practical instruction. Most of the agricultural schools of Europe, and they are quite numerous, have experimental farms in connection. Many of those farms, if not all of them, are made to return a profit. The school of Eldena, in Prussia, for instance, has an experimental farm of 841 acres, yielding a net revenue, of which 5,000 thalers is set apart for the benefit of the school; the rest is used in improving the place.

Much the greater benefit, however, would be derived in another way, namely, by the facts elicited, which would enable us to gain data from which to work in the future, through the correct and thorough record kept and the conclusions drawn, and the comparisons and averages made from time to time. In stock breeding, for example, suppose we take three prominent breeds of cattle, as Short Horns, Devon and Ayrshire, which might represent beef, work and milk; or Short Horns, Hereford and Alderney, which would represent two great beef-producing families, and one famous for peculiar quality of milk. Let them be bred separate and distinct; take, also, their crosses; and besides, the grades from each upon the best native cows, through a course of 10 years, keeping a careful record of their cost; and, also, their market value when sold; their adaptability to various uses, the relative value and amount of beef, bone, fat and offal; their power of withstanding climatic changes, disease and other contingencies that occur; their economical and relative value as between the pure bloods, crosses and grades. The data that might be gained in this way would add an immense value to the wealth and producing power of the State.

The same principle may be adopted with the grains, grasses and other crops, using different modes of cultivation, taking care in selecting and establishing varieties and the production of new sorts, which being continued from generation to generation would ultimately result in increasing the standard of agricultural science to a high degree. It would be necessary that the whole minutiae of farm operations should be carried out, not on an extensive scale, perhaps, but to a sufficient degree to illustrate—

1st. The best methods of growing crops; experiments pertaining thereto, including the testing of new plants, keeping a correct and absolute record thereof, with a comparison from year to year.

2d. The different breeds of farm stock, their adaptability to various uses; the proper mode of management, sheltering, feeding, and their various economical values.

3d. The management of the dairy and household.

4th. Horticulture in its different departments, as pomology, kitchen gardening, arboriculture, floriculture, rural adornment, etc.

Some kinds of manufacturing would almost necessarily attach to such a farm, and very many might be attached with the best results, so that the products of the farm should be worked up into the best and most economical form for marketing; for example, fruit drying, raisin making, wine making, brewing, sugar making, starch making, tile making, brick making, etc., etc. These, under favorable circumstances, would yield good results, and would help very materially to make up one of the best, and certainly the most practical educational institution that the State could have. The most useful education is that which best fits the youth of the land for getting bread and butter; and the education which contributes most, in the long run, to the wealth and permanent prosperity of a State, is that which most encourages and stimulates production and manufactures.

There is another great need, in this connection, to which I desire to call attention, namely the need of a way of publishing, for the benefit and education of the people, such facts and industrial knowledge as can be gained, and should take a more extended and permanent form than can be afforded by the agricultural papers or newspapers. Suppose, for instance, that we get established an experimental farm. Then we must have a way to publish the facts and results annually developed thereon, so that the people shall have the full benefit of it in permanent form. The Agricultural Professor in the State University has proposed to commence, at an early day, an agricultural survey of counties. Such a work would be very interesting and useful, but it would be quite essential that it be published in suitable form for use and reference by the people.

We need a State Board of Agriculture, composed of a dozen or more enterprising and public-spirited men, to meet once, twice or more times a year for consultation and deliberation in regard to the agricultural and manufacturing interests of the State; with a Secretary, whose time shall be devoted to the collection of industrial statistics, facts and information from and in regard to all the counties, of reports from all industrial organizations, and to procuring such other information in regard to the resources and industrial progress of the State as may be attainable, and prepare the whole for publication by the State in an annual report.

See the annual reports of the Massachusetts State Board of Agriculture, and you will find a mass of industrial information of immense value to that State, including reports from their agricultural college and experimental farm.

We have a State Agricultural Society it is true, but about the extent of its mission is to give us an annual State fair, which is well enough as far as it goes, but it does not go far enough.

We have our State Grange, and the local

Granges, but the light they develop is too much hidden under a bushel.

The *Grange Bulletin* urges members of the Grange to select subjects beforehand, to read and study them, so as to make the meetings interesting and profitable. It says: "In this way we all become educated. And when you become familiar with one subject, you advance step by step in the educational work." This is very well so far as it goes, but it should be the mission of educators to let their light shine among men. It is enough that the executive work of the Grange be secret, but there should be a way of giving to the public such facts and useful information developed by the Granges as may be of common interest. I have often thought of words uttered many years ago by one of the best medical teachers that ever lived. He said to a class of several hundred medical students: "If I could give you the best piece of advice in my power, I think I should give you this advice, namely: In all your dealings with mankind, as physicians, and in all your life-doings, strive, first, to increase the boundaries of your knowledge; and second, strive to make that knowledge as vulgar, as popular as possible." This is sound doctrine, and will apply to most of the callings in life quite as well as to the physician's.

I wish success to the experimental farm movement, and hope also that the suggestion for a State Board of Agriculture, on a good basis, may meet with favor.

L. D. MORSE.

San Mateo, Oct. 9th, 1879.

### State Board of Agriculture.

The *Sacramento Bee* says: The State Board of Agriculture held a meeting at the Secretary's office on Monday, at which were present President La Rne, and Directors Shippee, Perkins, Coleman, Hancock, Flint and Newton.

A large amount of business was transacted. The time heretofore fixed for holding the annual fair for 1880 was changed so that the fair will commence the third Monday in September, and close the Saturday following.

The annual meeting of the Society for the report of officers, and the election of a President and three Directors, was fixed for the third Tuesday in January, 1880, at the pavilion in Sacramento, at 1 o'clock P. M. The last meeting of the Board for this year will be held on the Monday preceding, at 3 o'clock P. M.

A large number of protests against the decisions of committees in various departments of the fair were read and considered, but the action of the committees was generally sustained by the Board.

The Secretary was authorized to have made and prepared for delivery the necessary number of gold and silver medals to pay the awards at the late fair. Also to procure and have lettered the necessary number of diplomas.

The Board decided not to allow any sheep to compete at the next State fair, wearing blankets, or that have been blanketed since last shorn, and that the rule of the Society in reference to shearing sheep for exhibition should be rigidly enforced. Also in reference to diseased sheep. These rules require that all sheep admitted to competition must have been fully shorn during the past spring, and that they shall be free from disease.

The matter of making a radical change in the manner of offering and awarding premiums was discussed at length and laid over.

The idea was suggested of grouping all classes of stock and all articles of goods into classes, according to similarity of their natures or character, and offering so much money, or medals and money, to be awarded to all stock or articles in the group or class, according to merit, and in proportion to the value of each person's contribution to the whole exhibition in the whole group or class. The plan as applied to the art department at the last State fair worked so admirably and successfully it is suggested to extend it to all other departments.

### Special Premiums.

In reference to special premiums recommended by committees at the late fair, the following action was had:

B. N. Bugbey, Folsom—Diploma for patent axle for wagons and carriages.

H. H. Linnell & Co., Sacramento—Diploma for grain-saving elevator and stacker.

Leon M. Bowdoin, Nevada City—Rotary top table; diploma.

Griffith & Burke, Cacheville—For samples of wheat in variety; diploma.

J. F. Whyte, Sacramento—Diploma for street railroad turning table.

J. R. Crandall, Auburn—Diploma for apple-parer and slicer.

Dietrich Doernau, Sacramento—Diploma for distilling.

The preliminary report of the Secretary shows that there has been paid since the first of February last, of old indebtedness, the sum of \$88,332.02. They have paid to date expenses and premiums for this year about \$14,231.93, and will be able to pay all current expenses in full and have the indebtedness of the society reduced some thousands of dollars.

STEPHEN A. DOUGLAS, son of the late Senator, has been compelled to leave North Carolina on account of petty political persecutions.

DURING the past week specie in the Imperial Bank of Germany increased 12,859,000 marks.



## AGRICULTURAL NOTES.

## CALIFORNIA.

## CONTRA COSTA.

**NORMAN STALLIONS.**—Antioch Ledger, Oct. 25: Peter Fitzpatrick, who resides on a farm one mile and a half south of town, returned from Illinois last Saturday, bringing with him two fine Norman stallions. They are beauties, one being a dapple, the other an iron-gray. They weigh each 1,800 pounds, and are handsomely proportioned. Farmers who desire to improve their stock will do well to call at Fitzpatrick's ranch and take a look at these splendid animals.

## FRESNO.

**ITEMS.**—Expositor, Oct. 22: P. D. Jones, of Wildflower, informs us that there were over 25,000 sacks of wheat raised in the Duke Settlement this season. We are informed that a large number of sheep were in the mountains during the late storm, and it is supposed that several thousand head perished in the snow. The higher peaks of the Sierras are clothed with snow but here on the plains the flowers are in blossom, the trees and vines green, and laden with fruit. The new grass is springing up rapidly.

## LAKE.

**NEW AGRICULTURAL SOCIETY PROPOSED.**—Lower Lake Bulletin: Delegates from each voting precinct will meet in council at Kelseyville, November 15th, to form an agricultural society, appoint committees on constitution, by-laws, rules and regulations, and take such other action as may be necessary to carry into effect the desired object, and to report for approval, correction or amendment at an adjourned meeting.

## LOS ANGELES.

**HONEY THIEVES.**—Los Angeles Express: Thursday night Mr. J. Weber, who has a bee ranch in Verdugo canyon, about 13 miles from town, discovered two bears making sad havoc with his hives. He sallied forth with his shotgun and revolver and at the first fire from his revolver the smaller grizzly fell, shot through the heart, the ball penetrating the left side and being found under the skin on the right side. Though Mr. Weber fired six shots into the larger one, it got away. The dead bear was skinned and exhibited at Froehlinger & Frank's butcher shop yesterday. It weighed over 200 pounds and was nearly two years old.

**NEW FRUIT DRIER.**—Anaheim Gazette, Oct. 24: Messrs. Grimshaw & Sorenson are fitting up a fruit drier in the rear of the former gentleman's place of business on Los Angeles street. The furnaces and smoke-stack of the old Alden drier will be used.

## MARIN.

**WHITE VALLEY.**—Journal, Oct. 23: This charming little valley is one of the most productive spots in this county. Roy brothers have fine fields of Egyptian corn and sorghum, some of the latter being nine feet high. On the south is the elegant home place of Mr. Mailliard. Along the main valley are the rich farms of J. C. and W. J. Dickson, Roy brothers, San Geronimo station, with the schoolhouse and village, the mining settlement of several families, and R. K. Rogers' place, on which is one of the finest herds of cows in the county.

## MONTEREY.

**DESTROYING WEEDS.**—Democrat: David Jacks wants a law passed compelling every person who owns a foot or more of land to destroy every cockle-burr that springs up before it goes to seed. He says that, unless something is done to check it, the cockle-burr will overspread the country and become a far worse pest to farmers than the Canada thistle ever was.

**DRY WORK.**—Farmers about Gonzales are busy dry plowing, but they don't sow yet.

## SACRAMENTO.

**THE OUTLOOK.**—Bee: The sowing season is here and the farmers in all directions are making the most of it. Much ground is already red. The summer-fallow land is being seeded and the harrows are active all through central and northern California. One of the leading agricultural implement firms of this city tell us that they have thus far in the present fall sold more harrows than in any previous autumn; and this they take as an indication of the greater amount of grain that is being sowed.

## SANTA BARBARA

**LOMPOC ARRANGEMENT.**—San Luis Obispo Advocate: We learn from Mr. Norval Butchart, of Lompoc, that all lands unsold in the Lompoc colony have been reduced 25% from schedule prices, and interest reduced to 6% per annum. All purchasers having paid up in full for their lands will be allowed a rebate in the same proportion, payable in land. We understand that the colony lands have gone back into the original hands, and that the stockholders will receive land in their division. On this change the people are very much encouraged, and have taken hold with renewed life. A number of new settlers are moving in, and more prosperous times are at hand for the people in that section.

**BEANS.**—Press, Oct. 25: The Carpinteria farmers were lucky enough to plant a large acreage to the Lima bean, and their crop will bring in the neighborhood of \$25,000. Those who have raised bayos and pea beans will store them and hold for better prices.

## SANTA CRUZ.

**SUMMIT FRUIT GROWERS' ASSOCIATION.**—

**Sentinel, Oct. 25:** A fruit growers' association has been organized on the Summit. Lyman J. Burrell, the pioneer fruit grower and mountain farmer, was elected President; H. C. Morrell and Thos. Slaughter, Vice-Presidents; George Miller, Secretary, and J. B. Burrell Corresponding Secretary. One of its first meetings was held in the Summit Chapel last Saturday afternoon. Each member brought samples of the different kinds of fruit which had been grown on their respective ranches. Quite a number of ladies were present, who officiated as tasters, samplers and general inspectors. The collection of mammoth grapes from Judge Miller's farm was truly immense. Those from H. C. Morrell's place were also very fine. J. B. Burrell produced some good specimens of late peaches. The apples from Wright's Oak Hill Ranch, of which there were several varieties of large size, presented quite a handsome appearance. The object of this association is to produce a unity of action in regard to general fruit culture, prices, etc. An association of this kind would be of considerable importance, as the mountain vineyards and orchards represent many hundred tons of fruit.

## SANTA CLARA.

**PROSPERITY.**—Mercury: The San Jose Fruit Packing Company has put up over 1,000,000 cans of fruit this season, all of which has been sold. A large addition to their buildings will be erected this winter, which will greatly increase their canning capacity.

## SONOMA.

**A WARM BELT.**—Russian River Flag, Oct. 23: Robert Thompson demonstrated last winter that there was a belt of climate on Sonoma mountain, which at an elevation of 500 feet was 10° warmer than that of the valley. Walter Turnbull, one mile west of Healdsburg, has proved the existence of such a belt on our foothills by the success he has met in his orange orchard, at an elevation of about 100 feet from the valley.

**A HOG MUTILATING HORSES.**—From time to time within two years past horses put to pasture in the country round about have been mysteriously cut about the legs, and sometimes had their bodies ripped open. Hence there was good cause for some excitement, when on Tuesday of last week it was discovered that during the night previous three fine horses, running in the pasture at the Snider place, Upper Dry creek, had been badly cut, one fatally. Still greater was the feeling, when on the following night, Mrs. Snider's saddle horse was mutilated. On the next night, Officer Sewell, of Healdsburg; Thos. Miles (Mrs. Snider's son), and Willie, adopted son of D. D. Phillips, armed themselves, and passed the dark hours in the fatal pasture. During the night a tame boar, running with other hogs in the field, came near them, and they could see that he was striking his jaws together and making war signs. After a while they saw him in the vicinity of one of the colts, acting ferociously. And sure enough, in the morning the colt was found to be cut, and foam and other signs at hand proved the cutting to be done by a hog.

## STANISLAUS.

**THE NEW SEASON OPENED.**—News, Oct. 24: The recent rain has had the effect of causing grass and much of the fall-sown grain to sprout, and in consequence, many of the fields and hill-sides of our county are already beginning to wear a green appearance. The first rain has come upon us unusually early, still it will be no disadvantage, if moisture sufficient to keep the young grain and vegetation growing can be secured until the winter rains set in. On that score many of our farmers think there is not much danger to be apprehended, as the ground already contains considerable moisture, especially on summer-fallowed lands.

## TULARE.

**WORK AND CROPS.**—Delta, Oct. 25: Plowing and other work on the farms is going on quite briskly now. From various portions of the county we learn that our people are gradually seeding their farms to alfalfa, with the intention of engaging more extensively in the stock business and depending less on wheat growing. Several farmers around Tulare are putting in from 10 to 80 acres. This portion of the county has heretofore suffered for the want of water, but one or two ditches have been constructed, and they say that if they can get one good wetting in a season, they are satisfied from experience that alfalfa will prove a good enough crop to raise stock on in that vicinity. It is worth while to drive through the Mussel Slough country just to see the immense fields of Egyptian corn, which cereal is just now being harvested. The heavy heads are cut off into a basket and emptied into a wagon; when that is full it is unloaded at the stack, which often assumes the proportions of a pretty good-sized haystack. Since there is a great deal more than the chickens can manage, it is fortunate that the cows and horses show great willingness to assist in disposing of the crop. They are said to thrive well on it, too.

## VENTURA.

**RUST-PROOF WHEAT.**—Free Press, Oct. 18: We learn that Mr. T. R. Bard has procured from Scotland a small lot of wheat known as the "Mainstay," which resists rust even amid the cold fogs of that country.

**RAIN NOTES.**—Fifty-seven hundredths of an inch of rain fell here on Sunday evening last, between 6½ and 10 o'clock. It was as lively a downpour as is generally seen, while it lasted. We learn that a good many beans were lost, as the pods burst, scattering the beans on the

ground. Otherwise, no harm was done. The two following days were quite cold, for Ventura. In 1877, the first rain, amounting to .85, fell on November 12th, and the first shower in 1878 was on October 15th, when we had .34 of an inch.

## NEVADA.

**PECULIAR SOILS.**—Reno Gazette, Oct. 23: Farming in Nevada is almost as uncertain as mining. The soil in many parts of the State is very "spotty," and the division lines between the best and the worst lands are often only a few inches wide. The Humboldt meadows around Lovelocks contain some of the richest land in the world, and also some of the very worst, and the strangest part of it is that no one can tell anything about it by comparing it with land anywhere else. There is very hard, some black-colored ground, which looks as if it would produce anything, but which is so full of saltpeter and black alkali that nothing will grow on it. Water which stands on it a few hours gets the color of a very dark beer. Other tracts are white with alkali and salt for miles. Others near the mountains are composed of granitic particles, sand, soil and alkali, in all shades of proportion. There is a bluish-tinted soil, too, which is very deceptive. While being soft and loose, and of a very promising appearance, it is in reality almost worthless. The receding waters of the lake leave whole townships of tule lands, whose value still remains unsettled. The whole valley, containing about 90,000 acres, seems to have had for a basis a salty alkaline plain, through which the river once meandered about in the middle, overflowing frequently and depositing the rich sediments swept down from the mountains among the tules and willows which grew upon its banks. This process was continued until the middle was higher than either side, and the banks sloped gently downward nearly to the mountains on either side. During a high flood in recent years, but before white men came here, the river burst through its banks about half a mile above where the Central Pacific road now crosses it, and made its way along the eastern side and down to the sink, leaving a strip of marvelously rich land a couple of miles wide on the line of its ancient course, which is now called by the settlers the "long slough."

## IDAHO.

**A CHOICE "RED FISH."**—Reno Gazette: In some of the large lakes of Idaho and Washington Territory is found a peculiar fish called the "red fish." As we have before stated, it has no place in the catalogues of science, and no specimen has been placed in the Smithsonian Institute. It is probably a distinct species of the *salmo* family, which includes every variety of trout and salmon. From what is said of it we believe the red fish must be one of the most valuable of food fishes, and hope that pisciculturists may be induced to give this species a trial. Referring to the red fish, the Walla Walla (W. T.) Statesman lately said: "Adams Bros. this week received the largest consignment of these delicious fish that was ever brought to the market. They are incomparable, and far superior to any salmon, not only in flavor, but on account of the great advantage they possess of not taking so much salt." In reference to the above extract the Boise City (Idaho) Democrat remarks: "Notwithstanding the peurile nonsense of some of the newspaper writers of that country about the celebrated red fish being dog-salmon, it seems that where parties try the flavor of these splendid fish they all agree that said newspaper men are 'a little off,' and the fish meet with ready sale. Boise City should have a continual supply of these splendid fish."

**TESTING DAIRY COWS.**—There is now on the point of organization at the East a society, the object of which shall be "to collect and disseminate authenticated records of the yields of dairy cows, to the end that we may with far greater precision, intelligence and method than it is now possible to do, improve and fix in our various breeds of cattle higher and more persistent milking qualities, and the ability to transmit those good qualities to their offspring." It is proposed to appoint commissioners, who will visit different herds of milking cattle with the consent of their owners, and weigh and record the milk for a uniform number of milkings at different times of the year. It is hoped thereby to secure disinterested testimony concerning the milking ability of the different breeds. A meeting for organization will be held at American Institute, New York city, December 9th, 1879.

**SANDER'S POSTOFFICE.**—We see by our exchanges that a new postoffice has been established at Sanders, in Fresno county, California. This means that the home of our contributor, Prof. W. A. Sanders, has become of sufficient importance for the location of a U. S. Post-office there. This is quite a contrast with the picture that he gives of the place in 1875, when he settled there. His nearest neighbor then was two miles away, and he carried all the water that he used for weeks in a coal oil can, a distance of 2½ miles, only think, *five miles travel* for a pail of water! Now it is a dense settlement, with thousands of the choicest of fruit trees; fields of rank alfalfa, imphee, millet, and other forage crops; fat cows and horses in the dignified leisure of animal existence; and the most intelligent people, supporting the largest school, and showing the largest church attendance of any settlement in the county. Success to "Sanders."

## News in Brief.

**MIDHAT PASHA** has resigned the Governorship of Syria.

**STANDARD** silver dollars coined to date, 44,453,850.

**GORTSCHAKOFF** is expected at Berlin, November 11th.

A **NEW STOCK BOARD** has been organized in New York.

In eastern Siberia 200 inhabitants have died from famine.

**GENERAL KAUFMAN** has left St. Petersburg for Tashkend.

The forces at Cabul will occupy Butkhak the 1st of November.

**TROUBLE** is said to be imminent between Russia and Persia.

A **FLOOD** in Jamaica has caused a great loss of life and property.

The Roumanian Senate has passed the bill for the relief of the Jews.

ALL devices for arresting the phylloxera pest in France have failed.

The nailmakers of South Staffordshire, Eng., have resolved to strike.

WORK on the Northern Pacific railroad is being vigorously prosecuted.

The Republican majority on joint ballot in the Ohio Legislature is 31.

The tunnel fire on the Pittsburg and Connellsville railroad is still burning.

**SIR RICHARD KINDEYSLEY**, formerly Vice Chancellor of England, is dead.

**SERBIA** and **MONTENEGRO** have concluded an offensive and defensive alliance.

THERE arrived at Castle Garden, New York, Saturday last, 1,020 immigrants.

BUSINESS in nearly all branches of trade was resumed at Memphis yesterday.

THE inquiry into the massacre of the British Embassy is proceeding at Cabul.

ALL the constitutional amendments proposed at the late Ohio election were lost.

The military and police are to co-operate in night patrolling at Moscow, Russia.

**REV. THOMAS CALLAN**, assistant pastor of St. Mary's church at Stockton, is dead.

THE wheat crop of the United States this year will aggregate 425,000,000 bushels.

THE President pardoned Dr. Eddins, convicted of ballot-box stuffing in Tennessee.

THE Schaefer-Slosson billiard match at New York, 3,000 points, was won by Schaefer.

THE new elections for the Bulgarian Assembly resulted in a majority for the government.

THE first ice and heaviest frost of the season occurred last Saturday at Petersburg, Va.

It is expected that the St. Gothard tunnel will be out through before New Year's day.

THE deficit in the sugar beet crop of France will be from 25% to 50% less than last year.

AN Irish National Land League is to be formed, with its Central Committee in London.

THE continued cold weather at Memphis has caused a discontinuance of quarantine restrictions.

THE French representative in Roumelia has been attacked and robbed by brigands in Macedonia.

**SILVER** in London, 53d; consols, 97 15-16; 5 per cent. United States bonds, 105½; 4s, 105½; ½s, 109½.

**JOHN W. YOUNG**, Second Counselor of the Mormon church, has been indicted at Salt Lake for polygamy.

At Liverpool wheat is quoted at 10s 9d to 11s 10d for average California white, and 11s 9d to 12s 3d for club.

FIVE HUNDRED AND FIFTY men are now employed upon the New York approaches to the East River bridge.

THE Treasury Department has transferred an additional \$10,000,000 in gold to the assay office in New York.

**ROSENBERG**, the London Town Talk libeler, has again been found guilty of publishing defamatory statements.

THE captive women and children of the White River Agency have been delivered in safety to Special Agent Adams.

THE revenue of Russia last year amounted to 625,972,000 roubles, and the expenditures aggregated 1,033,972,000 roubles.

THE British and German governments have favorably received the recent circular of Secretary Evarts in regard to Mormonism.

SETTLERS on the Los Bolsas Rancho, Los Angeles county, are peaceably submitting to the legal proceedings taken to eject them.

A **MASS MEETING** of Irish residents was held Wednesday in New Orleans, for the purpose of considering the condition of affairs in Ireland.

**AUSTRALIAN ORANGES AND LEMONS IN LONDON.**—Those who are thinking of an ultimate foreign market for California citrus fruits will be interested to hear of a lot recently sent from South Australia to England. The consignment consisted of one case of lemons, one case of large Naples oranges, and eight cases of St. Michael's oranges. They were packed in very dry, fine, brown sawdust, and those in one case, by way of experiment, were also wrapped in paper. A few of the oranges in paper wrappings showed signs of a minute brown mold in bruised places, those packed free in the sawdust were in perfect condition. The Mark Lane Express says: "As fine oranges are at present being sold retail in Covent Garden market at 3d. and 4d. each, it is believed that the venture will yield a fair return to the grower, and the success of the experiment may lead to the development of a regular trade, which will increase the variety of our autumn fruits."





### Only a Word.

Only a word! a little winged word,  
blown through the busy town,  
Lighter than thistle down,  
Lighter than roving bee or bird  
Brushed from the blossoming lily's golden crown;  
Borne idly here and there,  
Oft as the summer air  
About men's doors the sunny stillness stirred.  
Only a word!  
But sharp, oh, sharper than a two-edged sword,  
To pierce and sting and scar  
The heart whose peace a breath of blame could mar.

Only a word, a little word that fell  
Unheeded as the dew  
That from the darkling blue  
Of summer midnight softly steals, to tell  
Its tale of singing brook and star-lit dell  
In yonder noisome street,  
Where, pale with dust and beat,  
The little window flower in workman's cell  
Its drooping bell  
Uplifts to greet the kiss it knows so well;  
A word—a drop of dew!  
But oh, its touch could life's lost hope renew.

—Mary Keely Boutelle, in *Sunday Afternoon*.

### Parasitism in Nature and Society.

The following lecture was delivered at the Independent Church in Oakland by Prof. H. B. Norton, of the State Normal school:

Dr. Le Conte has suggested that evolution is the law of time, as universally as gravitation is that of space.

There is a divine, fiery, infinite energy pervading all the infinitudes of matter and spirit.

It projects itself into the realm of warmth and light, and produces flowers, birds of paradise, and all the children of the light. It pours through the dens of darkness, and produces organisms that are incomplete, larval, monstrous and shapeless and terrible.

The physicist whispers in our ears words incomprehensible in their vast meaning. He talks about atoms and forces; heat as a mode of motion; light and life, not as entities or substances, but forms of vibratory activity. He bids us to imagine a whirling dance of infinitesimal spheres, going on and on, without beginning or end, forever; atoms clashing hands in tiny groups and systems, vibrating, pulsing, scattering, but ever forming anew, into ever fresh structures of organic life. And yet God, working in nature, does so without any reference to our human moralities or tastes.

"It pleaseth him, the Eternal Child,  
To play his sweet will, glad and wild.  
The vault that glows, immense with light,  
Is the inn where he lodges for a night.  
What reck's such traveler, if the bowers  
That bloom and fade like meadow flowers,  
A bunch of fragrant lilies be,  
Or the stars of eternity?  
Alike to him the better, the worse;  
The glowing angel, the outcast curse."

Nature seems to care nothing for vastness, or beauty, or refinement, in our sense of the words. She loves the rattlesnake as she does the dove; she creates more toadstools than roses; she gives us many mosquitoes, but few birds of paradise.

Devils are legion, but angels' visits are few and far between, and God is one. The scorpion or centipede is as splendidly armed and armored as Sir Galahad, going forth in quest of the Holy Grail. The tares choke the wheat. There seems to be no force in nature tending inherently and necessarily upward, to higher levels of spiritual being.

Involution or devolution equals evolution. Recoil is as powerful as propulsion.

There are grand houses on California Street hill, but each represents a myriad of ruined fortunes and lives. There must be a thousand bankrupts, broken homes, suicides, in order that the world may have one bonanza king.

The preservation of the fittest means too often the preservation of the swiftest, fiercest, most cunning, best armored. Out of the infinite wreck and waste of passages have come to us the gazelle and humming-bird, the palm-tree and the rose;—but how much agony, struggle, death, forgotten lives, destroyed races, do these triumphs of her work represent! And far oftener her selective choice rests upon diametrically opposite endowments. The gazelle perishes that the hyena or tiger may grow strong; the vulture tears the humming-bird; the poison oak strangles and outlives the rose. Out of millions of lives snuffed in torpor, squalor, mediocrity, a few giants arise;—men that seem like Assyrian bulls and lions restored to the flesh; men with the brain of a god, the physical presence of Ilypeion, the physical passions of a king of beasts. Such men we see in the stock exchange, the places of political power, sometimes in the pulpit, sometimes guiding armies. Byron, Goethe, Danton, Mirabeau, Bismarck, Napoleon I., were of this type.

Only once among millions of instances do we see a great brain fitted to be the temple of a still diviner life. One Richter, one Washington, one Lincoln, one Victor Hugo,—aspiring, unselfish, divine, shining like stars above the dusty desert of history. But these great ones are few indeed. Nature seems best to love averages, mediocrity, the petty and the commonplace. Like a Com-

ancheshe rejoices in torture. She forgives no sins. Keep step upon her treadmill, or you shall go under the wheel. She experiments crudely; she casts away her failures mercilessly. Our geological museums are full of the fragments of forms experimental, tentative, transitional, too clumsy and uncouth to keep pace with the march of time, too torpid in fibre and feeble in brain to long endure. I cannot find any law of natural progression toward the heights of spiritual being. New natural powers and forces only intensify inherent tendencies. Evil is positive, aggressive, self-reproductive. It is not a vacuum or negation. The equatorial warmth and moisture open the vast frond of the palm and the splendid cup of the Victoria Lily, but they also distil the deadly venom of the morali and the cobra. I cannot find in nature any force tending to change the lion into a lamb; or to destroy the lion and preserve the lamb; or to make the upas or crochans less deadly; or to diminish the power of sin, and arrest the hellward march among men. The germs of evil have a strange and terrible fecundity. If Nature had been left to her own will, Guiana would still have been a tropical swamp, brooded over by a deadly miasma, ruled over by the anaconda and alligator.

It had been built up out of the waste, the slough and slime of the continent, vomited from the mouth of the Amazon, and flung, as a mass of abhorred refuse, upon the shore. Black, stagnant rivers wound through its swampy forests; hideous reptiles and the unclean pelican breasted its waters; and the cloud of poisonous effluvia forever hung over it. But at last a generation of laborious, sturdy Dutchmen came in to overthrow the reign of Nature; the ax and spade, wielded for centuries, have turned the pestilent morass into a tropical paradise. So it must be everywhere. If the earth and man are to be fully redeemed, it must be through the working of forces higher than those merely natural.

Our evolutionist philosophers speak of three forces working toward the end of which they are the expositors.

1. Heredity. This tends to produce fixity of type, by handing down to each generation the characteristics of its ancestors.

2. The influence of environments. This works mainly upon germs and embryos, modifying them upward or downward, according to the nature of circumstances.

3. Natural selection. By the operation of this principle, the strongest, most cunning, best protected and best concealed animals live, while others perish in the struggle for existence. This force tends toward physical perfection. It works in the fields of our mental and spiritual being. Nevertheless, spiritual exaltation is a costly gift. When one soul ascends the upward way, we looking from the merely natural standpoint seem to see a throng pressed down thereby to lower levels. Human vermin and weeds, like their congeners in lower nature, have a fatal fecundity. The double flower, the costly product of a century of culture and care, bears no fruit. The large-brained American race is dying out of its birth-place; but how the Five Points and the Chinatowns swarm!

One of the strange phenomena of the life of lower nature is parasitism. This word refers to animals and plants that grow, feed, prey upon others. In all the life of the sea, parasitism is almost universal; and the wonderful growth of medical science is teaching us things concerning the relation of parasitism to disease, in regard to which ignorance is bliss. The German peasants ate the raw sausage at their harvest-feasts, and died in a horror of gnawing death-worms, as terrible as that which overtook Philip II. or King Herod. The "germ theory" assumes that all zymotic diseases, like cholera, diphtheria and yellow fever, are caused by different species of minute fungous plants, bred in filth, whose spores, floating everywhere invisibly, are inhaled and germinate in human tissue.

But this much we learn from nature; parasitism always is degradation. The dodder, with its pale, bloodless tissues, and its feeble, loathsome life, is closely related to the beautiful convolvulus. Some naturalist speaks of the sacculina, a lively and perfect little crustacean, which sometimes attaches itself to the head of a fish, and begins to feed upon the living tissues of its host; and at last its brain disappears, its eyes vanish, its limbs are changed into clinging rootlets, and it becomes a mere sac of unconscious or semi-conscious jelly, its individuality gone, its identity practically merged in that of the animal which it had selected for a prey. In the realms of human life, the same law holds; parasitism is degradation.

The grand things of nature are always separate, individual, distinct. The stars occupy each a central position in some region of the vastness of space. Their light-waves meet in radial lines; each keeps the secret of its own fiery heart. The grand men concede little to precedent; each, in his inmost nature, tends to solitariness; he wants air, light, elbow-room, freedom from obtrusive contact, for body and soul. The Polyp-life of the sea is crowded and massed, each form penetrating and feeding upon the other, till parasite can hardly be distinguished from its host. The lower grades of human life show a similar gregariousness and tendency, mutual suction and absorption. The feeble student intensifies his feebleness by feeding upon the fruits of his brother's work. Every popular minister is surrounded by a parasitic group, feeding upon his thought, and therefore sinking into mental feebleness through the desuetude of their own reasoning powers. I need not speak of the helpless wives, sons, daughters, drunken husbands, parasitic upon partner or parent, and going down into torpid decay; nor of the stock-jobbers, political rings, thieving adventurers, systems of religious oppres-

sion, which are, in some measure, parasitic upon the world's life; but confine my thought to the degraded tramps, vagrants, beggars, sneak-thieves, the acari and pediculi upon the body politic. The vast multiplication of these is one of the most terrible of the phenomena of our social evolution. Our social order is about that of wild beasts. Room for the king! Room for the strong arm, the vast cold brain, the heart of granite, the cheek of brass! Room for the largest competition, the most merciless monopoly. Every one for himself. Ah, how sad that we must complete the proverb: "the Devil take the hindmost!" In the pitiless struggle, the weak go down. To him that hath shall be given; from him that hath not, that which he seemeth to have is taken away. The best government, we say, is that which governs least. All that humanity needs is free schools and the ballot in every hand. The saying is unspeakably, monstrously false.

The tramp is a new phenomenon upon this continent. Whence does he come? It is a complex problem. Formerly, America was building 5,000 to 8,000 miles of railroad per year. Many thousands of laborers, endowed with little but mere muscle, were spading those endless lines of embankments. That work is measurably done. The vast multiplication of labor-saving machinery has enormously increased the demand for educated, skilled labor; but the world has less and less a place for the two-fisted bog-trotter and clumsy clodhopper. The work which these can perform pertains less and less to the world's life. They sink lower and lower in every facet and fibre of their being, as humanity sweeps onward and past them. They drift toward poverty, beggary and stolid despair. Their mental and physical characteristics are hardening into hereditary types. We are breeding up a mighty swarm of human beings, as parasitical, verminous, loathsome, as the lazzaroni of Naples.

And what are we doing to cure this great evil? We must do all; Nature will do nothing for us. She loves and multiplies her baser types. We must overcome them, as ever in the realm of nature, by special and artificial methods.

[To be continued.]

A THEORY FOR NOSES.—As the forehead grew outward with increasing brain-growth, and as the jaws retreated backward with decreasing usage, the nasal bone and cartilage were probably pushed forward, as it were, from above, and dragged downward from below. These two movements, slowly continued in the plastic development of the organ for many generations, would finally produce just such a shape as that with which we are now familiar. Of course, it must not be supposed that there was ever any actual physical strain, such as would result from any attempt to push or pull a negro's nose at one trial into the Aryan mold; all that the theory demands is a slightly altered mode of growth to meet the altered circumstances during many thousands of years. The molecules which would once have naturally arranged themselves in one order, would later be driven by slightly different attractions and pressures to arrange themselves in another order. And thus it would finally result that man, when compared with the higher apes, would possess a human nose, and that this nose, short and flat in the small-browed prognathous negroes, would become relatively large and prominent in the straight-browed, small-mouthed, and delicate-featured Aryan. So that, in the last resort, the nose must be regarded as a product of two other factors, not as a thing in itself. It really depends, if our theory be correct, upon the joint action of the increased brain-cover and the decreased jawbone.—*New Quarterly Review*.

BOOKS OF OLDEN TIME.—From the opening of the ninth century, parchment took the place of papyrus. Ancient books were rolled instead of being in square form, as we have them. About this time paper made from cotton and linen rags began to be made, but its manufacture was so limited that the facility for copying was not much increased. All writing material was exceedingly scarce in that age, and bad the invention of printing dated earlier, it could not have made any substantial progress on this account. In many instances the only way to issue a new work was to erase the original writing from a manuscript, and then to trace another book upon the same parchment. Thus the writings on many valuable manuscripts were destroyed, and some even more valuable than those which took their place. Written language had almost perished for the want of material upon which to record the burning thoughts which were struggling for expression. The books of those days were written out by hand, and the work of the copyists was both honorable and lucrative. They were generally employed by booksellers on a salary. The rich employed favorite slaves to copy works of antiquity and of their own times, for their own libraries. Orators secured the copying of their own discussions; and the government, of its edicts.

VOTES FOR WOMEN.—The *North American Review* for November opens with a series of replies, by Julia Ward Howe, Elizabeth Cady Stanton, Thomas Wentworth Higginson, Lucy Stone and Wendell Phillips, to Mr. Parkman's article on "The Woman Question," which appeared in the October number. They are united under the title, "The Other Side of the Woman Question," and give a very complete presentation of the arguments in favor of extending the right of suffrage to women.

### Mrs. Hayes and the Workingwomen.

Mrs. President Hayes lately visited the "Woman's Department" of the Indianapolis fair, and was welcomed by one of the women managers in a speech, from which we take the following:

"Mrs. Hayes, wife of the Chief Executive of these United States, I, on behalf of the Woman's State Board of Industry, extend to you a most hearty and cordial welcome to the Woman's Department of Indiana's Industrial Exposition. I believe I but echo the sentiments of all right-thinking people when I say that no more fitting or appropriate place could have been chosen for you to grace with your presence and smiles of approbation than the halls wherein are massed for exhibition the products of busy, skillful and womanly hands. We are glad, honored madam, to have an opportunity of making this demonstration of welcome here to-day, because we feel sure that the weight of the influence, which your high position lends you, if thrown in with our earnest endeavors, will in a great measure revolutionize public opinion with regard to the status of a woman who works, and to a considerable extent aid in destroying the flimsy gauze of social pretense which sets the dainty, weak, idle woman of the world far above and apart from the energetic, thorough-going, every-day, working woman of the country. We, an association of practical working women, who know nothing and absolutely care nothing about the vaunties and foibles of high-lit idleness, commonly termed genteel society, are glad to welcome you here, because we have every reason to believe, judging from your determined and noble endeavors to make of the White House a true home in every sense, instead of a banquetting place for intemperance, conviviality and folly; that you carry within your breast an honest and true regard for working women everywhere, for those women 'who look well to the ways of their own households,' and for those brave, self-sacrificing spirits of our sex who are striving against adverse influences to bring forward and upward into proper recognition all of the manifold industries by which women are enabled to become not only the adorners, but in a grand measure the supporters of nations. It cannot be denied that, in proportion as the 'busy hum' of industry echoes through the homes of our land, just in the same proportion will the prosperity and perpetuity of our nation, which is only our bones in the aggregate, become powerful and enduring. It is a well-known fact that of all the unimportant, overlooked, and undervalued personages in the world, working-women are the most insignificant. Theirs is a continued struggle against adverse circumstances as compared with the condition of the workmen of the country. The difference between their conditions is the very distinctive difference between labor disfranchised, despondent and hopeless, and labor free, honorable, thriving, and an equal sharer in political power. As an industrial association, we are determined in so far as our influence and power extends, to lift the burdens of the vast army of toiling women, who are stretching out their hands to us for help from every city, town, village and hamlet in our State. We are determined, in so far as our influence and power extends, to open up new avenues of labor and work for our toiling sisters, and to secure for them, instead of social ostracism, the honor and respectability socially they justly deserve. And again, honored madam, in view of all this, and knowing you to be a high-souled working-woman, with a true appreciation of the efforts of the workingwomen of the country, we with seven-fold heartiness greet and bid you welcome here."

TRUE HEROISM.—Mr. Gladstone, in an address on "Dr. Hook," recently gave his idea of a hero. He holds that a hero is a man who must have ends beyond himself, in casting himself, as it were, out of himself, and must pursue these ends by means which are honorable and lawful, otherwise he might degenerate into a wild enthusiasm. He must do this without distortion or disturbance of his nature as a man, because there were cases of men who were heroes in a great part, but who were so excessively given to certain ideas and objects of their own that they lost all the proportion of their nature. A man to be a hero must pursue ends beyond himself by legitimate means. He must pursue them as a man, not as a dreamer. He must not give to some one idea a disproportionate weight which it did not deserve, and forget everything else which belonged to the perfection and excellence of human nature. If he did all this he was a hero, even if he had not very great powers; and if he had great powers, then he was a consummate hero. A greater hero than Napoleon was the captain of a ship, which was run down in the Channel three or four years ago, who, when his ship was quivering and the water was gurgling round her, and the boats had been lowered to save such persons as could be saved, stood by the bulwarks with a pistol in his hand and threatened to shoot dead the first man who endeavored to get into the boat until every woman and child was provided for.

"I'm a poor strolling player," groaned a "scedy" looking fellow to a gentleman on a country road, "and do not ask for money, but only for some left-off clothes." "My good man," rejoined the latter, "I'm sorry I can't assist you. Times are now so bad that I wear my left-off clothes myself."



## Chaff.

WHY is an author looking for writing fluid like a coroner discharging the duties of his office? Because he is holding an ink quest.

AN EXCELLENT old deacon who, having won a fine turkey at a charity raffle, didn't like to tell his wife how he came by it, quietly remarked, as he handed her the turkey, that the "Shakers gave it to him."

"SARAH," said a young man the other day, to a lady of that name, "why don't you wear ear-rings?" "Because I haven't had my ears pierced." "I will bore them for you, then." "I thank you, sir; you have done it enough."

A COUNTRYMAN saw, for the first time, a school-girl going through some of her gymnastic exercises for the amusement of the little ones at home. After gazing at her with looks of interest and commiseration for a while, he asked a boy near by "if that gal had fits." "No," replied the lad, contemptuously, "that's gymnastics." "Oh 'tis, hey," said the verdant. "How long has she had 'em?"

A NEW order of anniversary weddings is: End of one year the cotton wedding; two years, the paper; three, leather or straw; five, wooden; seven, woolen; ten, tin; twelve, silk and fine linen; fifteen, crystal; twenty, porcelain and delft; twenty-five, silver; thirty, pearl and ivory; forty, rubies and garnets; fifty, golden, and seventy-five the diamond wedding.

A FEW months ago some miners were working in a pit not many miles from Durham, and talking about the North Pole, when one of them, who seemed to be better informed than his companions, said: "Ay, a suppose nobody's ivor gotten te'd yet, for aa'll thor greet ex-dishuns." "Aa divrent see that, marra," exclaimed one of his hearers; "if nobody's nivor gotten te'd, who put thor up, then, aa vad like to kuaa?"—*Glasgow Herald*.

A WELL-KNOWN clergyman, who preached in a village in Massachusetts, found his hearers diminishing day by day, and consulted an old Scotch sea-faring man, who could not boast of much religion, but who stuck by the ship, why the people would not come to church. "I canna exactly tell, mon; ye preached on spring and autumn most eloquent discourses, and ye improved the great accident and loss of life on the sound; ye might try them with something out of the Bible, and, being fresh, maybe it would hold them another Sunday or two."

## Home Reading.

One of the pleasant and noble duties of the head of the family is to furnish its members with good reading. In times past it was considered enough to clothe and feed and shelter a family; this was the sum of paternal duty. But latterly it has been discovered that wives and children have minds, so that it becomes a necessity to educate the children and furnish instructive reading for the whole household. It has been found that the mind needs food as well as the body, and that it needs to be sheltered from the pitiless storm of error and vice by the guarding and friendly roof of intelligence and virtue. An ignorant family in our day is an antiquated institution. It smells of the musty past. It is a dark spot which the light of the modern man of intelligence has not reached. Let good reading go into a home, and the very atmosphere of that home gradually but surely changes. The boy begins to grow ambitious, to talk about men, places, principles, books, the past and the future. The girls begin to feel a new life opening before them, in knowledge, duty and love. They see new fields of usefulness and pleasure. And so the family changes, and out of its number go honorable members of society. Let the torch of intelligence be lit in every household. Let the old and young vie with each other in introducing new and useful topics of investigation, and in cherishing a love of reading, study and improvement.—*Work and Play*.

ELECTRIC JEWELRY.—A curious application of electricity appears in some specimens of electric jewelry recently described in *La Nature*. Among the specimens are a scarf pin consisting of a small golden rabbit holding a liliuputian mallet in each paw, with which it beats a roll on a small golden gong; a golden skull with movable diamond eyes and an articulated jaw. This is also a scarf pin, and its eyes and jaw are made to move in a singular manner. A bird is also shown which is an ornament for the head dress. It is of gold, thickly studded with diamonds. These pieces are connected by a fine concealed wire with a small battery carried in the vest pocket. When the battery is made to operate, the rabbit will strike the gong, the bird will move its wings, and the skull will roll its eyes and gnash its teeth. The battery consists of a zinc and carbon couple contained in a hermetically closed vulcanite case, the zinc and carbon occupying the upper half of and the exciting fluid the lower half of the case. When the case is in a vertical position the exciting fluid does not touch the zinc or carbon, but when it is inverted or placed horizontally, the fluid comes into contact with the zinc and carbon, and the current traverses the coils of the diminutive magnets, which operate the mechanism of the pieces. The mechanism is much like that of an ordinary vibrating electric bell.

## Young Folks' Column.

## How the Fighters Fell.

[Written for the RURAL PRESS by DIVER.]

The fierce combats of deer are well known. It is "death to the knife" with them. One must die before they quit. Sometimes their antlers get so interlocked that they cannot part them, and consequently they fall a prey to panthers, lions, bears or wolves. Their heads have been found with the antlers so interlocked that it was impossible to pry them apart. The following marvelous incident lately came to my knowledge, but the truth of which I can vouch for. It is a wonderful feat, seldom if ever accomplished before. Had the deer seen him he would certainly have been killed.

Mr. Hall, who lives in a small branch of the Santiago canyon, about 20 miles from Anaheim, had occasion to go up the canyon about a quarter of a mile above his house, and coming upon a place where the ground was all torn up, he thought that it was done by hogs and naturally looked around to see where they were. To his great surprise, instead of hogs, he saw two large bucks but a few yards away, head to head, in fierce combat. He watched them for a while, and they paid no attention to his presence. One was a trifle larger, and the small one would get on the upper side of the hill and the larger would shove him right up the hill, plowing the ground with his feet until he would get out of breath, and then they would stop and rest a few minutes, still head to head.

Mr. Hall watched them for some time, and finally thought he would try and kill one of them. As he had nothing but a long rope with him, he picked up a large stone, and when they stopped, went up close and threw it at one, but he paid no attention to it at all. So he took the rope and tied one end around the neck of one and the other end around the neck of the other, in slip nooses. The deer paid no attention to him even while he reached around their necks for the rope. After he had them tied, he went to his house for his knife, and when he came back there had been a couple of "rounds," but had not drawn the nooses tight. When they stopped to take breath again, he stepped up and cut the throat of first one and then the other, and they stood perfectly still, head to head, watching each other, until they both fell. The larger one was the largest deer that has ever been killed in the canyon, and the other was very little inferior in size.

Anaheim, Oct. 15th, 1879.

## To the Boys.

To whatever occupation you may be called as a means of obtaining a livelihood, determine to understand it well and to work heartily at it.

If you constantly look upon your employment as a mere drudgery—as something which, while it must be done, may be done anyhow—depend upon it, you will always be a mere drudge. There are two classes of young men—those who work without thought and without energy, and those who throw both thought and energy into their work. The first do their best to keep themselves down; the others do their best to raise themselves up, and both in the end will reap just what they have sown.

Let your conduct be such as to insure the approval of those above you; resolve to learn everything that can be of service to you; let "quickly and well" be the mark at which you aim in relation to every business matter with which you are entrusted; and never forget that upon your diligence in youth will depend your success as a man.

Be careful as to who are your companions. "Tell me your company and I'll tell you what you are." Many a lad who has bid fair to grow up a respectable man, has been wholly ruined by mixing with evil companions. The habits that some lads contract of resorting to public houses and frittering away their golden hours in smoking and drinking, have in thousands of instances laid the foundation for a disgraceful life, a wretched death, and a miserable eternity. Choose associates of a different character. If you would not only respect yourself, but have the respect of others, you must shun the very presence of those who, having no regard for their own character, would soon make havoc with yours.

## Children's Etiquette.

Always say "Yes, sir," "No, sir," "Yes, papa," "No, papa," "No, thank you," "Good night," "Good morning."

Use no slang terms.

Clean faces, clean clothes, clean shoes and clean finger-nails indicate good breeding. Never leave your clothes about the room.

Have a place for everything, and everything in its place.

Rap before entering a room, and never leave it with your back to the company.

Always offer your seat to a lady or old gentleman.

Never put your feet on chairs, cushions, or tables.

Never overlook any one when reading or writing, nor talk or read aloud while others are reading.

Never talk or whisper at meetings or public

places, and especially in a private room, where any one is singing or playing the piano.

Be careful to injure no one's feelings by unkind remarks. Never tell tales, make faces, call names, ridicule the lame, mimic the unfortunate, nor be cruel to insects, birds, or animals.

## GOOD HEALTH.

## Sleep.

In a work on "Sleep and Sleeplessness," by J. M. Granville, it is claimed that sleep is a rhythmical function of life. It is performed by the nervous system, either through a single center or by the several centers connected with various parts or organs of the body, from the supreme cerebral centers which control the immediate apparatus of intentional thought to the ganglia that regulate the work of the viscera. I believe the sympathetic system plays a conspicuous part in the production of the phenomenon, and this is why the due performance of the function is so readily prevented as it is by disorderly action in almost any part of the body, even when there is no sensation of pain or of uneasiness at the seat of the disturbance. People who do not sleep well and regularly are peculiarly liable to functional disorders; and, conversely, those who are subject to the anomalous maladies and symptoms too often set down to fancy, but actually existing and traceable with care to some special ganglion of the sympathetic system (for example, uneasiness in the "pit of the stomach," or aching pain in the lower lumbar region of the spine) are disturbed or disorderly sleepers. Sleep is a nerve state, whether the part sleeping be the brain or certain parts of the organ, the muscular system or viscera. The modifications which take place in the vessel supplying the organ or system that sleeps are the effects or consequences, instead of the causes of its condition.

The author devotes a chapter to the subject of going to sleep, and considers here the use of narcotics for the purpose of inducing it, observing that "the state they produce is not sleep, but a condition of narcotism that counterfeits sleep," adding, "When a man says, 'I want a quiet night; I cannot obtain it by going to sleep, or I am afraid to trust to the chances of natural rest, so I will poison myself a little, just enough to make me unconscious or slightly paralyze my nerve centers, not enough to kill.' If this fact should be kept clearly before the mind, the reckless use of drugs which produce a state that mocks sleep, would be limited." The state of inaction which is brought about by natural sleep is very different from that which is produced by paralysis of any degree. The following remarks are important:

Habit greatly helps the performance of the initial act, and the cultivation of a habit of going to sleep in a particular way, at a particular time, will do more to procure regular and healthy sleep than any other artifice. The formation of the habit is, in fact, the creation or development of a special center, or combination, in the nervous system, which will henceforward produce sleep as a natural rhythmical process. If this were more generally recognized, persons who suffer from sleeplessness of the sort which consists in simply being "unable to go to sleep," would set themselves resolutely to form such a habit. It is necessary that the training should be explicit, and include attention to details. It is not very important what a person does with the intention of going to sleep, but he should do precisely the same thing, in the same way, at the same time and under as nearly as possible the same conditions, night after night for a considerable period, say three or four weeks at least. The result will amply reward the effort.

CAUSE OF STAMMERING.—M. Chervin has of late drawn attention to the frequency of stammering in the south of France, where from 12 to 13 cases are noted for every 1,000, while in the eastern departments the proportion is only 1 for every 1,000. It has been assumed that the defect was in many cases simulated to avoid the conscription, but according to Abbo Petitot there are two districts in the Bouches-du-Rhone where all the inhabitants (15,000), stammer. This he ascribes to long-continued intermarriages among the communities, and to a consequent degeneracy of the race; and M. Chervin is of opinion that meningitis, induced by the great solar heat, which occasions so high an infantile mortality in this region, may possibly, when not fatal, leave an exceptionally great tendency to stammer.

ANTISEPTIC FOR INFECTIOUS DISEASES.—Prof. Klebs, of Prague, announces that the benzoate of soda is the best antiseptic in all infectious diseases. It acts, as the experiments of the author show, very powerfully. It is claimed that a daily dose of from 30 to 50 grammes to a full-grown man will render the poison of diphtheria inoperative. The benzoate is prepared by dissolving crystallized benzoic acid in water, neutralizing at a slight heat with a solution of caustic soda, drying and then allowing the solution to crystallize over sulphuric acid under a bell-glass. Large doses do not appear to be absolutely necessary. Good results may be obtained by the daily administration of about 12 grammes.

## DOMESTIC ECONOMY.

## Salad.

A salad well prepared is a charming compound, and, when taken with plenty of oil, very wholesome, attractive and agreeable; badly prepared it is an abomination. A Spanish proverb says that four persons are needed to make a good salad—a spendthrift to throw in the oil, a miser to drop in the vinegar, a lawyer to administer the seasoning, and a madman to stir the whole together. Lettuce is generally supposed to form the foundation of a salad, but there are few fresh vegetables that may not be used, and on the Continent every known vegetable is, when plainly dressed, used cold for salads; and cold meat, fish and game are served in the same way. Amongst the vegetables appropriate for salads may be named asparagus, artichokes, beet-root boiled, basil celery, chives, cucumbers, chervil, cauliflowers, dandelion leaves, endive, French beans, garlic, lettuces of all kinds, lentils, mustard and cress, mint, onions, parsley, potatoes, radishes, shallots, sorrel, tarragon, tomatoes, Windsor beans and watercress. Though a variety in salads is easily secured, great care is necessary in the preparation of the dish, and three or four rules must be closely observed if the salad is to be a success. First, the vegetables must be young, freshly cut, in season, and in good condition. If possible, they should be gathered early in the morning or late in the evening, and should be kept in a cool, damp place. Secondly, the vegetables should not be allowed to lie long in water. If withered, they may be put in for a short time, to render them a little crisp, but if fresh, they should be simply rinsed through the water and dried immediately. Thirdly—and this point requires most careful attention—the vegetables must be rendered perfectly dry after washing. The best way of doing this is to drain the salad and shake it first in a colander or salad-basket, and afterwards in a clean napkin held by the corners and shaken lightly till the salad is dry. Fourthly, cut the salad with a silver knife, or tear it in shreds. Do not prepare it until a short time before it is wanted, and on no account mix the salad dressing with it until the last moment. It is a very usual and excellent plan to pour the liquid into the bottom of the bowl, lay the shred vegetables upon it, and mix the salad at table. A wooden fork and spoon are the best for this purpose. Salads may be garished in various ways, and afford ample opportunity for the display of artistic taste. Boiled beet-root cut into slices, stamped into fancy shapes, or cut into trellis-work, sliced cucumbers, olives, hard-boiled eggs cut into quarters or rings, radishes, nasturtium leaves and flowers, etc., may all be used. When these are arranged tastefully the salad presents a very attractive appearance. Of course the garniture must not entirely hide the salad.—*Cassell's Dictionary of Cookery*.

TO PREVENT citron from getting to the bottom of a cake or pudding, rub the citron well with flour after cutting, and it will neither sink nor mass together; the same applies to other fruit. After mixing the cake to the proper consistency, which must be stiffer than for plain cake, put a layer of the mixture in the pan, then a layer of citron cut in thin pieces, then another layer of the mixture, and one of citron, and so until the pan is two-thirds full; I have never found this to fail; it distributes the citron evenly through the cake, and looks very pretty when cut in slices for the table.

APPLES SURPRISED.—Peel, core and slice about five nice-looking apples; sprinkle the slices with a spoonful of flour, one of grated bread and a little sugar; have some lard quite hot in a stew-pan, put the slices of apple in it, and fry of a light yellow. When all are done take a piece of butter the size of a walnut, a good spoonful of grated bread, a spoonful of sugar and a teaspoonful of milk; put into the pan and when they boil up throw in the apple slices. Hold the whole over the fire for two minutes, when it will be ready to serve.

TOMATO CATSUP.—To one gallon of tomatoes put half a gallon of good vinegar, two tablespoonfuls of red pepper, four tablespoonfuls of black pepper, a little salt, one tablespoonful of powdered cloves, one grated nutmeg; boil until very thick, then strain it and add half a pound sugar; bottle and shake well every morning for seven days.

BAKED PEARS.—Peel and bake ripe pears with but little water. When cold, cover the top and sides with a cake-icing flavored with vanilla, and serve with cream and sugar. This makes a delicate and healthful dessert, and but little time is consumed in its preparation. Tart apples may be baked in the same way, and are preferred by many.

APPLE CUSTARD PIE.—Scald the milk and let it cool; grate some sweet apples; to each cupful of apples have two-thirds cupful of powdered sugar, four well-beaten eggs, one cupful milk, one-fourth of a nutmeg; line an earthen pie-dish with a rich crust, and let it bake; then fill with the custard and let it bake for half an hour. To be eaten cold.





DEWEY &amp; CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 202 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, *five cents* will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES: 1 week. 1 month. 3 mos. 12 mos.

Per line.....	.25	.80	\$2.00	\$5.00
Half inch (1 square).....	\$1.00	\$3.00	7.50	24.00
One inch.....	2.00	5.00	14.00	40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Quack Advertising positively declined.

The Scientific Press Patent Agency.

DEWEY &amp; CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, November 1, 1879.

## TABLE OF CONTENTS.

**EDITORIALS.**—Imported Game Birds; A Tropical Fruit; Flax as Fodder; Peronospora-Proof Potatoes, 273. The Week; Our Obsolescent Agriculture; The State Horticultural Society, 280. Southern California Horticultural Fair; The Percheron Horse, 281.

**ILLUSTRATIONS.**—The Tamarind, 273. Percheron-Norman Stallion "Chere," imported by M. W. Dunham, of Illinois, 281.

**QUERIES AND REPLIES.**—Proper and Pride of Butte Wheats; Age of Monterey Cypress; The Favorite Grape of the Medoc, 280.

**CORRESPONDENCE.**—Fire-Proof Rock in California, 274.

**POULTRY YARD.**—Stimulants for Sitting Hens; Embryology of Incubation, 275.

**THE APIARY.**—Beginnings in Beekeeping.—No. 1; Cultivating the Sage for Bee Feed, 274.

**THE STABLE.**—A California Horse Trots in 2:12; Feeding Value of Oats, Beans, Maize and Bran, 274-5.

**THE FIELD.**—Potato Growing in California; Is the Truth at the Bottom of a Well? 275.

**FLORICULTURE.**—Growth of the Maiden-Hair Fern; Making a Lawn; Electricity in Flowers, 275.

**PATRONS OF HUSBANDRY.**—To the Memory of Sister Carrie A. Colby; The Establishment of Experimental Farms, 276.

**AGRICULTURAL NOTES** from the various counties of California, Nevada and Idaho, 277.

**HOME CIRCLE.**—Only a Word (poetry); Parasitism in Nature and Society; A Theory for Noses; Books of Olden Time; Mrs. Hayes and the Workingwomen; True Heroism, 278. Chaff; Home Reading; Electric Jewelry, 279.

**YOUNG FOLKS' COLUMN.**—How the Fighters Felt; To the Boys; Children's Etiquette, 279.

**GOOD HEALTH.**—Sleep; Cause of Stammering; Antiseptic for Infectious Diseases, 279.

**DOMESTIC ECONOMY.**—Salad; Apples Surprised; Tomato Catsup; Baked Pears; Apple Custard Pie, 279.

**METEOROLOGICAL.**—Forests and Meteorology; Los Angeles Rainfall, 282.

**MISCELLANEOUS.**—Spelling Reform; Notices of Recent Patents, 282.

## Business Announcements.

"New Model" Eureka Gang Plow, Sweepstake Plow Co. Percheron-Norman Horses, M. W. Dunham, Wayne, Ill. Brazilian Artichoke, J. H. F. Goff, San Felipe, Cal.

## The Week.

The general cheer and gratulation continue. The cheese makers are now taking a turn at the price list, and California cheese has struck 17½ cents per pound, a price which has been absent so long that dairymen have forgotten it. This advance will shed quite a light on the factories until cheap Eastern curds roll in and extinguish it. What cheese maker does not now wish he had the best curing room in the State and his whole summer's make in it? Beans, too, are beginning to show a little agility. May they strike the stars.

From all points there come reports of earnest work in preparation for a full product another season. An electric current of hope is creeping down the limpest backbones, and even those parts of the State which have been set down as having chief resources in climate and scenery are picking up most praiseworthy courage. When all go to work with a will the whole disposition of the State is transformed. The whole view of self and surroundings is changed. Even the rough clouds seem handsomer upside-down than they did when lying idly basking in the sun.

The raisin interest is still farther encouraged by the continued firmness and advance in the New York market. Here, too, it seems that there are movements in raisins which are raising values. Raisins are the last article to fall into a corner, and it is reported that supplies are being concentrated by two or three houses. There seems a chance for a "deal" in raisins, and our sharp merchants scent it afar off. It is to be hoped that producers will realize full prices, else the movement will work unfortunately, both east and west.

A CHAIR for instruction in Chinese has been established at Harvard.

## Our Obsolescent Agriculture.

Everything relating to the agriculture of the United States is extremely likely to grow obsolete in a year or two. The "standard of fertility" may be seventeen to-day, and will be twelve next year perhaps. Wheat growing flourishes now, and ten years hence it may have been extinguished by that of Manitoba. And within a generation the whole country may have killed the goose that lays the golden eggs, and may be greatly troubled to grow food for its own consumption.—*London Agricultural Gazette.*

Yes; just so. And then the French think so, too; and when we drop from our millions of surplus into a starving condition, "in a year or two," they are going to ship wheat to us and get back the gold which Atlantic steamers are now bringing hither by the dray-load. And then what is to become of us "in a year or two?" According to these European observers, our soil will be too poor to grow beans for our own sustenance; our gold will soon all be used up for purchased food. Therefore, "in a year or two" we shall lapse into a condition of oppressive obsolescence—into demerit dank and dark desuetude, as it were. But shall we lie silently and be thus slid off a plank into the damp, disagreeable depths of oblivion?

History tells of an ancient dame who was so given to berating herself as the chief of sinners, that her pastor, tiring of attempts to lift the drooping spirit, concluded to let it lie where it had fallen. Instead then of efforts to persuade the dame that there were rifts of light in the cloud which symbolized her character, he ceased to console and pretended to add his condemnation to her own. "Yes," quoth the parson, "you are of all human sinners the most wicked." Uprose then quickly the self-condemning spirit, and while eyes flashed and lips curled, there came hotly the answer: "You ought to know better, sir; there are a hundred people in your church ten times as bad as I am." But where the pertinence in this tale? Just here. We have freely condemned our system of wheat growing, as rapidly exhausting the land. Although we have not predicted ruin "in a year or two," we have spoken of continuous cropping, without return to the soil, as ultimately destructive to its fertility. We have lectured ourselves with such unctious on this point that our foreign friends are apt to take us at our word, and especially as the view suits their food-producers well, they speak of our agriculture as verging on decay, and count their own resurrection from our demise. But this reading out of producing existence we cannot stand. Like the ancient and repentant dame, we may humble ourselves, but at his peril be it who dares to set foot upon our prostrate form.

The fact is, English and French prophets of evil to our general agriculture little know the themes they assail. In the matter of crop producing, we are certainly no worse off than the rest of the world, perhaps much better off. The mistake made abroad lies in taking our criticism on the system as equivalent to distrust of natural conditions. This is only measurably and indirectly true. It is difficult to understand how countries, whose fertility is so thoroughly vested in the manure pile, the phosphate bed or factory and in the hulls of guano vessels, could so far lose sight of the conditions of their own success as to count us dead before we have scarcely applied at all the stimulants to which they owe their life. And this oversight on their part seems the more unfortunate when it is remembered that the fertilizing material which is at hand is not used, but goes to waste or is exported as a commercial product. Upon us, then, there devolves, first of all, to save, to refrain from wasting what is at hand or may easily be produced from material which is in possession. Before we shall have to pay out the immense sums for fertilizers which European agriculture demands, we have a wide interval in which to modify our system, so as to employ restorative agents which will cost little but the handling of them. We may have to keep more animals, and thus reduce to valuable form the straw which is now commonly burnt; and other modifications of practice will ere long creep in. Take it in its most alarming form, the admonition from worn acres is not to cease but to change, to profit by the experience of the older regions, and to introduce a more economical system of production—more economical in that the waste is less.

While this resource remains we shall not die. But when shall the life preserver be seized? He who lays hand upon the cork early is doubtless wise and safe, but common voyagers delay until danger is imminent. It may be expected then that so long as wheat growing by the present system of cropping in this State (with or without bare fallows) is profitable as it is now, there will be no stampede among producers, and preach as we may and prophesy as may our European critics, so long as European skies are so kind to wheat values, it may be a generation before any marked change will enter our wheat growing. For when the first blush of fertility leaves the virgin soil there recur years of yields, at times reaching high, at times sinking low, which seem the work rather of seasons than of soils. More than this, there are coming in methods of working, matters of date and times of plowing, intervals of rest and the like, which have a marked and salutary effect, and so long as the soil seems plastic under the hand of the man who fashions its culture, there naturally arises a question whether it does not still hold full treasures for him who knows how to educe them. It will take at least "a year or

two" to work out all these and many other problems, and while wheat grows well, yields well and sells well, their solution need not cast a shade on this year's Thanksgiving cheer. Meantime Manitoba mourns: "He cometh not," she said.

But there is another handle to this kettle. This is a great country, "blasted" as ye may. This country has regions as large as many England which have outgrown the practices which are now held to be so prone to obsolescence. And what do these regions become? Are they dismal, deserted deserts? Ask England where she gets the cheese that she paid \$23,000,000 for last year. It was from the "obsolete" grain fields of New York, Ohio, Illinois, Iowa and Wisconsin. And whence come the thousands of cattle which English beef-eaters are offering rewards for, "living or dead?" They are from the "obsolete" grain fields of the northwest, and from the prairies which were so engulfed in oblivion that even the grain grower stopped short of them. No; the agricultural regions of the United States do not die any more than the fields of other enlightened nations. They change, it is true, and in changing multiply their value. Dense populations spread over obsolete grain fields. Mixed husbandry, manufactures, the environment of culture and education, support and surround new thousands. He who once owned a township has now a quarter-section and a heavy bank account, unless he squandered his receipts.

To Americans must be conceded at least common sense enough to adapt themselves to new conditions. Although in the midst of transformations, they are found in the car of progress, not beneath its wheels; and when the car stops it is but to oil its axles for a new journey. American agriculture is just now steaming up for a new run into the region of success and prosperity. It will be a "year or two" before it emerges.

## QUERIES AND REPLIES.

## Proper and Pride of Butte Wheats.

**EDITORS PRESS:**—What is the difference between the "Proper" and "Pride of Butte" wheats?—ISAAC DAKIN, Soquel, Cal.

**EDITORS PRESS:**—Yours of October 24th, asking me to describe the leading characteristics and habits of each of the varieties of wheat known as Proper and Pride of Butte, is duly received, and will be briefly answered.

The Proper originated from the selection of a number of heads of bearded wheat in the field of a Mr. Proper, at Sutter station, on the line of the Marysville & Vallejo railroad, in Sutter county. Impressed with their appearance, Mr. Proper gathered and sowed, and sold to his neighbors, a very fine article of early wheat, eagerly sought after by millers and which makes a superior article of flour. The Proper is a bearded wheat, and exactly similar in appearance, as to the heads, to the Pride of Butte, although of entirely a different nature. The Proper is a very fleshy wheat, and has a very thin husk, and farmers generally complain that it requires too much seed. The fact, so far as I have been able to ascertain, is that they bluestone too heavily, and on examination I am convinced that this is the case. Where in ordinary wheat there is required about from three to four pounds of bluestone to the ton, the Proper will not allow of two pounds. If more, it will rot in the ground, and hence the farmers attribute it to want of thicker sowing. The Proper is a wheat which ripens very early—as early as the Sonora, one of the earliest known varieties. It is from five to eight days later, owing to peculiarities of soil in this respect. It is not a very good wheat to stool, and in this respect quite unlike the Pride of Butte. It is of rather soft straw, and in rich ground is liable to fall down and lodge, hence on such land it is better to sow in the spring, but not on poor land. It will stand later sowing and still mature than any other variety I know of, except Sonora.

The Pride of Butte originated in a similar manner, with a gentleman in Butte county. It is what is called a winter wheat, or must be sown early. As growing, it resembles, after being headed out, the Proper; but quite unlike it in other respects, it takes a longer time to mature. It ripens about six days earlier than the large White Club, or about the same time as Chile. The Pride of Butte is a most wonderful variety to stool. I gathered, the past season, many bunches which had from 150 to 200 stalks from a single seed; and, incredible as this may appear, one bunch showed 212 distinct stalks from a single seed, each having a good head. These, of course, were selected from the edges of the field, where the wheat was sown thin. Where the Proper requires 80 pounds sown to the acre, the Pride of Butte only requires 65 pounds. This wheat, on good ground, will grow five and six feet in height, and will stand up against all winds, and is not so liable to be threshed out. It is quite as fine a milling wheat as Proper; but whoever undertakes to sow it must do so early, and must close the season with Proper or Sonora, the latter not fit for milling.

As to general cultivation, both varieties are the same, with the exceptions I have named. As to threshing out with the winds, none are so bad or liable as the Australian, and others in the following order: Sonora, Chile, Proper, White Tuscan, Black Sea, Tappahanock, Pride of Butte, Large White Club and White Tou-

zelle. The last I regard as one of the finest wheats grown, although it must be sown on summer-fallowed land or very early. It is an exceedingly large berry, and of very fine milling quality, and as little liable to rust as the Odessa.

Thus I have very briefly and in great haste given you the peculiarities of the two varieties you desire. I have done it in a practical manner, so that our farmers interested may readily understand the relative difference between the two kinds; and if it should be of any service to a single one, I shall not regret the time, and shall be most happy, at any time, to communicate any information I may possess in reference to these or any other varieties of wheat grown by our farmers. One thing is most particularly important, and that is the necessity of changing seed. Our old varieties, as Chile, Club, Sonora, etc., are deteriorating very rapidly, and our efforts should be exerted to procure new varieties adapted to our soil, and most particularly our climate. During many years of examination and experiments I have found all others fail except those from a climate similar to California; and farmers must give their particular attention in selecting varieties to see that they originally came from a country similar in climatic conditions to ours, or their labor will be most assuredly in vain.—CHAS. F. REED, Grafton, Yolo Co., Cal.

## Age of Monterey Cypress.

**EDITORS PRESS:**—Is the Monterey cypress a long-lived tree? I hear 'tis not. Let some one who knows give their experience.—R. W. WATERMAN, San Bernardino, Cal.

We have no evidence at hand to fix the age attained by this tree, and if any of our readers have points on the subject we should be glad to receive them for publication. The term long-lived is somewhat indefinite, for if our sequoias be taken as the standard, other trees would seem to die young. However, using the term in an average sense, we should think the Monterey cypress fairly entitled to honors. On Cypress Point, Monterey county, trees may be seen from two to two and a half feet in diameter of trunk, and though the storms have played havoc with their upper works, they have doubtless retained their hold upon earth for generations. Certain it is that trees planted out in this part of the State 25 years ago are still in appearance young trees. We should think, for ordinary interpretations of the term, the tree could be called long-lived.

## The Favorite Grape of the Medoc.

**EDITORS PRESS:**—I am anxious to know if any fruit grower or vineyardist in the State has ever given a fair trial to the favorite grape of the Medoc, the "Carmenet" or "Carbenet," and if so, with what result. The most celebrated wines of the Medoc are produced largely from this grape, and this is so well known that it would seem that it must have been planted by some one in this State. If there are any who have tried the experiment, the result of their experience would be interesting and useful. This grape must not be confounded with the "Charbonneau."—R., San Francisco.

If any grower has this grape will he favor us with the facts desired?

**THE STATE HORTICULTURAL SOCIETY.**—According to appointment a meeting of those desiring to perfect an organization of a State Society of Horticulturists was held in this city on Saturday last. There were about 30 present from various places from St. Helena on the north to San Jose on the south. John Lewelling, of the former place, occupied the chair, and Mr. Shinn held the quill. A draft of constitution and by-laws submitted by the committee previously appointed reported a document, which, after abundant amendment, was adopted *seriatim* and endorsed by many of those present who "pungled" the \$2.50 entrance fee. After this the meeting proceeded to the election of officers, but stumbled upon rocks in the shape of parliamentary tactics which were held to be insurmountable, and an adjournment was taken until Thursday of the present week. Toward the last the meeting assumed the flavor of the persimmon rather than of the peach, but it was hoped that the former would ripen before the second meeting. We go to press in *medias res*, but in our next issue we shall doubtless be able to recite the facts about the perfection of the organization.

**ENGLAND'S NEEDS AND SUPPLIES.**—We notice that the grain reviewer of the *London Farmer* argues that "the monthly wants of the United Kingdom from abroad are expected to approach 1,400,000 quarters, a quantity which, if required for 12 months, would amount to 16,800,000 quarters, and if required for 11 months only to 15,400,000 quarters. Between these two amounts the real wants of the United Kingdom may with fair certainty be said to lie. The exact quantity must depend upon the lateness or earliness of next year's harvest. At the present time we can see our way clear to some 8,000,000 quarters from America. Some 4,000,000 quarters from the Baltic and Black seas, and some 2,000,000 quarters from India, Egypt, Australia and Chile. How much more grain may eventually be forthcoming from these great sources of supply it is impossible to say, and so there exists in the corn trade of to-day an element of uncertainty which naturally tends to keep speculation afloat."

THE Cabinet at Washington have decided that the War Department shall deal directly with the refractory Utes.



## Southern California Horticultural Fair.

The second exhibition of the Southern California Horticultural Society took place at Los Angeles last week, opening on Monday the 20th inst., and closing on Saturday the 25th. The exhibition was one of more than usual interest, and the attendance and receipts greatly exceeded those of the former year. The total number of entries were 813 for competition, and about 300 not for competition. Since the previous exhibition the Board of Directors have introduced many improvements into the internal arrangements of the pavilion; better stands and tables were provided; the walls, beams and entire inside of the building has been covered with a heavy coat of whitening, which added largely to both cheerfulness and light—and all of which placed the exhibitors in a much better condition for showing their goods than was met with last year.

It was a very general remark of visitors that the exhibits showed a marked improvement in both quantity and quality over those of last year, giving conclusive evidence that the producers of the southern part of the State have in some respects profited by the experience of the past, and by the knowledge they have acquired from the exhibitions heretofore held.

There appears to be a very general impression among both managers and exhibitors that the time for holding these annual reunions here should be fixed at a different date, so as to give a better opportunity for the display of oranges, lemons and grapes—which constitute the distinctive feature of Los Angeles products. Could the convenience and necessities of other exhibitors be made to conform to that most suited to semi-tropical exhibits, the change would greatly enhance their interest and importance, and it would be difficult to exaggerate the charming effect which might be produced by decorating the pavilion with orange trees and boughs in all the snowy whiteness and rich perfume of bud and blossom, accompanied with the glory of fresh foliage and perfected and immature fruit. Yet, even as it was, no person could walk through that pavilion, as it appeared last week, devoid of the many possibilities that might have been present, without being impressed with the fact that the capabilities of the soil and climate of southern

California are most remarkable—in fact, that they cannot be surpassed, possibly not equalled, by any other region of equal extent on the globe. Within the range of a semi-circular area of from 25 to 50 miles, to the north and east of the city of Los Angeles, there is a succession of valleys in which can be produced at some point almost or quite every product of the soil known to the commercial world, unless the coconut and possibly coffee and some of the spices may be exceptions, neither of which, we believe, have been thoroughly tried. Within the pavilion were shown, as the products of the district described, the apple, pear and peach, potatoes, corn, wheat and barley, as perfect as were ever seen from any portion of the temperate zone, and by their side were exhibited the orange, lemon, lime, pomegranate, olive, citron and banana, equal to the best ever brought from tropical or semi-tropical regions; also raisins, figs and nuts of all kinds, not inferior to any that were ever exported from either shore of the Mediterranean.

One of the most interesting features of the fair for this locality was the display of apples. Five years ago it was held that good apples could not be produced in Los Angeles county. This exhibit has proven that the doubters were altogether mistaken, for it is seldom that so fine a show of this important fruit is seen as that which was made at the Los Angeles fair last week. They were shown in great variety, of unusually large size and fine in flavor and color.

One gentleman, Mr. Milton Thomas, of Los Angeles, exhibited 71 varieties—all named except 10, which were seedlings of his own production. Included in this exhibit were four

apples of the Domine variety, which were picked from a root graft only 18 months old.

Mr. O. N. Cadwell, of Carpinteria, exhibited, in addition to 20 well-known varieties, 40 lots of seedlings of his own raising, each of which appeared to present marked characteristics, such as would seem to entitle it to a distinctive name.

Mr. Geo. Harder, of Downey City, exhibited some 15 varieties, nearly all of which excelled in size and perfection of fruit.

Among other exhibits, we noticed Rev. C. F. Loup, of Pomona; Rev. Robert Strong and Josiah McCoy, of Westminster; H. M. Higgins, San Diego, and Mrs. A. E. Brewster, of San Diego.

Mr. M. P. Grove, of Los Angeles, made a very fine display of apples produced by the Hamilton sub-irrigation system.

The display of semi-tropical fruits, for reasons already alluded to, was not as full as might have been expected. Messrs. Fisher, Richardson & Co., of the San Pedro Nursery, made an excellent display of orange and lemon trees in bearing. Mr. L. H. Titus, of San Gabriel, exhibited oranges and pomegranates; one particularly noticeable specimen of the latter fruit weighed 1½ pounds.

Mr. G. B. Lyons, of Tustin City, had in his exhibit a most remarkable specimen of Mediterranean Sweet, which probably could not be duplicated either in size or perfectness of form and color by anything even grown on the sunniest plain of Italy. Geo. C. Swan, of San

## Picking and Drying.

The grapes should be picked just at the proper time, which is indicated by their peculiar amber color and transparency when held to the light. They are placed carefully in trays 2x3 feet in size, and the trays laid upon the ground between the rows, or in some open space where they can get the sun and air freely. The grapes remain upon these trays from eight to ten days, undisturbed, when they are turned carefully without disturbing the fruit. After turning, they are permitted to remain eight or ten days longer, according to the weather, or until they are thoroughly dried. They are then placed in boxes three feet square and one foot deep, for the purpose of sweating. If they are very dry, a little water is sprinkled over them as they are placed in the boxes, which, under such circumstances, will hasten the process; but when there is no hurry in getting the fruit into market the sprinkling process may be dispensed with, as the fruit will gradually take moisture from the atmosphere, from which they should be covered as closely as possible. The fruit is kept in these boxes at least two weeks. In going through this process of sweating the raisins should assume a uniform color and texture, and the stems should lose their brittleness and become tough and yielding. No good raisins can be made without a proper and thorough process of sweating.

## Honey.

There was but one article which has hitherto formed a prominent feature in the commerce of

separator for gold placer diggings, which appears to be a decided improvement over anything else of the kind with which we have met before. It is said that there is a large and profitable field for a practical machine of this character in many parts of Arizona. Much interest was also felt in a fine display of carp, in the basin of the fountain. They were from the pond of Mr. Waterman, of San Bernardino.

Our space will not admit of more extended notice of these exhibits at this time; but we propose to refer to them again in some future number of the PRESS.

## The Percheron Horse.

We take pleasure in presenting our readers in this issue the portrait of the elegant young Percheron stallion "Chere," winner of the first prize and gold medal at the Universal exposition of Paris, 1878. "Chere" with 35 other horses of the breed was lately imported by M. W. Dunham, of Wayne, Ill. The famous race to which this horse belongs has become thoroughly established in the United States, and a Percheron Norman Stud Book is published, in which the annual importations and native pure bred animals entitled to register are duly recorded.

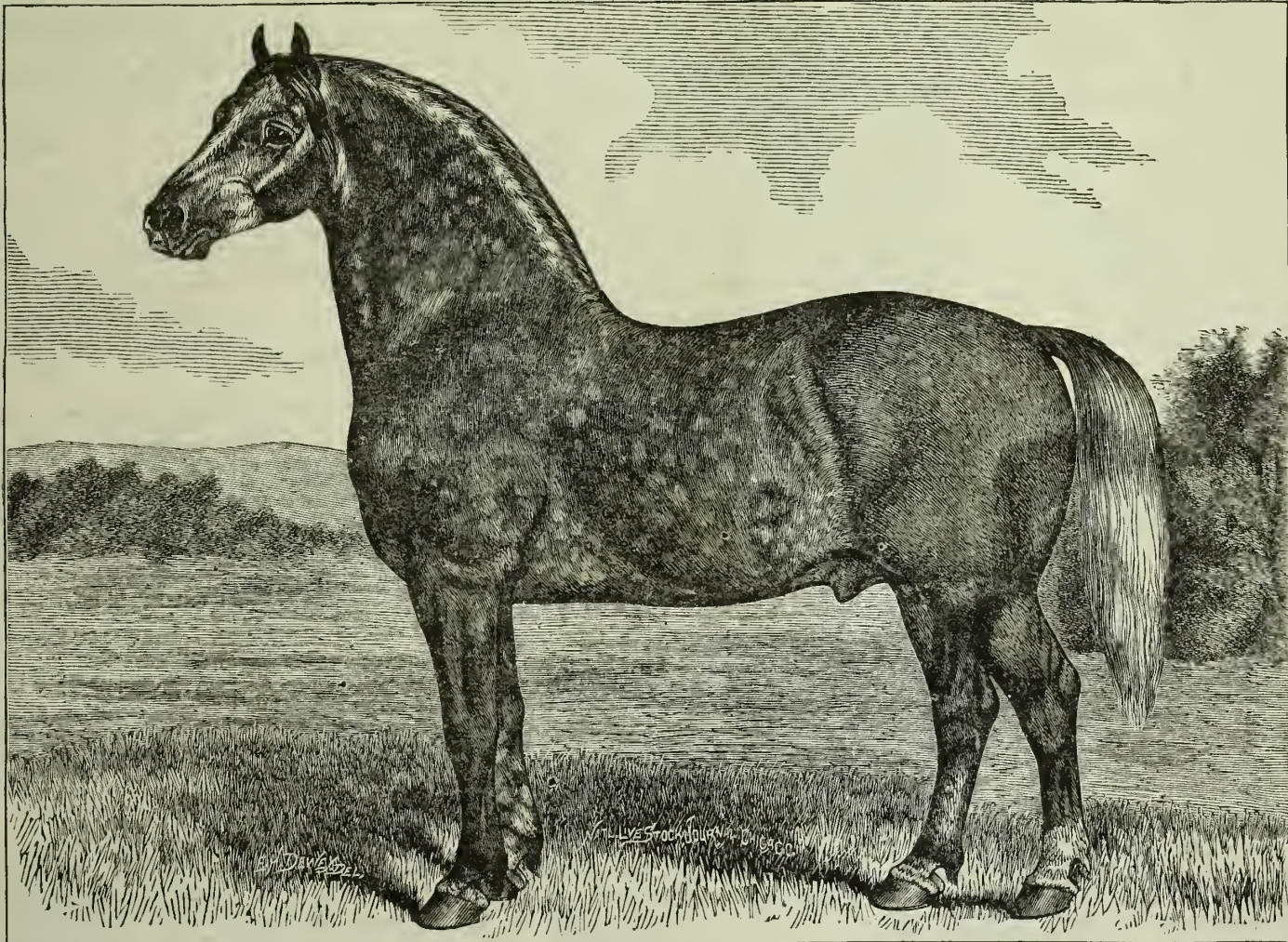
The great popularity of this breed has been attained by the success of the cross upon all classes of native mares. The uniformity of the get of these stallions, and the certainty with which they impart their own qualities—adding compactness, weight and vigor to their offspring—have made them favorites among all who are desirous of breeding horses adapted to use upon the farm, or that can be readily sold on the market at high prices.

We have always striven to induce farmers to use greater care in the improvement of all classes of stock; and have advocated the selection of the very best pure bred sires for breeding, as the most certain way to accomplish that end. As we learn from time to time of the importations to the United States of the choicest animals of their kind to be found in Europe for this purpose, we feel that our labor has not been lost, and that enterprising search for the best animals abroad is bringing wealth to the agricultural community of the country. The number of Percherons in this State is steadily increasing, both by breeding and importation. We notice by the Antioch Ledger two were brought in from Illinois last week.

## PRESERVING FRUIT SPECIMENS IN BRINE.—

Rev. Henry Loomis shows the result of a test he has made to test the efficacy of a recipe he found floating in the newspapers to the effect that specimens of fruit could be kept without decay or loss of color by submersion in common brine. He placed an orange in a jar of brine about six months ago, and shows it to us now with as bright-colored skin as when first plunged. He will now test the effect of brine upon apples and other fruits. Of course it is understood that the brine is advocated merely for the preservation of specimens of fruit for show when they are out of season. Samples of fruit ripening at any time of the year might be preserved in this way and kept for exhibition at the fairs, etc. The use of alcohol is both expensive and it extracts the coloring matter from the skin, and thus destroys the appearance of the fruit. Better than alcohol is a mixture of one-third water and two-thirds gin, which has been found to keep the color in grapes with but slight discoloration.

THE St. Louis and San Francisco railroad is to be completed from Vinita, Indian Territory to the Pacific ocean; \$20,000,000 of German capital at 5% has been offered to construct it. Vice President Baker says the arrangements are now being made.



PERCHERON-NORMAN STALLION "CHERE," IMPORTED BY M. DUNHAM, OF ILLINOIS.

Diego, made a fine display of lemons. His "Olivias" are attracting much attention, and have proven excellent keepers—have a thin rind, free from all bitter taste and are pronounced by experts equal, if not superior, to the best imported Sicily lemons. When such fruit as this, and other approved varieties are freely cultivated in California, importation will very likely be changed to exportation.

## The Display of Raisins

Was extremely fine. The principal exhibit was from Riverside, although Santa Ana, San Diego, Santa Barbara and Pasadena were all fairly represented. The people of Riverside are quite enthusiastic over the golden prospects before them in this branch of industry, and well they may be. The growers there have taken hold of fruit culture, in all its branches, with an energy an intelligence which will admit of no failure, and which is bound to reach all its possibilities.

They have heretofore had some trouble about producing raisins of uniform quality, but will obviate this in the future through a perfected concert of action, in the form of a Fruit Growers' Association, which has been recently organized. This association has appointed an inspector, and adopted a common trademark and brand, by which all raisins put up by them will hereafter be known. It is made the duty of the inspector to visit the vineyard of members of the association, and to personally direct all matters in picking, curing, sweetening and packing the raisins, and to brand each box according to its merits. It is only by such extreme care and by perfect concert of action that the best results can be obtained.

southern California, which was conspicuous for its absence—the product of the apiary. We learned that the past season has been very unpropitious for this branch of industry—that there is not one-tenth of the honey raised in Los Angeles county this year that was produced the previous season. While the exportation of last year reached 600 or 700 tons, in all probability it will not exceed 10 tons this season. There were but four exhibitors of this product, and the total amount did not exceed 25 pounds. Mr. C. N. Wilson, who has about 150 stand of hives near San Fernando, exhibited a small lot of very fine honey, and a new construction for hives. He makes a hive of a composition, consisting mostly of clay—white and soft. It consists of a simple box, with a movable top and bottom. The advantages claimed for it are that it is cooler than wooden hives, and can be readily and thoroughly cleaned with a little sandpaper. These hives, of a capacity of 75 pounds, can be made for \$1.50 each.

## Sugar and Sugar Beets.

Mr. Gennert had an exhibition of dried sugar beets, and samples of beet sugar, both raw and refined. He, and many others as well, think there are great possibilities for Los Angeles county in this direction. The Professor proposes that beets should be raised and dried, and transported in that condition to the factory. Information of the proposed enterprise was given in our last issue.

## Among Other Novelties Shown

Was a new machine for cutting and burying cornstalks in the field, invented and shown by Jacob Kraft, of Downey City; the machine appears to be very practical; also a dry washer or



## METEOROLOGICAL.

## Forests and Meteorology.

An important paper in *Polybiblion* on this subject gives the results of observations made during the last six years under trees and not far from the edge of a forest, and also in the plain and far from all trees. 1. Forests increase the quantity of meteoric waters which fall on the ground, and thus favor the growth of springs and of underground waters. 2. In a forest region the ground receives as much and more water under cover of the trees than the uncovered ground of regions with little or no wood. 3. The cover of the trees of a forest diminishes to a large degree the evaporation of the water received by the ground, and thus contributes to the maintenance of the moisture of the latter and to the regularity of the flow of water sources. 4. The temperature in a forest is much less unequal than in the open, although, on the whole, it may be a little lower; but the minima there are constantly higher, and the maxima lower than in regions not covered with wood.

These observations have been made in the neighborhood of Nancy, and by the pupils of the School of Forestry of that city, under the direction of M. Mathieu, sub-director of the school. On the other hand, M. Fautrat, when sub-inspector of forests at Senlis, made during four years, but on a different method, observations on forestal meteorology which fully and completely corroborate, in certain respects, those of M. Mathieu. The laws which seem to follow from the figures given by M. Fautrat, as well as an inspection of the curves which graphically represent them, are as follows:

1. It rains more abundantly, under identical circumstances, over forests than over non-wooded ground, and most abundantly over forests with trees in a green condition. 2. The degree of saturation of the air by moisture is greater above forests than over non-wooded ground, and much greater over masses of *Pinus sylvestris* than over masses of leaved species. 3. The leafage and branches of leafed trees intercept one-third, and those of resinous trees the half of the rain water, which afterward returns to the atmosphere by evaporation. On the other hand, these same leaves and branches restrain the evaporation of the water which reaches the ground, and that evaporation is nearly four times less under a mass of leafed forest than in the open, and two and one-third times only under a mass of pines. 4. The laws of the change of temperature out of and under wood are similar to those which result from the observations of M. Mathieu. The general conclusions seem to be that forests regulate the function of water, and exercise on the temperature, as on the atmosphere, an effect of "ponderation" and equilibrium.

## Los Angeles Rainfall.

We find that the rainfall record has been kept in Los Angeles since the seasons of 1872-3, seven years. The first three years of this period was kept by Mr. C. Ducommun, but as his instruments and manner of measurement have been tested by the Signal Service officer in this city and found to be correct, and as his measurement during the past four years has tallied very closely to that of the Signal Service, we give the rainfall for the past seven years, so as to get as long an average as possible. The following table shows the rainfall for five years in several of the leading cities of the State. We would bring the figures down to date had we the figures for other localities besides Los Angeles:

Years.	San Francisco	Sacramento	Stockton	San Jose	Merced	Nevada City	Mayville	Los Angeles
1872-3	18.02	13.41	13.30	10.99	38.70	13.04	12.50	
1873-4	23.95	23.77	15.20	19.11	10.60	62.91	26.87	23.72
1874-5	18.40	17.75	11.14	7.90	10.40	45.95	13.81	21.20
1875-6	20.01	25.52	18.34	12.77	12.03	66.07	17.30	29.22
1876-7	10.00	9.18	7.03	4.99	3.20	33.02	12.16	5.29
Averages	19.28	17.92	13.00	8.92	9.57	49.45	16.65	18.38

By bringing the rain statistics in Los Angeles down through two more seasons, we find that in 1877-8 we had 21.26 inches of rain, and in 1878-9 we had 11.35 inches, and the average for the seven years is 17.79, but a little less than Sacramento for the five years, and still is ahead of the other places named.—*Southern Cal. Horticulturist*.

TO MAKE HOLES IN HARD STEEL.—Holes can be made in hard steel by the application of nitric acid. True, they will not be very perfect, but cases may occur where such an operation will be very convenient. The process is as follows: Cover the steel plate, where you wish the hole, with a thick layer of melted wax; when cold, make a hole in the wax of the size you want the hole in the plate, then put on one or more drops of strong nitric acid, leave it on for some time, wash off with water, and if not eaten through apply other drops of the same liquid, and continue this until the plate is perforated.

## Spelling Reform.

Since we captured our first prize in a spelling match, in an old country school-house, in western New York, we have been somewhat conceited on our ability to wrestle with almost anything in the dictionary, and, like people who are too good for repentance, we do not feel the need of an easier system of orthography. However, it seems quite likely that there is to be a spelling reform, and when we see it zealously advocated by a journalist so well educated and devoid of manias as Dexter North, managing editor of the *Utica Herald*, we are prone to enlist in the cause.

It seems that the first reform insisted on is to be the enforcement of the following "five rules," or orthographic changes, approved by the American Philological association:

1. Omit *a* from the digraph *ea* when pronounced as *e* short, as in *bed*, *helt*, etc.
2. Omit silent *e* after a short vowel, as in *hav*, *giv*, etc.
3. Write *f* for *ph* in such words as *alfabet*, *fantom*, etc.
4. When a word ends with a double letter, omit the last, as in *eg*, *shal*, *cliff*, etc.
5. Change *ed* final to *t* when it has the sound of *t*, as in *lasht*, *imprest*, etc.

In advocating these changes in an address before the Spelling Reform Association at Philadelphia, Mr. North said: "There is no sound reason why every journal in the land should not at once adopt the five rules and resolutely carry them into the newspaper and job office. Within a month from the change, every constituency will be habituated to the improvement, and what is better, conscious that it is an improvement."

"The silent letters are nothing but the relics of modes of utterance which formerly prevailed. Omitted and eluded sounds have disappeared, leaving behind them these grave-stones for us to stumble over. Hundreds of these silent letters have disappeared in turn. The hundreds remaining will follow them some time. The eternal friction of language catches a new one every now and then. Why should they not all go at once, or in battalions?"

"It is years since any of us first dropped the superfluous 'me' off 'programme.' Already many are used to dropping the final 'te' from the entire group of words like *cigarette*, *quartette*, *etiquette*; and the words have gained a manly, straightforward appearance from the elision."

There is nothing in the five rules more radical, more orthographically *outré*, than are the changes alluded to above. Why do we continue to carry that ugly 'ugh,' like an old man of the sea, upon the backs of our *thoroughs*, *throughs* and *boroughs*? Long ago the people of my county sanctioned its taking off, when they permitted the descendants of the founders of the first village planted on the head-waters of the Mohawk river to shorten up their 'Whitesborough,' so that the village letter-writer might have time to reach the mail before it closed. Who will miss the 'ue' that the spelling reform association begs the newspaper to drop from the rear of *catalogue* and *demagogue* where the pair have been silently catching a stolen ride for all these generations? Why should not the press be as fierce to kick this intruding letter *k* out of the alphabet as it is to drive a thief out of public office? Why must we use a *p* and an *h*, when a single *f* is better than both? Why should we longer flatter our consonants by the inevitable doublet at every possible opportunity? All the world stops when it is thro'—except the printer. With him, as with the witches, it is an endless 'double, double, toil and trouble.'

"Of the several phases of the practical aspect of this question as applied to journalism, the saving of time, labor and money is of the first importance. \* \* \* A column of printed matter after the manner of the five rules, has shown a saving of not quite one letter to a line. If the whole paper had been spelled in the same economical fashion, the saving would have been 7,500 letters per day—more than 2,000,000 letters a year, or about one-thirty-sixth of the total number of letters used and re-used in the composition of the 313 issues. These figures become more impressive, when applied to the large quarto editions of the metropolitan press. They become still more impressive, when by an extension of the same calculation, we find that the 600 daily papers in the United States are setting up and re-distributing over and over again, 1,550,000,000 of the superfluous letters which would disappear unmissed and unmourned from our spelling, by the adoption of the five rules. The weekly and monthly press, numbering 5,300, are setting up the same number of superfluous letters. If the opponent of the spelling reform will stop long enough to count one billion, he may consent to believe before his task is finished, that it is worth while to save the vital energy, the precious time, the costly labor thus wasted in blind homage to the frailties of our mother tongue. To put this question in another form, this calculation shows that enough of these superfluous letters are used by those who neglect the five rules, to fill full five issues a year of the journal with which I am connected."

A FRENCH philosopher declares that much more depends upon how a woman wears her dress than of what it is made, and on how a man talks than on what he says.

## Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

SOLES FOR RUBBER BOOTS.—Charles H. Beach Althouse, Josephine Co., Oregon. No. 219,672. Dated Sept. 16th, 1879. The object of this invention is to provide a leather sole for rubber boots. The method usually adopted is to fasten the leather sole either with screws or tacks directly to the bottom of the boot, which is not always reliable. In this invention the soles are attached in the following manner: The leather main sole is large enough to lap or turn up around the edge of the rubber sole of the boot. To this main sole is fastened a tap-sole either with rivets or screws, the tap-sole only covering the bottom of the boot, the same as in ordinary tap. The main sole is then fastened to the edge of the rubber sole with small screws or tacks, which are put in horizontally to the rubber sole, thus attaching both soles to the boot. By this method there is no strain or wear on the leather of the main sole or the screws with which said main sole is fastened, so that the bottom of the rubber boot can never leak.

THILL COUPLINGS.—William Quiulan, Mayfield, Santa Clara county, Cal. No. 219,175. Dated Sept. 2d, 1879. The object of the inventor is to produce a means by which the shafts of a vehicle may be readily connected and disconnected without the use of a wrench or other tool, and at the same time have the parts so made that when in position they will not become accidentally displaced. The rear end of the shaft has a bolt passing through it, the outer ends of which are set in hook arms on the clips that secure the axle of a carriage to the bolster. A bail is placed under the shaft-iron and secured by means of the bolt in the shaft; this bail is connected to the clip by a short strap, thus holding the shaft in its place and preventing displacement. The invention is simple and very convenient, and will no doubt meet with ready sale wherever introduced.

WAGON BRAKES.—Harris G. Cox, Alvarado, Alameda Co., Cal. No. 219,692. Dated Sept. 16th, 1879. This invention consists in so constructing the brake that it may be operated by the back-pulling action of the horses, or may be operated by an ordinary hand lever, as desired, and may be applied to any ordinary vehicle or street cars. It differs from ordinary horse brakes in that the wagon may be backed at any time without locking the wheels, while at the same time the wheels may be locked if it is desired to do so.

WINDLASS AND DERRICK FOR BORING ARTESIAN WELLS.—Benjamin F. Mull, Merced, Cal. No. 220,408. Dated October 7th, 1879. This invention relates to an improved windlass and derrick for artesian well-boring, and consists: First, in a novel construction of the windlass, so that it may be worked by hand or horse, or steam power, and by which it may be worked by cog or friction gearing for more or less speed, as desired. Second, in forming the derrick of light sections of boiler-iron connected together in a peculiar manner, by which means he is enabled to form a light, high derrick which may be easily separated in sections, so as to be transported from place to place without difficulty.

SPRING GUNS.—Richard Wylie, Napa, Cal. No. 220,325. Dated Oct. 7th, 1879. This device relates to an apparatus for throwing missiles, projectiles or arrows; and it consists of a gun having a barrel, suitably connected with a stock and having a slot in its lower part. A driving-block for the arrow or projectile moves in the barrel, and has a stem projecting down through the slot, so as to have the firing clastic straps attached to it. These straps are contained in a chamber beneath the barrel, and have one end secured at the front, so that their tension may be regulated. The weapon may be properly sighted, and is very accurate.

SELF-FASTENING TOE-WEIGHT.—Wm. Zartman, Petaluma, Cal. No. 220,326. Dated, Oct. 7th, 1879. This invention relates to an improved toe-weight for horses, and consists in a peculiar construction of the spur or clip and weight, by which the weight is firmly secured to the shoe without the necessity of using any bolts, screws, or straps to keep it in position, so that the weight is made self-fastening.

EDUCATIONAL CRAMMING.—Prof. Huxley, speaking of the high pressure or "cramming" system in the schools, says that the children so taught are "conceited all the forenoon of life and stupid all its afternoon," and, also, that "their faculties are worn out by the strain put upon their callow brains, and they are demoralized by worthless childish triumphs before the real work of life begins. I have no compassion for sloth, but youth has more need for intellectual rest than age, and the cheerfulness, the tenacity of purpose, the power of work which make many a successful man what he is, must often be placed to the credit, not of his hours of industry, but to that of his hours of idleness in boyhood."

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

PETERSAXE & SON, 520 Bush St., S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

## SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

## POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magpie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Dors, etc. Eggs for hatching. Send for price list.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine. Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Poland-China Swine and Black Cochon Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

## BEES.

JOS. D. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## Grangers' Bank of California, SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000,  
In 10,000 Shares of \$100 each.  
Capital Paid up in Gold Coin, \$400,000.

## OFFICERS:

G. W. COLBY, President  
JOHN LEWELLING, Vice-President  
ALBERT MONTPELLIER, Cashier and Manager  
FRANK McMULLEN, Secretary

## DIRECTORS:

G. W. COLBY, President. Butte Co.  
JOHN LEWELLING, Vice-President. Napa Co.  
J. V. WESTER, Alameda Co.  
URIAH WOOD, San Benito Co.  
J. C. MERYFIELD, Solano Co.  
THOMAS MCCONNELL, Sacramento Co.  
I. C. STEELE, San Mateo Co.  
SOLOMON JEWETT, Kern Co.  
C. J. CRESSEY, Stanislaus Co.  
SENECA EWER, Napa Co.  
A. D. LOGAN, Colusa Co.

The Bank was opened on the first of August, 1874, for the transaction of general banking business.

CURRENT ACCOUNTS are opened and conducted in the usual way.

GOLD and SILVER deposits received.

CERTIFICATES of DEPOSIT issued for Gold and Silver.

TERM DEPOSITS are received and interest allowed as follows: 6% per annum if left for 3 months; 7% per annum if left for 6 months; 8% per annum if left for 12 months.

EXCHANGE on the Atlantic States bought and sold.

ALBERT MONTPELLIER,

Cashier and Manager.

San Francisco, Oct. 15th, 1879.

## PIANOS

## LARGEST MUSIC HOUSE

On the Pacific Coast.

WHOLESALE AND RETAIL.

Lowest Prices and Best Goods.

Write for information concerning any Musical Instrument, and terms of sale. It will be given with pleasure.

ESTABLISHED IN 1850.

## KOHLER &amp; CHASE,

137 and 139 Post Street, San Francisco.

OBTAINED IN U. S. AND FOREIGN COUNTRIES; trademarks, labels and copyright registered through DEWEY & CO.'S MINING AND SCIENTIFIC PRESS Patent Agency, San Francisco. Send for free circular.



## Lands for Sale and to Let.

## FARMS FOR SALE.

IN THE FERTILE AND HEALTHFUL

San Pasqual Valley,  
San Diego County, Cal.

TITLES PERFECT.

The owner (an architect) having recovered his health by a residence of four years in this Valley, is desirous of returning to the city, and so offers the following farms for sale

At a Great Sacrifice:

The Home Farm of 200 acres is well fenced and subdivided. There is beside 600 yards of movable panels,

50 Acres in Alfalfa.

Yielding five and six crops a year. There is an abundance of water on the place for stock, besides running water for garden, orchard, etc., and a one-sixth interest in the S. P. V. Ditch Co. House 28x30, enclosed in a lot 200x180, barn and stable, 54x35, two sheds 24x14 and 18x14, smoke-house, 20x14, with an adobe cellar under it, and every convenience as regards large tanks, etc., for making bacon. The implements are of the best, nearly all new, and in good order. They consist of two farm wagons, 10-foot header, header beds, hay rack, mower, gang plow, single do. harrow, 10-foot seeder and cultivator, small do. sulky rake, two sets of strong harness, together with a lot of other tools, bay, grain seed, etc.

Price for the whole, \$4,000; one-half cash, balance on time at 1 per cent.

For Sale Also,

A farm under cultivation of 116 acres, adjoining the above, suitable for grain, corn or alfalfa, with a one-sixth interest in the Ditch Co., and about one and one-quarter miles of fencing, no other improvements. Price, \$1,200; one-third cash, balance on easy terms.

For Sale Also,

A farm of 120 acres, one-quarter mile from the above ranches, mostly damp land, suitable for a nursery, alfalfa, corn, etc. There is a small house, etc., and a ditch running along its upper side. Price, \$900; one-third cash, balance on easy terms.

The neighborhood is exceedingly healthful and growing. Two schools are in the valley, one within one-quarter mile, and the postoffice within one mile, neighbors with families are all around.

My stock consists of superior brood mares, colts, hogs, etc., and they may be taken at a valuation if wanted.

For particulars apply to **W. B. STEWART,**  
San Pasqual Valley, San Diego Co., Cal.

## FARMING LAND

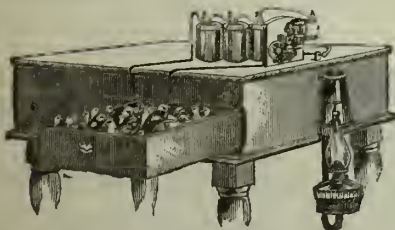
For Sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

**LAND** Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to **EDWARD FRISBIE,** Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

## MONEY in CHICKENS



If You Want to Make Money

By raising any number of Chickens at any season of the year without setting hens, procure an

## ECLIPSE INCUBATOR

(E. A. SAMUEL'S Patent).

In both public and private trials on this coast as elsewhere, the "ECLIPSE" has proved itself a perfect and successful Egg Hatcher. It may be examined and its merits proven to customers before they make purchases. Write for particulars and circulars to

**G. G. WICKSON, 319 Market Street, S. F.**  
Agent for the Pacific Coast.

TRADE MARK.

## LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price, \$2 per gallon. For directions and testimonials, apply to **FALKNER, BELL & CO.,**  
Sole Agents, 430 California Street, S. F.

## The New Beekeepers' Text Book.

By N. H. and H. A. KINA. The latest work on the Apiculture, embodying accounts of all the newest methods and appliances. Fully illustrated. Sent by mail, postpaid, for \$1. **DEWEY & CO., 202 Sansome Street, S. F.**

## PAINT YOUR ROOFS

— WITH —

## Averill Mixed Paint!



The Best, Most Durable and  
Beautiful of all Paints.

PREPARED READY FOR USE, AND OF ANY  
SHADE OR COLOR DESIRED.



O. S. ORRICK, General Agent,

No. 329 Market Street, opposite Front, - - San Francisco.

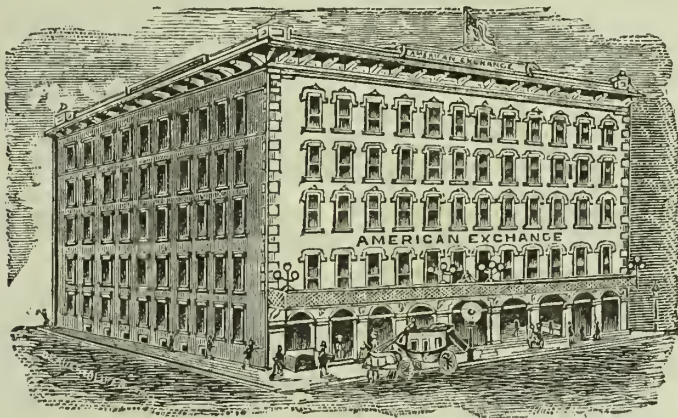
## The American Exchange Hotel,

SAN FRANCISCO, CAL.

Is situated on Sansome street, next adjoining Bank of California, and is in the very center of the great city.

Sansome Street is one of the finest and principal business streets in S. F.

The Hotel is situated within two blocks of the U. Land Office and U. S. Surveyor General's Office; also within



two blocks of the City Hall, Supreme Court and all the District Courts; within two blocks of the Postoffice and Custom House. All places of amusement are convenient to the Hotel. Street cars for all parts of the city pass the Hotel every minute.

## THE AMERICAN EXCHANGE HOTEL

Having been recently renovated and refurnished throughout in every respect the BEST FAMILY HOTEL in San Francisco. It has Two Hundred Rooms, well ventilated and neatly furnished, and being easy of access, fire-proof and sunny is decidedly the Hotel for comfort and convenience for the traveling public.

## DEWEY &amp; CO.'S

Scientific Press



Patent Agency.

(ESTABLISHED 1860.)

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old, experienced, first-class Agency. We have able and trustworthy associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other Agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us to often give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address **DEWEY & CO., 202 Sansome St., S. F.**

A. T. DEWEY.

W. B. EWER.

GEO. H. STRONG.

## WELLS, RICHARDSON &amp; CO'S BUTTER COLOR

Clives Butter the gilt-edge color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. **WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.**

## Pocket Map of California and Nevada.

Compiled from the latest authentic sources, by Chas. Drayton Gibbs, C. E. This map comprises information obtained from the U. S. Coast and Land, Whitney's State Geological, and Railroad Surveys; and from the results of explorations made by R. S. Williamson, U. S. A., Henry Degroot, C. D. Gibbs and others. The scale is 18 miles to 1 inch. It gives the Judicial and U. S. Land Districts. It distinguishes the Townships and their subdivisions; the County Seats; The Military Posts; the Railroads built and proposed, and the limits of some of them; the occurrence of gold, silver, copper, quicksilver, tin, coal and oil. It has a section showing the heights of the principal mountains. The boundaries are clear and unmistakable, and the print good. 1878. Sold by **DEWEY & CO.** Price, postpaid, \$2; to subscribers of this journal, until further notice, \$1.

## Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates,

## HEALD'S BUSINESS COLLEGE,

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post street, or address for circulars, **E. P. HEALD,** President Business College, San Francisco, Cal.

## Seedsman.

SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc. Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.

## CUZCO CORN.

Fresh Seed Direct from Peru.

Price, \$1 per pound in 5-pound bags.

JOHN GARDNER,

Care Wightman Bros., 117 Clay St., S. F.

EXOTIC F. A. MILLER & CO., Mission St.,  
GARDENS. opposite Woodward's Gardens. Send for Catalogue and Price List.

## Nurserymen.

1,000,000!

Strawberry, Raspberry, Blackberry and Cranberry Plants.

STRAWBERRY PLANTS.—The Essex Beauty, Crescent, Cinderella, Forest Rose, Glendale, Juconda, Monarch of West, Langforth Prolific, Triomphe d' Gand, Wilson Albany.

RASPBERRY PLANTS.—Cuthbert Early, Early Prolific, Reliance, Pride of the Hudson, Brandywine, Herstine, Philadelphia Red, Clark, Henrietta, Hornet, Belle de Fontenay, Delaware Bistol.

BLACKBERRY PLANTS.—Deering Seedling. Early and the most productive of all. I will give satisfactory proof that these Berries have realized \$750 per acre. It paid more than twice as much as the old varieties; also the Early Cluster, the Vina Seedling, Kittatinny, the Mammoth Cluster, Missouri Mammoth, Dorchester and Lawton.

CRANBERRY PLANTS.—The Cherry Cranberry Vines at \$10 per 1,000, by mail 64 cents more.

I will sell to responsible parties on time, part cash, 10-acre field of Cranberry vines under cultivation. Can be seen at the place. Send for Catalogue.

H. NYLAND,

Boulden Island, San Joaquin River.



The most complete assortment in the West. A particularly fine lot of Standard Pear Trees. Also a superb lot of as healthy Peach Trees as were ever grown. Full stock of Apple, Plum, Pear, Peach, Cherry, Quince, etc. A select lot of Grapes, Raspberries, Gooseberries, Currants, Strawberries, etc. An immense stock of Greenhouse Plants. Trade List and Greenhouse and Bulb Catalogues free. Correspondence solicited. 26th Year. 400 Acres. 15 Greenhouses.

**STORRS, HARRISON & CO.**  
PAINESVILLE, LAKE CO., OHIO.

## Phylloxera-Resisting Vines.

Vineyard proprietors desiring to plant American Grape Vines, which resist the attacks of the Phylloxera, either as Grafting Stock, or for direct production, which proves to be the only salvation and means of reconstructing the destroyed Vineyards of France, will do well to address **BUSH & SON & MEISSNER,**  
Bushberg, Jefferson Co., Mo.

## PEPPER'S NURSERIES.

(Established 1858.)

For sale at reduced prices, a general assortment of Fruit Trees and Small Fruits; also choice Ornamental Shrubs, Roses, etc. A limited supply of Cook's Seedling Apple, one and two years old. Catalogue and list of prices furnished on application. Address

W. H. PEPPER,

Petaluma, Sonoma Co., Cal.

## TREES

A large assortment of FRUIT, SHADE, ORNAMENTAL TREES and SHRUBS; ROSES, GREENHOUSE PLANTS, etc. GREGG, RANPERRY, SNYDER, BLACKBERRY, APPLE SEEDLINGS. New Fall Catalogue free. Established 1852. **BAIRD & TUTTLE,** Agents, Bloomington Nursery, Illinois.

## THOROUGHbred POULTRY.

SAFE UNLIMITED  
ARRIVAL RANGE.  
OF  
FOWLS Healthy Stock  
AND 116 ACRES  
EGGS Devoted to the  
Guaranteed. Business.



LANGSHANS. I now breed this justly celebrated Fowl. Send 3c. stamp for price list and circular describing the different breeds I keep. Incubators.

M. EYRE, Napa, Cal.

23 Pamphlet on Breeding, Hatching, Diseases, etc., adapted especially to Pacific Coast, sent for 15c.

50 Perfumed, gilt edge & chromo Cards, elegant case, name in gold, 10c. **ATLANTIC CARD CO., E. Wallingford, Ct**



## The Wheat Interest of the United States.

The reports of the United States Bureau of Statistics give the figures of wheat exports from this country during July last, as compared with the same month for nine preceding years. These give some clue to the great inpouring of European gold which is now in progress at Eastern ports:

Months.	Quantities.	Values.
July, 1870.	4,294,563	\$5,573,147
July, 1871.	2,895,265	4,075,722
July, 1872.	2,579,155	3,558,458
July, 1873.	4,898,730	7,096,982
July, 1874.	4,723,932	6,429,122
July, 1875.	6,071,206	8,232,300
July, 1876.	3,903,922	4,261,666
July, 1877.	1,497,043	2,194,516
July, 1878.	6,122,211	7,646,319
July, 1879.	12,705,327	14,118,532

For wheat in the shape of flour, there is also a likelihood of considerable increase upon the average export quantities in past years. Below is the comparative exhibit for 10 successive Julys:

Months.	Quantities.	Values.
July, 1870.	250,934	\$1,599,736
July, 1871.	252,843	1,696,581
July, 1872.	198,365	1,490,317
July, 1873.	262,407	1,803,618
July, 1874.	307,278	2,033,050
July, 1875.	339,452	2,052,899
July, 1876.	282,093	1,630,549
July, 1877.	163,052	1,273,412
July, 1878.	345,417	1,869,099
July, 1879.	853,515	1,988,160

When it is considered that the bulk of these exports of wheat and flour are derived from the West, and what immense sums of money are represented by the transactions, it may readily be conceived what a prominent and important part is being taken by this section in turning the balance of trade in favor of the United States.

**THE COLORING OF AUTUMN LEAVES.**—The green coloring matter of leaves has been recently reinvestigated by M. Fremy, and his results shed some light on the cause of the coloration of autumn leaves, although further study is still necessary to account for the manifold brilliant tints to be found in American autumn foliage. M. Fremy's previous studies on chlorophyll tended to prove that it was not a simple coloring matter, but composed of two different substances—a yellow which he named Phylloxanthin and a bluish green named Phyllocyanin acid. His more recent investigations have had for their object to ascertain in what conditions these constituents of chlorophyll exist in the organic tissue, whether mixed or combined, suspended in the liquid or united with the cellular tissue. By means of experiments, he finds that they exist in the leaves as a mere mixture. It yet remains to ascertain whether the phyllocyanin acid existed in a free state, or combined with a base, or united with the cellular tissues by a sort of capillary affinity. Analysis showed the presence of a notable quantity of potassa. The green matter of leaves, then, can be considered as a phyllocyanate of potassa mixed with phylloxanthin. "It has long been known," says M. Fremy, "that leaves in autumn lose their green appearance, changing to yellow, and also give off a large portion of their alkali. Now we know that this process depends upon the decomposition of the phyllocyanate of potassa."—*Ex.*

**A MEXICAN VEGETABLE IN FRANCE.**—It is reported that the Mexican tomato ("alka kenge") introduced in France a few years ago is now cultivated quite extensively. This fruit is of a dull yellowish-green color, and covered with a viscous matter. Its uninviting appearance, however, is amply compensated by its most delicious flavor. The Mexican tomato is a grateful refrigerator, and slightly aperient in its action if taken in quantity, but it is principally grown at home for the preparation of a syrup which is highly esteemed in affections of the throat and bronchi. For this purpose the fruit should be gathered when it comes away easily from the stalk. About 20 medium sized tomatoes are sliced into a liter of water, and the fluid boiled till reduced to about half that volume, when it is strained through fine linen, poured on to a pound of white sugar, again boiled to the consistency of a syrup, and then slightly acidulated.

**MINERAL SOAP.**—About three years ago there was discovered, near Elko, a deposit of a peculiar character, which upon being tested proved to possess remarkable detergent qualities. Analysis of the material showed that it was composed of many of the constituents used in the manufacture of the soap of commerce. Within the past six months the "soap mine" has been worked by an incorporated company and the product utilized in the manufacture of mercantile soap. We yesterday received a call from E. A. Littlefield, of the Elko Post, who left some samples of this useful article, which proves upon test to be all that the manufacturers claim for it. The company are now making and shipping from Elko about a ton of soap per day, but this will be increased to ten tons within a few weeks. Its cost is about the same as that of inferior brands of soap, which it will supersede in due course of time.—*Nevada State Journal.*

## Premiums at Sonoma and Marin District Fair.

We give the principal awards at the above-named fair, held at Petaluma, September 29th to October 3d.

**Horses.**  
Thoroughbred Horses—Stallions: 4 yrs or over, Hubbard, dip and \$20, E. R. Rockwood; 2 yrs, Haddington, \$12, J. McM. Shafter; 1 yr, Wade Hampton, \$8, R. Crans; mares: 4 yrs and over, Carrie C., \$15, G. Pacheco; 3 yrs, Belle Denman, \$12, E. Denman; 2 yrs, Rosette, \$8, J. G. Underhill; 1 yr, Rosie, \$6, G. Pacheco; suckling horse colt, no name, \$5, E. Denman; mare colt, Cecil, \$5, B. E. Harris.

**Graded Horses**—Stallions: 4 yrs or over, Eureka, dip and \$15, J. Piau; 3 yrs, Young Bayswater, \$12, U. P. Quackenbush; 2 yrs, Bill Hayes, \$8, R. Seavy; 1 yr, Hubbard, Jr., \$6, E. R. Rockwood; mares: 4 yrs and over, Storm, \$12, J. D. Adams; 3 yrs, Flora Alexander, \$9, P. Lawler; 2 yrs, Mollie, \$7, E. R. Rockwood; 1 yr, Mary Gray, \$6, W. Bihler; suckling horse colt, Dickey, \$5, R. Crane; mare colt, Carrie, \$5, S. S. Drake; stallion and 6 colts, Eureka, \$20, J. Piau; spec award for Admiral and 8 colts to S. S. Drake, dip and \$10.

**Horses of All Work**—Stallions: 4 yrs or over, Grey McClellan, dip and \$15, W. Bihler; 3 yrs, Black Diamond, \$12, H. Hinebaugh; 2 yrs, Twilight, \$8, H. Helman; 1 yr, Sultan, Jr., \$6, J. A. Peyton; mares: 4 yrs and over, Kate, \$12, T. M. Chapman; 3 yrs, Puss, \$9, E. R. Charles; 2 yrs, Laura, \$7, J. Merchant; 1 yr, Minnie, \$6, A. H. Van-kuran; suckling horse colt, Kallach, \$5, T. M. Chapman; suckling mare colt, Maggie, \$5, J. Piau; stallion and 6 colts, Patchen and family, \$20, J. Merchant.

**Draft Horses**—Stallions: 4 yrs or over, Duke de Chartres, dip and \$15, Petaluma Horse Breeders' Association; 3 yrs, Duke of Normandy, \$12, T. Skillman; 1 yr, Charley, \$6, D. Stewart; mares: 4 yrs and over, Kate, \$12, G. D. Green; 3 yrs, Young Blanche, \$7, J. Blossom, \$6, Page Bros.; horse colt, no name, \$5, G. D. Green; mares colt, Jeanie D., \$5, H. Mechem.

**Roadsters**—Stallions: 4 yrs or over, Alexander, dip and \$15, S. Sperry; 3 yrs, Norman, \$12, J. McM. Shafter; 2 yrs, Alex. B., \$3, J. Button; mares: 4 yrs and over, Mollie, \$12, J. Button; 3 yrs, Nellie, \$9, J. Fritsch; 2 yrs, Lulu, \$7, J. Merchant; colt, Point, \$6, W. Bihler; stallion and 6 colts, Young McClellan and family, \$20, J. R. Rose.

**Carriage and Saddle Horses**—Matched carriage team, Minnie Mae and Lady Mac, \$15, O. F. Westover; single buggy horse, Sunbeam, \$7, J. McM. Shafter; saddle horse, Roanoke, \$5, P. H. Lawler.

### Cattle.

**Durhams**—Bulls: 4 yrs or over, Star Duke, \$20, J. McM. Shafter; 2 yrs, El Medico, \$10, J. Kirk L. Prines, \$8, bull calf, Prince Royal, \$5, cows: 4 yrs or over, Nomic Richardson, \$15, 3 yrs, Caroline Sutherland, \$10, heifers: 2 yrs, Belle Christmas, \$8, 1 yr, Belle Oxford, \$5, heifer calf, Lady Oxford, \$4, all to Page Bros.

**Devons**—Bulls: 2 yrs, John, \$10, 1 yr, Rover, \$8, cows: 4 yrs and over, Maud, \$15, 3 yrs, Nancy, \$10, heifers: 2 yrs, Fashion, \$8, 1 yr, Cherry, \$5, heifer calf, Fashion Second, \$4, all to J. R. Rose.

**Ayrshires**—Bulls: over 4 yrs, Major Greenwood, \$20, A. Higgins; 3 yrs, Prophet, \$15, E. R. Charles; 2 yrs, Little Giant, \$10, J. Merchant; 1 yr, Duke, \$8, J. Higgins; bull calf, Duke, \$5, cow, Kitty Clyde, \$15, heifer, 2 yrs, Dollis Varden, \$8, A. Higgins; heifer, 1 yr, Rose, \$5, E. R. Charles.

**Alderneys**—Bulls: 4 yrs and over, Surprise, \$20, J. McM. Shafter; 1 yr, Jake, \$8, bull calf, John, \$5, F. B. Thompson; cows: 4 yrs or over, Mayflower, \$15, J. McM. Shafter; 3 yrs, Hattie, \$10, heifer, Anne Hathaway, \$8, F. B. Thompson; bull, 1 yr, Frank, \$3, R. Seavey.

**Holsteins**—Bull, 4 yrs and over, Duke of Holstein, \$20, F. Judson.

**Graded Stock**—Bulls: 3 yrs and under 4, Sonoma Boy, \$7, C. S. Gibson; 2 yrs, no name, \$5, A. C. Shelton; 1 yr, Petaluma Chief, \$4, D. Brown; bull calf, no name, \$3, C. S. Gibson; cows: 4 yrs and over, Lady Fragrant, \$3, Page Bros.; 3 yrs, Pet, \$6, heifer, 2 yrs, Daisy, \$5, A. B. Mill; heifer, 1 yr, Susie, \$4, heifer calf, Sprightly, \$3, Page Bros.

**Sweepstakes**—Thoroughbred herd, El Medico and 5 cows, \$20, graded herd, Young Oxford and 5 cows, \$10, Page Bros.

### Sheep.

**Spanish**—Ram, \$10, 5 ewes, \$10, Page Bros.  
**Southdown**—Ram, \$10, 5 ewes, \$10, R. Crane.  
**Cotswold**—Five ewes, \$10, F. Judson; 5 ram lambs, \$5, 5 ewe lambs, \$5, Page Bros.

**Graded Stock**—Ram, \$8, C. C. Champlin; 5 ewes, \$6, 5 ram lambs, \$4, Page Bros.; 5 ewe lambs, \$4, D. S. Dickson.

### Goats.

**Angora goat**, dip and \$10, 3 Angora does, \$10, L. J. Cralle.

**Berkshire boar**, \$3, C. S. Gibson; sow, \$5, A. C. Shelton; China-Poland boar, \$8, sow, \$5, R. Crane; 5 pigs (any breed) \$5, A. C. Shelton.

**Graded Stock**—Boar, \$6, sow, \$4, G. D. Green; hog, \$5, R. Crane.

### Poultry.

Five varieties, \$10, Morris Bros.; Light Brahmas, \$2.50, R. Crane; Dark Brahmas, \$2.50, J. B. Hinkle; Buff Cochins, \$2.50, A. B. Hill; White Cochins, \$2.50, Black Cochins, \$2.50, White Dorkins, \$2.50, Silver Spangled Hamburgs, \$2.50, Black Spanish, \$2.50, White Spanish, \$2.50, Houdans, \$2.50, Morris Bros.; Brown Leghorns, \$2.50, J. Button; White Leghorns, \$2.50, J. S. Filmore; Silver Spangled Poland, \$2.50, Morris Bros.; Game, \$2.50, T. B. Cary; Sultans, \$2.50, Golden Seabright Bantams, \$2, Morris Bros.; Japanese Bantams, \$2, L. W. Walker; Game Bantams, \$2, Mrs. J. S. Purington; Dominique, \$2, Bronze turkeys, \$3, Morris Bros.; geese, \$3, J. P. Rodenhaver; ducks, \$2.50, D. M. Winans; Plymouth Rock, spec men, J. Piau; ducks, spec men, E. R. Evans.

### Farm Products.

**Grain**—Four varieties, 100 lbs each, \$10, W. D. Freeman; Australian wheat, (100 lbs), \$5, Wm. Comstock; Club wheat, \$5, W. D. Freeman; Chile wheat, \$5, H. Gaston; Smith wheat, \$5, J. H. Tuffe; sk wheat any other var, \$5, Propo wheat, W. D. Freeman; sk barley, \$5, E. R. Charles; sk rye, \$5, J. Kendall; sk oats, \$5, W. D. Freeman; sk wheat flour, \$5, sk corn meal (50 lbs), \$3, G. P. McNear.

**Vegetables, Etc.**—Potatoes, 5 var, \$5, P. Mullally; single var, \$2, Wm. Comstock; onions, \$2, P. Mullally; squashes, \$2, D. M. Winans; peas, \$2, beans, 3 var, \$2.50, F. Starkie; sugar beets, \$2, W. Gibson; mangel wurzels, \$2, 6 blood beets, \$2, C. D. Grover; rutabagas, \$2, J. Kendall; corn on stalk, \$2.50, Wm. Comstock; hops (25 lbs), \$5, J. R. Jewell; cabbage, 5 heads, \$2, J. Kendall; watermelons, \$1.50, D. M. Winans; garden vegetables, 10 var, \$5, J. Kendall.

### Fruits, Nuts, Etc.

**Fruits**—Colleen fruits, \$20, M. Gillam; 2d, \$10, D. M. Winans; colleen fruits, 1 orchard, \$10, apples, \$5, M. Gillam; single var apples, \$2.50, L. P. Rixford; 6 var, \$3, D. M. Winans; colleen pears, \$5, L. P. Rixford; single var pears, \$2.50, G. R. Coddling; 6 var pears, \$3, L. P. Rixford; quinces, \$2.50, M. Gillam; oranges, \$3, Morris Bros.; lemons, \$3, L. R. Rixford; colleen grapes, 12 var, \$20, Morris Bros.; 2d, \$10, colleen grapes, 1 vineyard, \$10, foreign grapes, \$5, Cal. grapes, \$3, H. Talbot; largest bunch grapes, any var, \$2, Morris Bros.; figs, (10 lbs), \$2, L. R. Rixford.

**Nuts**—Almonds, \$2, English walnuts, \$2, Mrs. S. C. Pierce.

**Preserved Fruits, Etc.**—Dried fruit, \$10, dried apples, \$2, dried peaches, \$2, dried plums, \$2, dried plums seeded, \$2, C. P. Hatch; raisins, \$5, Morris Bros.; canned fruits, \$5, Jellies, \$5, Mrs. G. W. Case; pickles, \$2, F. Starkie; catsup, \$1.50, Mrs. C. A. McGuire.

**Butter, Bread, Etc.**—Fresh butter, \$10, I. R. Jewell;

packed butter, \$10, E. R. Charles; 2d, \$5, D. Stewart; cheese, \$10, R. Glenn; 2d, \$5, L. Cantell; hams, \$5, bacon, \$3, R. Craue; wheat bread, \$3; Mrs. R. Looney; Boston brown bread, \$3, Mrs. G. W. Case; corn bread, \$2.50, Mrs. R. Haskins; fruit cake, \$3.50, sponge cake, \$2.50, Mrs. G. W. Case; coffee cake, \$2, Mrs. C. A. McGuire; tarts, \$3, Daisy Tuttle; port wine, \$4, red wine, \$2, white wine, \$4, L. P. Rixford; ale, \$2, cider, \$2, soda, \$2, B. F. Connolly.

### Trees, Shrubs and Flowers.

For 10 several exhibits, premis, amtg to \$37, W. A. T. Stratton; miniature garden, \$3, W. Townie; vase bouquets, \$2, Mrs. T. M. Chapman.

## Upper Sacramento Valley Fair Awards.

The fair of the Upper Sacramento Valley Agricultural Society was held at Chico, September 30th to October 4th. We print below a list of the more important awards:

### Horses.

**Thoroughbred Horses**—Telegraph, J. Keesecker, \$10. Graded Horses—One yr, Metzger, P. Jones, \$5; mare, 3 yrs and over, Blossom, J. B. Clark, \$20.

**Horses of All Work**—Lafayette, 3 yrs and over, Hickock & Co., \$15; mare, 3 yrs and over, Mollie, J. B. Clark, \$10. Draft Horses—Stallion, 3 yrs and over, Mark Dunham, \$15, 2 yrs, Bill Hill, \$7.50, Hickock & Co., mare, 3 yrs and over, Doll, \$10, 2 yrs and over, Pet, \$7.50, A. Henry.

**Roadsters**—Stallion, 3 yrs and over, Tehama George, G. Leroux, \$15; gelding, 4 yrs and over, Charlie, T. Rinehart, \$10; mare, 3 yrs and over, Jane Bidwell, J. H. Guill, \$15.

**Carriage Horses**—Span, Grant and Dublin, \$10, single carriage horse, Kate, \$7.50, T. H. Barnard.

**Roadster Team**—Fannie and Mack, C. C. Mason, \$10. Saddle Horse—Franklin, Miss Mary Finnium, \$7.50.

**Colts**—Yearling, Susie, A. Henry, \$7.50; suckling mare colt, Telephone, J. Bidwell, \$5; lowest grade native horse, Pinto, G. Williams, \$5.

**Sweepstakes**—Stallion, Tchama George, G. Leroux, \$20; mare, Zoe, A. Henry, \$15; gelding, Jack, J. B. Clark, \$10; family stallion, 3 yrs and over, and 5 colts, Frank Tollman, Pet, Nettie Tollman, Mollie and Minnie, \$25.

**Special Premiums**—Graded horses: Nellie Reavis, mare, 3 yrs, \$10, mare, 2 yrs, Dixie, \$10, J. H. Guill; 1 yr, Daisy, \$7.50, A. Henry. Draft horses: Gelding, Planter, W. S. Elliot, \$7.50. Roadsters: Frank Tollman, F. Barnard, \$10; gelding, 3 yrs and over, Den H. D. Hancock, \$7.50. Carriage horses: Jack and Starling, J. B. Clark, \$7.50; single carriage horse, Bob Sharkey, A. Henry, \$7.50. Horses of all work: Pet, J. Shannon, \$7.50; Nettie Tollman, J. H. Williams, \$7.50; Minnie, W. S. Elliot, \$7.50; Nellie, ff. T. Bell, \$7.50; Friday and Bloomsbury, T. F. Davis, h. m.; Black Centaur, J. M. Woodman, h. m. Saddle horse: Beck, J. F. Dunn, \$5. Suckling colt: Birdie, J. H. Guill, \$5.

### Mules.

**Jacks**—Two yrs and over, Compromise, T. F. Davis, \$10; span of mules, Kate and Jill, J. Shannon, \$7.50; 3-yr-old mule, Dragon, M. Gray, \$3.

### Cattle.

**Thoroughbred Cattle**—Bull, 3 yrs and over, Stonewall, \$15, 2 yrs, Fifteenth Duke of Chico, \$10, Sec U. S. A. S.; 1 yr, Cottonwood Louan, \$7.50, bull calf, Louan Twentieth, \$5, M. Wick; cow, 3 yrs and over, Rosa Lee, Sec U. S. A. S.; \$15; 2 yrs, Frantic Louan Second, \$10, 1 yr, Frantic Louan Seventh, \$7.50, heifer calf, Frantic Louan Fourteenth, \$5, M. Wick. Spec prem—bull, 3 yrs and over, Mitchell, J. C. Garner, \$10; 2 yrs, Professor L., J. C. Garner, \$7.50; cow, 3 yrs and over, Fannie Fern, Sec U. S. A. S., \$10.

**Herds**—Two yrs and over, Stonewall and Fannie Fern, Rosa Lee, White Cross, Flora Hale, Sec U. S. A. S., \$25; 1 yr and over, Golden Louan Duke and Red Princess, Frantic Louan Second, Frantic Louan Third, Frantic Louan Seventh, M. Wick, \$20; Devon cow, Lucy, J. Bidwell, \$15.

**Graded Cattle**—Bull calf, Oleander, \$5, cow, 3 yrs and over, Mary, \$10, heifer calf, Minnie, \$2.50, J. Bidwell; spec prem to Nellie, C. Henry, \$2.

**Sweepstakes**—Bull, Stonewall, \$30; cow, Rosa Lee, \$20, Sec U. S. A. S.

### Sheep.

**French Merino**—Ram, \$7.50, 3 ewes, \$7.50, 6 lambs, \$5, J. Bidwell.

**Spanish Merino**—Ram, \$7.50, 3 ewes, \$7.50, J. Bidwell.

**Cotswold**—Ram, \$7.50, J. Bidwell.

### Goats.

**Angoras**—Scotchman, \$10, does, \$10, M. Wick.

### Swine.

**Berkshires**—Boar, Parker No. 2, \$4, W. M. Thorp; sow, Susie, \$5, T. E. Boucher.

**Essex**—Boar, \$8, sow, 5, J. Bidwell.

**Poland-China**—Boar, \$5, sow, \$5, J. Keesecker; 5 pigs under 6 months, \$5, J. H. Guill.

### Poultry, Etc.

**Pure-Bred Poultry**—Five varieties, A. B. Collins, \$5; Light Brahma, J. Bidwell, \$2.50; Light Brahma cock, G. Jones, \$5; Silver-Spangled Hamburgs, J. F. Dunn, \$2.50; Black Spanish, J. W. Padan, \$2.50; Brown Leghorns, Mrs. J. H. Guill, \$2.50; White Leghorns, \$2.50, Silver-Spangled Polish, \$2.50, Gold Spanish-Polish, \$2.50, A. B. Collins; game cocks, \$2.50, game cock under 1 yr, \$2, Japanese Bantams, \$2.50, Rooney & Kerble; Dominique, Mrs. J. H. Guill, \$2.50; Bronzed turkeys, Mrs. E. D. Silsby, \$5; China Gray geese, C. Henry, \$2; Embden geese, \$2, China White geese, \$2, W. Bassett; Plymouth Rocks, \$2.50, A. B. Collins.

### Farm, Orchard, Dairy, Etc.

**Agricultural Products**—var wheat, J. Bidwell, \$7.50; J. Shannon, hon men; W. Rantz, spec men; J. P. Helphentine, hon mention, J. W. Bowers, spec men; J. Shannon, spec men; J. Bidwell, Egyptian wheat, spec men, sk flour, \$5; sk oats, Cal prod, J. Shannon, \$2.50; sk Nepaul barley, spec men, sk corn, \$2.50, J. Bidwell; J. Bowers, hon men; sk corn meal, J. Bidwell, \$2.50; cigsars, J. G. Neubarth, \$5; lard, Mrs. J. L. Keefer, \$2.50; melons, \$2, squash, \$2, cucumbers, \$2, tomatoes, \$2, sugar cane, spec men, sugar beets, \$2, J. Bidwell; butter roll, D. Reid, \$5; valley butter, Mrs. P. Jones, \$5; Mrs. J. M. Cook, spec prem, \$1. Domestic Bread—George Dorn, \$2; Mrs. D. Reid, hon men; Caddie Foster, hon men; brown bread, Mrs. A. F. Fisher, \$2; salt-raising bread, Mrs. M. Entler, \$2.50; corn bread, Mrs. S. A. Walker, \$2.50; pastry, Mrs. A. F. Fisher, \$5; Miss B. Patrick, spec, \$2; var canned fruits, Mrs. J. H. Guill, —, Jellies, Mrs. F. Entler, \$5; Kate Conger, \$5; pickles, includ fruits, J. G. Neubarth, hon men; Mrs. J. Bidwell, canned, preserved and pickled fruits, spec prem, \$10; boiled ham, Mrs. Helphentine, \$5.

**Green Fruits**—Apples, 10 var, \$7.50, colleen pear, 5 var, \$7.50, peaches, \$5, J. Bidwell; plums, Wm. M. Thorp, \$5; prunes, J. H. Guill, \$5; colleen foreign grapes, J. Bidwell, \$5; bunch foreign grapes, \$3, bunch Cal grapes, \$3, Mrs. Mary Sellick; wine grapes, A. Henry, \$3; var fruits, \$5, figs, \$3, J. Bidwell; pomegranates, Mrs. J. L. Keefer, \$3; quinces, W. V. Groves, spec, \$2.

**Dried and Preserved Fruits and Nuts**—Sliced pears, \$5, sliced apples, \$2.50, J. Bidwell; raisins, 5-lb box, C. L. Durban, spec men; garden seeds, J. Bidwell, \$5; colleen cultid nuts, J. H. Guill, \$5.

**Wines, Liquors, Sugars, Syrups, Etc.**—Sugar from beets, \$5, syrup from beets, \$3, A. Henry; wines and liquors, \$10, white wine, \$3, red wine, \$3, sherry wine, \$3, Madeira wine, \$3, claret wine, \$3, champagne, \$3, grape brandy, \$3, peach brandy, \$3, apple brandy, \$3, pear brandy, \$3, E. C. Nichols; vinegar, A. Henry, \$3; J. Bidwell, spec prem, \$2.50; lager beer, Wolter & Shetzell, \$20; Catawba wine, E. C. Nichols, \$3.

### Manufactured Articles.

**Machinery, Etc.**—Apl mchry, \$15, header, Cal manf, \$10, wheat drill, \$10, broadcast sow mach, \$5, reap mach, \$5, mow mach, Cal manf, \$5, farm feed mill, Cal manf, \$5,

fan mill, Cal manf, \$5, self-regulating windmill, Cal manf, \$10, Hawley & Co.; farm gate, Cal manf, J. M. Garner, \$5; spec prem on farm gate, E. C. Nichols, \$5; grain separator, Cal manf, Hawley & Co., \$10; dairy implements, J. F. Newman, \$10; clothes horse, f. Small, \$2.50; well pump, Hawley & Co., \$2.50; plow extras, Graff & McMillan, spec, \$5.

**Vehicles**—Top buggy, \$10, open buggy, \$5; spring market wagon, \$10, W. H. Sherwood; hearse, Fettes & Williams, spec prem, \$20.

**Mechanical Products**—Hardware, Hawley & Co., \$10; silverware, C. Ball, \$5; Hibbard & Sommer, spec \$5; Britannia ware, Hawley & Co., \$2.50; gunsmith work, A. F. Bloch, \$5; cook stoves, \$5, 4 ranges, spec prem, \$2.50, J. F. Newman; mattresses, Cal manf, Fettes & Williams, \$5; broom corn, brooms and brushes, J. Bidwell, \$5; soap, Mrs. J. B. Swearingen, \$5.

**Minerals, Fossils, Birds, Fishes, Etc.**—Colleen birds illustrating ornithology of Cal, Wm Ford, \$10; colleen kelps and mosses, 60 var, spec men, colleen Cal ferns, 40 var, spec men, Miss Jennie Plank; colleen crystallized minerals of Cal, W. K. Conger, \$10.

## List of U. S. Patents Issued to Pacific Coast Inventors.

[From Official Reports for the "Mining and Scientific Press," Dewey & Co., Publishers and U. S. and Foreign Patent Agents.]

FOR THE WEEK ENDING OCT. 14TH, 1879.

220,522.—DRAIN AND OTHER PIPES—John P. Culver, S. F. 220,527.—YEAST COMPOUND—J. H. Goll and A. Spinner, San Francisco.

220,536.—FORMATION AND BENDING OF POTTERY PIPES—Wm. E. Hyde, Oakland, Cal.

220,539.—DUMPING WAGONS—A. McFarlane, San Bernardino, Cal.

220,542.—IMPLEMENT FOR GRAPPLING, WITHDRAWING AND PERFORATING PIPES AND TUBES IN ARTESIAN WELLS—B. F. Mull, Merced, Cal.

220,556.—GOLD WASHER—Wm. H. Pilliner, Elko, Nev.

220,559.—GAS CHECK FOR WASTE AND SEWER PIPE—Wm. Wilson, Oakland, Cal.

**NOTE.**—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest



## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, October 29th, 1879.

The Produce trade is quiet. In some lines there has been a slight advance, in others a decline. The Grain trade is about at a standstill. The Wheat market is merely nominal, as the lack of ships prevents immediate engagements, and the weak tendency in the cable restrains shippers from speculation. Holders are generally firm and not disposed to make the concession. The course of the foreign market can be learned from the following:

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.		CLUB.	
Thursday....	11s	@12s	11s	7d@12s
Friday.....	10s	9d@11s	10d	11s 7d@12s 3d
Saturday....	10s	9d@11s	10d	11s 7d@12s 3d
Sunday.....	10s	9d@11s	10d	11s 7d@12s 3d
Tuesday....	10s	8d@11s	8d	11s 6d@12s
Wednesday..	10s	8d@11s	8d	11s 6d@12s

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.		Club.	
1877.....	12s	8d@13s	12s	11d@13s 4d
1878.....	9s	7d@9s 9d	9s	9d@10s 1d
1879.....	10s	8d@11s	8d	11s 6d@12s

## The Foreign Review.

LONDON, October 23.—The *Mark Lane Express* says: Field work has progressed satisfactorily, and, except in latest districts, the remainder of crops has been gathered and something done toward winter sowing. The condition of later cereals is deplorable, and the loss thereon is heavy. Very little of the Wheat is yet fit to thresh. Foreign Wheat continues to reach our shores in considerable quantities, Friday's list of imports showing the arrival of nearly 70,000 quarters, and with more disposition on the part of holders to realize, the rapid upward movement of prices appears to have been arrested. The question arises, what proportion of the 15s rise which has taken place can be maintained when the speculative movement ceases, and the more legitimate influences of supply and demand are once more paramount in trade. Taking into consideration the enormous resources of America, and the fact that present prices of Wheat at London are sufficient to attract, and have attracted, supplies from all Wheat-exporting countries in the world, it appears most probable that the safe basis for future operations will be reached when values have receded \$5/6s from the recent highest point. It would be too much to assert that prices must necessarily give way to this extent, as trade closes in very sensitive conditions, and much will depend on the action of America, but the opinion is nevertheless offered that the reduction indicated would bring values to a safe position. Sales of English Wheat last week were 35,617 quarters at 49s 10d, against 50,431 quarters at 39s, during the corresponding week last year. Imports into the United Kingdom during the week ending October 18th, were 1,384,766 cwt of Wheat, and 290,950 cwt of Flour.

## Freights and Charters.

The latest charters are as follows: Ship *Sintram*, 1,674 tons, Wheat to Liverpool, £3 3s 9d; Cork, £3 6s 3d; Continent, £3 11s 3d; ship *Alameda*, 1,474 tons, Wheat to Cork, £3 6s 6d; Continent, £3 11s 6d; ship *Reaper*, 1,468 tons, Wheat to Liverpool, £3 5s; Cork, £3 6s 6d; Continent, £3 12s 6d.

## Eastern Grain and Provision Markets.

NEW YORK, October 28.—The Merchandise markets are less active. Breadstuffs are depressed, without exception, and dull and lower. Flour is 50c@10c, and Wheat 10c@2c lower. Pork is dull, \$11.50. Lard is dull, lower.

CHICAGO, October 25.—The Markets during the past week have been excited and generally higher, with an occasional attempt at panic, but without any special break. A most extraordinary rise occurred in Provisions, Pork having risen \$1.20 per barrel, and Lard nearly \$1. There has been a large short interest in Corn and Provisions which has been unmercifully squeezed. Wheat opened strong, fluctuated generally lower, closing firm again. Sales for November at \$1.15@1.22. Corn was stronger from the beginning, but closed lower than best prices, with a good, strong demand for October and November, which were apparently cornered. Sales for November at 42c@46c. Oats were strong and higher. November sold at 30c@32c. Rye sold for cash at 76c@77c, closing at nearly outside figures. Pork sold for January at \$9.00@11.20—the lowest price on Monday and the highest to-day. Lard is similar to Pork, but higher in proportion to January, 86c@97c. Whisky was quoted at \$1.09@1.10, closing at \$1.08. The closing prices were: For Wheat, \$1.19 for November; Corn, 44c; for November, 32c; November Rye, 77c; cash; Barley, 83c@84c; cash; Pork, \$11.12; January Lard, 86.87c. January closing cash prices—Wheat, \$1.17@1.17c; Corn, 44c; Oats, 32c; Pork, \$11 bid, \$11.50 asked; Lard, 86.05@86.67c.

## Eastern Wool Markets.

NEW YORK, October 25.—Wool has been in irregular demand, but prices are fully maintained. Sales of California, 14,000 lbs, and 120 bales of Spring, at 27c@33c; 330,000 lbs Fall, 20c@30c.

BOSTON, October 25.—The Wool market is quiet, active for domestic, with a more speculative inquiry, and prices again advanced 10c@2c lb, the rise being most marked in Michigan fleeces and Kentucky, Missouri and other medium Wools. There appears to be no falling off in the demand, but holders are unwilling sellers at current rates. The stock of medium Wools is very much reduced. Fine fleeces also attracted considerable attention. Pulled Wools sustain the advance previously noticed, with good demand. The sales comprise: Ohio, Pennsylvania and Virginia fleeces, X, XX, XXX and No. 1, at 40c@47c; Michigan X No. 1, at 33c@45c; Wisconsin X and No. 1, at 38c@43c; medium X and No. 1, Maine, 44c@45c; heavy X fleeces, 35c; Combining and Delaine, 42c@47c; Kentucky Combining, at 34c@35c; Missouri, 35c@38c; Oregon, 30c@30c; unwashed, unmerchantable fleeces, 25c@33c; tub washed, 47c; Texas Fall, 80c; Territory, 34c@39c; scoured, 35c@38c; Super and X pulled, 35c@50c. The sales of Fall California for the week reached 1,140,000 lbs, at 18c@30c, and 69,000 lbs Spring at 23c@35c. There has been quite a movement in English Combining and Clothing Wools, the sales of the week comprising 415,000 lbs at 40c@47c. The total sales of domestic for the week were 3,130,290 lbs.

PHILADELPHIA, October 28.—The Wool market is firm, with a good demand; prices buoyant, stocks light. Oregon fine is quoted at 25c@35c; medium, 28c@35c; coarse, 27c@30c; California fine, 30c@35c; medium, 30c@32c; coarse, 26c@30c; New Mexican and Colorado fine, 20c@30c; medium, 22c@28c; coarse carpet Wool, 10c@22c; pulled extra Merino, 30c@40c; Super, 37c@40c; Lamb's super, 37c@40c.

## New York Dried Fruit Markets.

NEW YORK, October 28.—Foreign Fruits continue very firm, with an encouraging undertone. Raisins are fairly

active, particularly London Layers, which are held at \$2.50@2.60 for boxes, \$1.35 for half boxes, 75c for quarters; Seedless, \$4.50; New Layers, \$2.25; half boxes, \$1.15; quarters, 65c; Turkish Prunes are firm and reported to be ruling relatively higher abroad than in the local market. Bosnias and Servias are quoted at 7c@8c for the crop of 1878, and 10c for the crop of 1879. Sales on this spot and to arrive have been large. Figs are in good demand and firm. Smyrna, New Layer, 12c@18c; kegs and bags, 8c@9c; drums, 11c@12c. For Domestic Dried Fruits there is a fair inquiry for choice lots. For Apples and Peaches prices are firm. A few lots of Plums have arrived, and were sold at irregular prices. Apples are quoted: Southern, crop 1879, 8c@10c; quarters, 4c@4c; State sliced, crop 1878, 5c@5c; quarters, 4c@5c; Western, crop 1878, 4c@4c; evaporated, 11c@13c.

## Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for this week ending at noon to-day as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Oct. 8.	WEEK. Oct. 15.	WEEK. Oct. 22.	WEEK. Oct. 29.
Flour, quarter sacks..	41,691	30,790	49,576	58,908
Wheat, centals.....	416,730	582,824	483,130	353,222
Barley, centals.....	78,142	73,044	66,311	62,933
Bons, centals.....	8,225	5,906	6,923	17,107
Corn, centals.....	10,632	2,823	2,793	3,619
Oats, centals.....	6,198	22,116	12,134	6,502
Potatoes, sacks.....	10,343	22,653	26,327	27,200
Onions, sacks.....	1,308	2,416	3,606	2,574
Wool, bales.....	7,162	7,214	6,252	6,739
Hops, bales.....	1,334	2,698	927	562
Hay, bales.....	1,500	2,020	1,542	1,732

BAGS—The trade is small and prices are nominal. BARLEY—Sales are few and within the limits fixed last week. We note a sale of new Coast Brewing, 200 sks, at 90c.

BEANS—A pleasant rising disposition may be noted in nearly all kinds named in our list. We note sale of 100 sks good Bayos at \$1.35.

CORN—The advance which set in last week has gone a little farther. Sales at present are few.

DAIRY PRODUCE—Cheese has the advantage now. The supply being small, the price has advanced to 14c@17c, the latter for choice California factory. Eastern Cheese is now in. Butter has weakened a little, the consumption running on the cheaper packed and pickled stock.

EGGS—Eggs, too, have dropped a point on all kinds, as shown in our list.

FEED—There is no change in Hay or Millstuffs.

FRESH MEAT—Prices are stationary.

FRUIT—Grapes are still advancing. The higher rates for Wine Grapes is restricting the shipments for table Fruit. Limes are now in in greater abundance from Mexico, and the rate declines. Panama Oranges are still coming in—green as cucumbers.

HOPS—Rates are still advancing, and 35c is expected within a few days for both California and some Washington Territory Hops. We note a sale of 72 bales Washington Territory at 32c. Emmet Wells says:

Considerable excitement prevails in Hop-growing districts, caused by several of our leading shippers paying 40c for large choice lots. These prices appeared high several weeks ago; but from late foreign advices received here, there can be little doubt that full figures will be maintained. The reason we do not quote above country prices, is because parties who have fine shipping Hops do not offer them.

LIVE STOCK—We note the following sales: 2,800 Hogs at 3c; 500 do at 3c; 320 Hogs, part stock, at 3c; 417 fine Hogs at 3c; 1,500 Lambs, Wool on, in country, at \$1.25; 3,000 Sheep, in Los Angeles, Wool on, at \$1.50; 2,600 Sheep, in Sonoma, Wool on, at \$2; 000 pncr Ewes, in S. F., Wool on, at \$1.75; 2,200 Cattle, good Cows and Steers, at \$22.50; 120 Calves at \$11 each; 260 small Milk Calves, poor and fat mixed, at \$4 each.

OATS—Prices are unchanged.

ONIONS—The market is well supplied and rather dull. POTATOES—The only change is a decline in Cuffey Coves, the best of which do not now go above 75c.

PROVISIONS—No change since last week's advance.

VEGETABLES—"Garden sass" seems to have slipped off the rise scaled last week, and String Beans, Peas, Corn, Cucumbers and Horseradish are back again near to midsummer rates. Fresh Garlic has shown strength.

WHEAT—A decline is claimed by most trade authorities, and nothing is quoted over 82. Transactions are, however, infrequent, and rates being nominal we retain last week's prices till something turns up.

WOOL—The market unchanged. We note sales of 240,000 lbs Northern at 20c@25c; 60,000 lbs Calaveras Wool at 19c@22c.

## FRUITS AND VEGETABLES.

(WHOLESALE.)

WEDNESDAY M., October 23, 1879.	
Apples, box.....	40 @ 1 00
Apricots, box.....	12 @ 1 50
Bananas, bunch.....	3 00 @ 5 00
Blackberries, ch'st.....	@ 1 00
Cherries, ch'st.....	@ 1 00
Citrons, Cal., 100.....	@ 1 00
Cocoanuts, 100.....	3 00 @ 5 00
Crab Apples.....	@ 1 00
Cranberries, bul 10.....	50 @ 1 50
Currants, ch'st.....	@ 1 00
Figs, box.....	50 @ 75
Gooseberries.....	@ 1 00
Grapes, bx.....	60 @ 85
Damascus.....	1 25 @ 1 50
Muscata.....	65 @ 1 00
Isabella.....	75 @ 1 25
Confection.....	1 00 @ 1 25
Tokay.....	60 @ 80
Limes, Mex.....	6 00 @ 8 00
do, Cal, box.....	2 50 @ 3 50
Lemons, Cal M. 25.....	30 @ 50
Sicily, box.....	10 @ 12 50
Australian.....	4 00 @ 5 00
Nectarines, hsk.....	@ 1 00
Oranges, Cal M.....	@ 1 00
do, small.....	@ 1 00
do, Tahiti.....	@ 1 00
Pineapples, 40.....	50 @ 60
Peaches, hsk.....	@ 1 00
do, Mountain.....	@ 1 00
Pears, hsk.....	50 @ 1 25
Barlett.....	@ 1 00
Seckel.....	@ 1 00
Pineapples, doz.....	8 00 @ 9 00
Plums, box.....	1 00 @ 1 50
Pomegranates lb.....	4 @ 6
Prunes, hsk.....	@ 1 00
Quinces, box.....	50 @ 75
Raspberries, ch'st.....	8 00 @ 10 00
Strawberries, ch'st.....	6 00 @ 10 00

WEDNESDAY M., October 23, 1879.	
Almonds, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11
do, Chile.....	6 @ 8
Almonds, hd sh lb.....	6 @ 7
Soft sh lb.....	12 @ 16
Brazil.....	15 @ 16
Chestnuts, Italian.....	14 @ 15
Pecans.....	14 @ 15
Walnuts, Cal.....	10 @ 11



## Agricultural Articles.

## The Famous "Enterprise."

PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babitted boxes. Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or hells to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

**HORTON & KENNEDY,**

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

## MATTESON &amp; WILLIAMSON'S



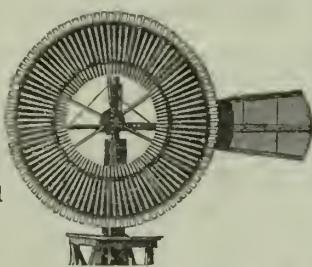
Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

**MATTESON & WILLIAMSON,**  
STOCKTON, CAL.

**\$50.**

The New  
**Worthington**  
Windmill



Manufactured by  
**W. D. PARSON,**  
1364 San Pablo Avenue, Oakland, Cal.  
Also, maker of the "Colorado Wind Engine," Wind Grist Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern of Deep Well and Artesian Lift Pump Cylinders. Circulars free.

**Windmills!**  
**HORSE POWERS!**  
**TANKS AND PUMPS**

Built and Repaired at  
No. 51 Beale street, S. F.  
Send for Circulars.  
**F. W. KROGH & CO**



## The Boss Pruner.

Patented Jan. 8, 1873.

**ENTIRELY NEW!**

Works on a cog principle. Smallest size cuts one inch, and largest size two inches in diameter. Has been thoroughly tested, and given perfect satisfaction. Sold by

**GEORGE LARKIN,**  
Newcastle, Placer County, Cal.

## A Card to Grangers and Farmers.

**HAY, GRAIN, HORSES and CATTLE.**

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nos. 11 and 13 Bluxome St., San Francisco.

**JOHN ROGERS & SONS,**

GENERAL STOCK AND SALE YARD,  
Corner Market and 9th Sts., San Francisco.

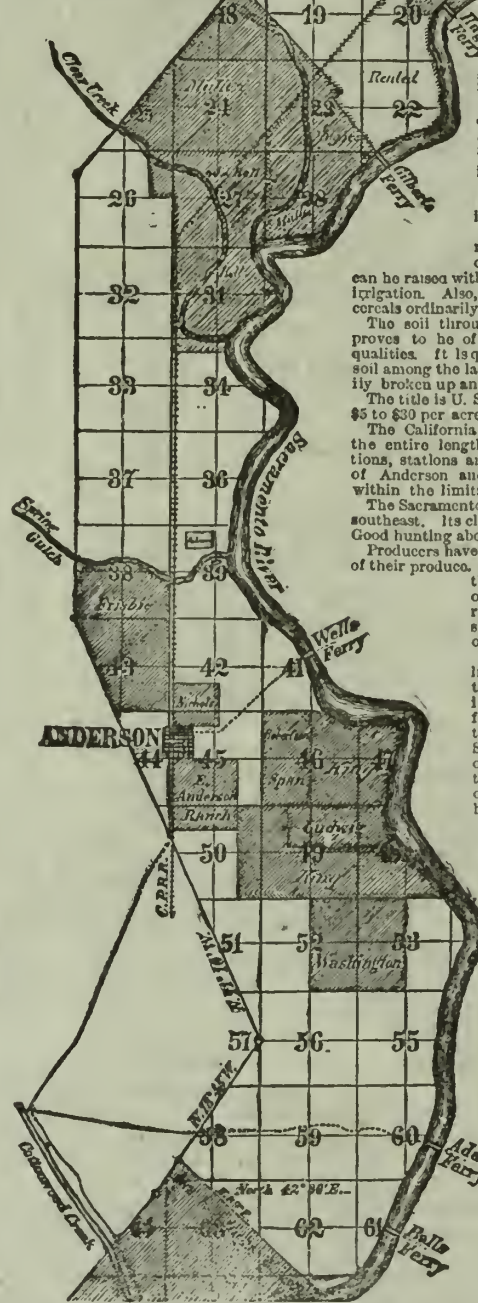
HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN. Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

50 Perfumed, Snowflakes, Chromo, Motto Cards, name in gold and jet 10c. G. A. SPRING, E. Wallingford, Ct.

# READING RANCH, Shasta Co., Cal.

**Good Land!**  
**Sure Crops!**  
**HEALTHY CLIMATE!**  
**Prices Low. Terms Easy.**

**TITLE PERFECT.**



The Reading Ranch, in the Upper Sacramento valley, originally embracing over 20,000 acres of choice grain, orchard and pasture land, is now offered for sale at low prices and on favorable terms of payment, in subdivisions to suit purchasers.

The ranch was selected at an early day by Major P. B. Reading, one of the largest pioneer land owners in California. It is situated on the west side of the Sacramento River and extends over 20 miles along its bank.

The average rainfall is about 30 inches per annum, and crops have never been known to fail from drought. The climate is healthy and desirable. The near proximity of high mountain peaks give cool nights during the "heated term" which occurs in our California summers.

Pasture, wood and good water are abundant. The tillage land is mostly level, with complete drainage.

Figs, Grapes, Peaches, Prunes, Almonds, Apples, Walnuts, Oranges and other temperate and semi-tropical fruits can be raised with success on most of the tract without irrigation. Also, Alfalfa, Vegetables, Corn and all other cereals ordinarily grown in the State.

The soil throughout the tillied portions of the ranch proves to be of great depth and enduring in its good qualities. It is quite free from foul growths. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

The title is U. S. patent. Prices range principally from \$5 to \$30 per acre.

The California and Oregon railroad traverses nearly the entire length of the tract. There are several sections, stations and switches, besides depots at the towns of Anderson and Reading, all of which are located within the limits of the ranch.

The Sacramento River borders the whole tract on the southeast. Its clear waters are well stocked with fish. Good hunting abounds in the surrounding country.

Producers have a local market which enhances the value of their produce. The railroad transportation route is level throughout to San Francisco. A portion of the land is auriferous and located near rich mines now being worked. Land suitable for settlers in colonies can be obtained on good terms.

Town lots are offered for sale in Reading, situated on the Sacramento river, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

Purchasers are invited to come and see the lands before buying here or elsewhere. Apply on the ranch, to the proprietor.

**EDWARD FRISBIE,**  
Anderson, Shasta Co., Cal.  
P. S. - Send postage stamp for illustrated paper containing information about Shasta county and these lands, and say advertised in this paper.

**Location of Shasta County.**  
Shasta County lies not far from midway between the two most important ports on the Pacific shore, i. e., San Francisco and Portland, Oregon, and directly on the overland route, which in the future will become the grand thoroughfare from Mexico to British Columbia. The town of Reading, at present, and probably for years to come, the head of railroad transportation on the California side of the mountains intervening below Oregon, is distant from San Francisco by railroad (via Vallejo) 235 miles; from Sacramento City, 169 miles; from Marysville, 117 miles.

**LAND FOR SALE OR RENT IN SUB-DIVISIONS.**

In consequence of spurious imitations of  
**LEA AND PERRINS' SAUCE,**  
which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

## MISSION ROCK DOCK AND GRAIN WAREHOUSES.

SAN FRANCISCO, CAL.

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

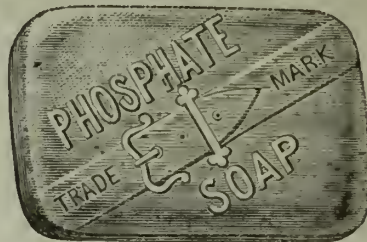
GRAIN consigned to us by water insured in open policy at Special Rates. Wheat shipped by railroads via Stockton, care of the CALIFORNIA STEAM NAVIGATION CO. will be received by them at Stockton and delivered at Mission Rock Warehouse at same rate of freight as to Oakland Wharf. Freight paid, Fire Insurance and Loans effected and proceeds forwarded free of commission. Money advanced at bottom rates, interest payable at end of loan. Fire Insurance 1% per annum. Short Rates of Storage—First month, 30 cents per ton, or 40 cents per ton if delivered. Each month thereafter 20 cents per ton. Weighing in, free. Weighing out, 10 cents per ton.

**CHAS. H. SINCLAIR, Superintendent,**

Or to the California Dry Dock Co., Office, No. 318 California Street. San Francisco.

Dewey & Co. { 202 San- } Patent Ag'ts | YOUR NAME PRINTED on Forty Mixed Cards for  
some St. Ten Cents STEVENS, BROS., Northford, Conn.

# PHOSPHATE SOAP



**THE BEST soap for toilet use ever manufactured. BEST because it contains all the excellencies of the most expensive foreign or American soaps without their defects. BEST because it combines strength with delicacy in such a way that its strong detergent qualities do not injure the skin. BEST because it is the result of years of study and experiment in the soap manufacturing business, assisted by modern chemical discoveries. BEST because it contains ingredients beneficial to the skin, which unite chemically with the soap in such a manner as to increase its saponaceous qualities. Every chemist familiar with soap manufacture knows that some ingredients which are in themselves beneficial to the skin cannot be saponified; some are partially neutralized, while others injure the quality of the soap. There are soaps in the market which are to some extent beneficial to the skin, but they are inferior articles for toilet use. PHOSPHATE SOAP is the ONLY article offered to the public which combines all the best elements of toilet soap with medical ingredients beneficial to the skin.**

If your wife is in the habit of using cosmetics of any kind, advise her to give up the pernicious practice, as the most harmless face powders obstruct the pores of the skin and sooner or later injure the complexion, while PHOSPHATE SOAP removes all impurities and assists nature in developing a natural, healthy and beautiful skin.

It is an old proverb that an ounce of preventive is better than a pound of cure. Twenty-five cents invested in a cake of PHOSPHATE SOAP will save hundreds of dollars in doctors' bills. It acts as a constant disinfectant, preventing Salt Rheum and other skin diseases.

If your wife will persist in the use of cosmetics, buy her a cake of PHOSPHATE SOAP and tell her to use it every night before retiring. In that way much of the harm will be avoided, as the skin will thereby be able to retain much of its natural vigor and beauty.

No salve or ointment can heal a wound or sore of any kind. Every educated physician will tell you that nature alone can do this. PHOSPHATE SOAP, by its cleansing, soothing and purifying qualities, gives nature a chance to act freely.

Natural beauty surpasses anything which can be imparted by artificial means. PHOSPHATE SOAP gives health to the skin simply by removing impurities and eradicating the poisons which give rise to skin diseases.

Not only for daily use on the face and hands, but for bathing the entire body, there is nothing equal to PHOSPHATE SOAP. It is a thorough disinfectant and removes offensive odors of every kind.

Ladies who have injured the skin by the constant use of cosmetics may do much to restore their faces to that beauty which nature alone can give by constantly using PHOSPHATE SOAP.

For all diseases of the skin use PHOSPHATE SOAP. There is nothing like it for removing impurities and giving the skin a healthy and natural vigor.

Cheap toilet soaps manufactured from rancid and refuse grease injure the skin and are really more expensive than PHOSPHATE SOAP, which retails for 25 cents per cake.

Thousands of articles are palmed off on the public which have no genuine merit, but PHOSPHATE SOAP is the result of modern discoveries of celebrated chemists.

PHOSPHATE SOAP costs no more than other good toilet soaps, while its medicinal qualities make it worth ten times its price to every man, woman and child.

If you want a nice article of Toilet Soap and something that is beneficial to the skin, buy PHOSPHATE SOAP.



## NEW OPERAS!

**Carmen.** Opera by Bizet.....\$2.00  
Carmen is an Opera that has gradually and surely won its way to a great popularity. Although the book is large, in fact what one might call a "four dollar book," it is got up in elegant style with music and all the words, English and foreign, for \$2.00.

**Fatinitza.** Opera by Suppe.....\$2.00  
Splendid new Opera that is a decided success. A large, fine book, with English and foreign words, and the opera in every way complete, for a low price.

**Doctor of Alcantara.** By Eichberg.....\$1.50  
A famous opera, now brought, by the popular price, within the reach of all. Orchestral parts, \$15.

**Bells of Corneville.** By Planquette (nearly ready).....\$1.50  
A great success. This, with the "Doctor" and the "Sorcerer" (\$1.50) are well worth adopting by Companies who have finished Pinafore (still selling well for 50 cts.), and who are looking out for new and easy Operas.

Remember our first-class Singing School and Choir Books, VOICE OF WORSHIP and THE TEMPLE, each \$9 per dozen, or \$4 each. Send for copies. Also always remember the MUSICAL RECORD, published weekly. It keeps you well posted as to musical matters, gives six or seven pages of music per week and costs but \$2 per year.

OLIVER DITSON & CO., BOSTON.

C. H. Ditson & Co., 843 Broadway, N. Y.

### ARITHMETIC MADE EASY BY ROPP'S EASY CALCULATOR.

This valuable work is used by thousands of farmers, mechanics and business men, and is highly recommended for its practical utility and convenience.

It embodies an entirely new system of calculation, by which a vast amount of figures and mental labor—required by the ordinary methods—and fractions with their complexities, are absolutely avoided.

It is so simple and easily comprehended that even the most illiterate is enabled, in a few minutes, to reckon with absolute accuracy and speed; while its original and rapid methods, benefit and delight the most scholarly.

It shows at a glance the accurate value of wheat, corn, rye, oats, barley, cattle, hogs, hay, coal, lumber and merchandise, from one pound to a car load, and for any price the market is likely to reach.

It gives the interest, simple and compound, on any sum, or any time, at six, seven, eight, and ten per cent.; the exact measurement of boards, scantlings, timbers, saw logs, cisterns, tanks, wells, granaries, bins, wagon beds, corn cribs, etc., the wages at various rates, for hours, days, weeks and months; besides numerous other important methods, rules and tables.

It is printed on fine tinted paper, is well and elegantly found in pocket-book shape, and accompanied by a silicate slate, pocket for papers, and memorandum, which can be replenished in the two latter styles.

It answers the purpose of a pocket book and diary, and costs no more, although it was gotten up at great expense and labor, and is unquestionably one of the most useful publications ever issued from the press.

Price, bound in Fine English Cloth, \$1.00.  
Sent direct from the Eastern publisher, postpaid, on receipt of price, by P. O. order, registered letter or receipted by express. Address

DEWEY & CO., San Francisco.

### E. T. ANTHONY & CO.,

DEALERS IN ALL KINDS OF

### TOBACCO

— FOR —

### SHEEP WASH PURPOSES.

#### THE NEW SHEEP DIP.

We invite our Wool Growers to call on us and examine the NEW OMAHA SHEEP DIP, the best preparation yet offered—one gallon dip makes 150 gallons wash.

407 and 409 Commercial St.,

Near Battery Street, - - - SAN FRANCISCO.

J. P. JONES. J. THOMPSON.

### JONES & THOMPSON,

Wholesale and Retail Dealers in

### Hay, Grain and Feed.

Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,

1535 Mission St., San Francisco.

M. COOKE. R. J. COOKE

### PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order, AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREGORY.

### F. A. ROBBINS.

MANUFACTURER OF

Canners and Soap Makers' Presses and Dies

### JEWELERS' TOOLS.

ELECTRICAL and MODEL MACHINERY.

No. 7 First St., San Francisco.

## Nathaniel Curry & Bro.,

113 Sansome Street, San Francisco,



Sole Agents for the

Sharps Rifle Co., of Bridgeport, Conn.

FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO.

Also Agents for W. W. GREENER'S Celebrated Wedgefast, Chokebore, Breech-loading DOUBLE GUNS; and all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America. AMMUNITION of all kinds in quantities to suit.

## Trall Hygienic, Medical and Surgical Sanitarium.

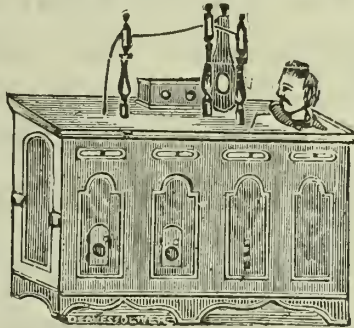
No. 8 Ellis Street, San Francisco, Cal.

Treatment by a Purely Scientific and Rational Method Without Drugs of any Kind.

THE TREATMENT DEPARTMENT EMBRACES ALL APPROVED REMEDIAL AGENTS, AS OXYGEN INHALATIONS, VACUUM TREATMENT, THERMO-ELECTRIC, TURCO-AMERICAN, ELECTRO-MAGNETIC, GALVANO-CHEMICAL, STEAM, VAPOR, WARM AIR, AND ALL FORMS OF WATER BATHS;

Swedish Movements, The Health Lift, Spirometer or Lung Strengtheners, Steam Atomizers, all Electric, Galvanic and Surgical Appliances, Sun Baths, and Solar Ray Surgery, new and perfect Truss for the Radical Cure of Hernia, lately discovered Chemical Compound for the speedy, safe, painless and permanent removal of Cancers, Scientific and successful method for the Cure of Piles, etc., etc.

Aims to keep Abreast with, if not in Advance of the Progressive Age.



It has been the mission of this System to mold public sentiment and this Institution will hope to be no disgrace to the immortal name it has assumed. The time has come when Physicians of this School can afford financially to keep a conscience; in fact it is disastrous financially as well as morally to compromise the truth one iota; hence patients can rest assured that they will be treated by the Physicians after the most approved and scientific methods, out of pure and enlightened selfishness, recognizing the truth and beauty of this great principle.

"The Universe is so ordered and arranged that the real and permanent good of every creature is best subserved in promoting the real and permanent good of every other being."

### THE BOARDING DEPARTMENT.

The table will be supplied with the best of the excellent market of the world affords, embracing fruits, grains, vegetables, meats, fish, fowl, eggs, cream, etc. Regular and transient boarders will be accommodated as well as patients. Business and professional men and women who are tired of restaurant fare, may appreciate eating to live a more healthful and enjoyable life. Pure food means pure blood. Pure blood means good health.

"The vegetarian school has demonstrated beyond the possibility of a doubt that farinaceous dishes, sweet milk and fruit, are sufficient to maintain a hard working man in perfect health. Such a diet might certainly be substituted by sedentary people for their greasy steaks and ragouts."—Popular Science Monthly, December, 1878.

The Rooms are pleasant, warm, well ventilated and sunny; convenient to treatment rooms, so as to afford the best advantage of nursing and professional attendance.

### GENERAL PRACTICE.

Fevers, and in fact all cases may be treated at home successfully. Parturition confinement cases are taken in the Institution or attended at home in any part of the city or country. Preparatory treatment in these cases is most important.

Testimonials of extraordinary cases and cures can be seen on application. The most desperate cases, and especially those that have been given up as incurable by the old methods, are invited. Puerperal and typhoid fever and diphtheria cases, after all other methods have failed, may be said to be a specialty. Send for the TRALL HEALTH JOURNAL.

DRS. D. C. & MRS. E. D. MOORE,

Trall Hygienic Sanitarium, 8 Ellis St. S. F.

## HOLLY & MAGOON'S CULTIVATOR.

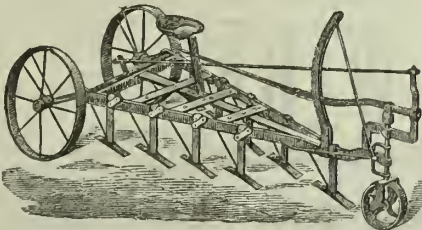
Manufactured by HOLLY & MAGOON, Stony Point, Sonoma County, and E. J. HOLLY Lakeville, Sonoma County, Cal.

Jones' Patent, May 29th, 1877, and Holly & Jones, Apr. 8, 1879.

This Cultivator is made by practical men, after years of experience, and better meets the wants of California farmers than anything before offered.

Made of the best material (with wood or iron frame), and warranted in every respect.

Prices REASONABLE.



For further information address the Manufacturers, or

M. C. HAWLEY & CO., Agents,

San Francisco and Sacramento, Cal.

— OFFICE OF THE —

## BLACK POINT PACKING AND SLAUGHTER HOUSE.

MERRY, FAULL & CO., Proprietors.

### TO OWNERS OF LIVE STOCK!

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

### SQUARE DEAL and FULL MARKET PRICES

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices.

Please address our

Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.

60 Elegant Perfumed Cards, Chromo, Motto, Lily, Etc., 15c. Gift with each pack. H. M. SMITH, Clintonville, Ct.

60 Perfume Chromo, Ac. Cards, name on, 10c. 42 Mixed Cards and one Pocket Knife, 25c. Autograph Album, 25c. Oame Authors, 15c. 50 Fun Cards, 10c. Ullston Bros., Clintonville, Conn.



Pyrethrum Cineraria Foliage—A California Production.

THE MOST WONDERFUL DISCOVERY OF THE NINETEENTH CENTURY.

This wonderful Insect Powder will exterminate Flies, Weevils, Caterpillars, Mosquitoes, Midges, Crickets, Cockroaches, Spiders, Tarantulas, Scorpions, Ants, Hawk-bugs, Phylloxera, Plant Lice, Moths, Beetles, Grasshoppers, Locusts, Bed-bugs, Fleas, and every species of insects. Remember that none is genuine unless my Trade-Mark is attached to every package.

\$100 WILL BE PAID IF IT FAILS TO KILL ANY INSECT.

Endorsed by Prof. E. W. Hilgard, of the University of California, and by Prof. C. V. Riley, Chief Entomological Commissioner at Washington, D. C., and pronounced superior to any imported article, and perfectly harmless to man and beast.

G. N. MILCO.

Patentee and Sole Manufacturer, Stockton, Cal.

CHARLES LANGLEY & CO., Wholesale Druggists, Sole Agents, S. F.

### THE WILSON ADJUSTABLE CHAIR,

With 30 Changes of Position.

Patented in the United States and Foreign Countries. BEST CHAIR IN THE WORLD.

Parlor, Combining  
LIBRARY, Beauty,  
Invalid Chair, Lightness,  
Rocker, Strength,  
BED or Simplicity  
LOUNGE, and  
READING POSITION, Comfort.

Same Chair in Cane Seating, very desirable for summer. Manufactured of the best of wrought iron and rivets. Castors made purposely for the Chair. Everything to an exact science. WILL LAST A LIFE-TIME.

Has been awarded Medals, Prizes and Diplomas for its superiority and merit who ever it has been exhibited. Orders by mail promptly attended to. Goods shipped to any address, C. O. D. Send for Illustrated Circular.

Address the WILSON ADJUSTABLE CHAIR MFG CO., 535 Washington St., Boston

### PLEASANT SUMMER READING.

#### THE NEW PENELOPE

— AND —

### Stories of California Life.

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. Agents wanted for this popular work. Easy sales and large commissions. Address

MRS. F. F. VICTOR,

721 Market St., S. F., Bancroft's Building, top floor.

PRICE, \$2 00.



DO NOT FAIL to send for our NEW PRICE LIST. More complete than ever. Contains descriptions of every thing required for personal or family use, with over 1000 Illustrations. Send nine cents for it. (Stamps will do.) We sell all goods at wholesale prices in quantities to suit the purchaser. The only Institution in America who make this their special business. Address, MONTGOMERY WARD & CO., 227 & 229 Wabash Ave., Chicago, Ills.

### MONEY TO LOAN

AT LOWEST RATES

On Country Real Estate and Grain in Warehouse.

McAFEE BROTHERS.

202 Sansome Street, San Francisco.

### ROOMS TO RENT.

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

### SEND FOR THE

\$1.50

### Homœopathic Medicine Case.

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address BOERICKE & TAFEL, Homœopathic Pharmacy, San Francisco.





SOLE PROPRIETORS AND MANUFACTURERS

**Celebrated Detrick "E W" 22x36 Grain Bag.**

CALCUTTA, DUNDEE and PACIFIC JUTE HAND-SEWED BAGS always on hand. OUR No. 1, No. 2 and No. 3 SECOND-HAND GRAIN BAGS selected and graded with care.

**TWINES.** 3, 4 and 5-ply for Grain Bags, 6 and 8-ply for Potato Gunnies, 3-ply EXTRA FINE for Flour Bags, made expressly for our trade and QUALITY GUARANTEED.

FLOUR BAGS Printed to Order WITHOUT EXTRA CHARGE. POTATO GUNNIES, Wool, Bean, Ore and Salt and Seamless Cotton Bags.

**Tents, Awnings and Hydraulic Hose.**

ORDERS PROMPTLY FILLED AT LOWEST MARKET RATES.

119, 121 and 123 Clay St., and 118 and 120 Commercial St., San Francisco.

**Geo. F. Silvester,**

IMPORTER, WHOLESALE AND RETAIL DEALER IN

**SEEDS,**

Fruit and Evergreen Trees, Plants, Etc.

ALFALFA, GRASS AND CLOVER SEEDS

In large Quantities and offered in Lots to suit Purchasers.

GREAT REDUCTION IN PRICES.

Seed Warehouse, 317 Washington Street, San Francisco.

**Wakelee's Patent Squirrel and Gopher****EXTERMINATOR!**

Sold by General Dealers and Druggists throughout the Coast.

**H. P. WAKELEE & CO., Druggists and Chemists, S. F.****MONEY FOOD**

For Farmers For Hogs.

**CHEAP PORK.****The Brazilian Artichoke,**

Is the cheapest and best food for Hogs, being ahead of anything in existence for that purpose. 600 to 1,000 bushels to the acre. Little trouble. No harvesting. No feeding. The Hogs will help themselves if allowed to do so.

I have eight acres of Artichokes this year, and will furnish seed for half the price of last year, when my seed cost me 25 cents a pound.

PRICE—I will send by Express or common freight, 50 to 300 lbs. at 3 cents a pound. Over 300 lbs., 3 cts.; 1,000 lbs. and over, 2 1/2 cts.; 3 lbs. by mail for \$1. I will send a circular with each package giving all information. Send all money in draft on San Francisco or P. O. Order on Hollister Post-office.

150 lbs. plants an acre.

For further information send for circular. Address

**J. H. F. GOFF,**

San Felipe, Santa Clara County, Cal.

**CHEAPER YET!****Tension Sewing Machines!**

A large number of nearly new genuine SINGER, WHEELER &amp; WILSON, HOWE, WOOD, GROVER &amp; BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

**NO TENSION MACHINE.****Wilcox & Gibbs' S. M. Co.,**

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.

**Baling  
Fencing  
Telegraph  
Telephone  
Galvanized****WIRE****Barbed Fence Wire.**

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the  
Trademark.**A. S. HALLIDIE**

Wire Mills.

Office, No. 6 California St.

SAN FRANCISCO.

**WIRE ROPE and CORDAGE**

Of every kind on hand or Made to Order.

**GOOD CROPS ALL SEASONS.**

Productive farms for sale on easy terms in Santa Cruz and adjoining counties. State requirements and obtain suitable particulars from the Real Estate

**EXCHANGE & MART,**

Santa Cruz, Cal

METRICK &amp; CO., Insurance and Money Brokers and Agents

**The "New Model" Eureka Gang Plow.**

No. 7b.

Raises Quick, Clean and High, by simply touching a Lever Lightly with the Foot, and is Lowered in the same manner.

The Plow is handled with no effort on the part of the driver.

The above cut represents the New Model Eureka as made last year. For the present season important changes have been made.

**The Lifting Gear is Neatly Enclosed.**

A Brake has been attached in such a manner that the Driver can control the descent of the Plow with his foot.

We offer this as the most perfect Gang Plow made.

SEND FOR CIRCULAR.

**SWEEPSTAKE PLOW CO.,**

San Leandro, Cal.

**BAKER & HAMILTON,****Agents.****R. J. TRUMBULL & CO.,**

SUCCESSORS TO

**R. J. TRUMBULL,**

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

"Guide to the Vegetable and Flower Garden" will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

**R. J. TRUMBULL & CO.,**  
419 and 421 Sansome Street, S. F.**M. W. DUNHAM****Just Imported 36 Head**

FOR HIS OAKLAWN STUD OF

**Percheron-Norman  
HORSES.**

Largest and Most Complete Establishment of the Kind in the World.

**More than 200 Stallions and Mares**

Imported from Best Stud Stables of France.

Winners of First Prizes in Europe and America, awarded First Prizes and Gold Medals at the Universal Exposition at Paris, 1879, over all. First Prizes and Grand Medals at Centennial Exhibition, 1876.

The public appreciation of its merits is indicated by the great demand for stock from every part of the country. During the past twelve months, the provinces of New Brunswick, Canada, and the States of New York, Pennsylvania, Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Nebraska, Kansas, Texas, Louisiana, Colorado, Nevada, California and Oregon, and Utah, Washington and Idaho Territories have drawn supplies from its Stables.

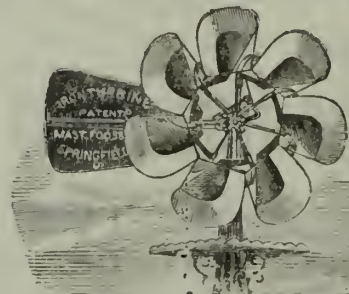
100 page Catalogue—finest thing of the kind ever issued; 25 pictures of Stallions and Mares, sent free on application.

**M. W. DUNHAM,**

Wayne, DuPage County, Illinois

N. B.—All Imported and Pure Native Bred Animals Recorded in Percheron-Norman Stud Book.

This paper is printed with Ink furnished by Chas. Eneu Johnson &amp; Co., 509 South 10th St., Philadelphia &amp; 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 120 Sutter St., S. F.

**Iron Turbine Wind Engine****AND BUCKEYE FORCE PUMP.**

This machine made of iron, wheel, vanes, etc., made of No. 24 sheet iron, bound and braced with best quality of wrought bar iron, gives more power than any other wheel of same diameter. No wood to swell, shrink, rattle or be destroyed by the wind. The most durable and the best Windmill ever invented. For particulars, price lists, etc., address

**D. E. GOLDSMITH, State Agent,**  
419 Sansome street, San Francisco

60 Chromo, perfumed, Snowflake &amp; Lace cards, name on all 10c. Game Authors, 15c. Lyman &amp; Co., Cincinnati, Ct





Volume XVIII.]

SAN FRANCISCO, SATURDAY, NOVEMBER 8, 1879.

Number 19

### Hart & Nicholson's Gang Plow.

We illustrate herewith an improvement in gang plows, recently patented through the MINING AND SCIENTIFIC PRESS Patent Agency, by Rueben Hart and Milford P. Nicholson, of Santa Maria, Santa Barbara county. The bearing wheels of the plow are made of large diameter, and the axle which unites them is either cranked or bent upward; or the axle may be made short, and secured to each end of an axle bed, which may be cut away below, as shown, the object being to provide a space into which the plow beam, *C D*, can be raised in lifting the plows. These beams are united at the front, and support the pole, and they diverge as they extend backward, one being shorter than the other, as shown in the engraving.

The plows are secured by standards to the plank, *F*, extending between the beams. This plank is slotted at the points where the bolts secure it to the beams, so that its ends may be moved forward or back, so as to adjust the plows to or from the land. The forward ends of the beams pass above a strap under the axle bed, as shown. Stout rods extend from this strap up through the axle bed at each side of this space, and tubes are secured to the sides of the beams, so as to slide upon these rods and guide the plow beams in their vertical movement.

The upper ends of the rods, projecting above the axle bed, form supports for the operating lever. On each side of the plow beams, at the front ends, are secured eyes, and links unite these eyes with the ends of the levers, *L*. The long arms of these two levers are brought together at some distance behind the axle and upon the right, so that the single end may be united with the lever, *M*, by a link. This lever, *M*, has its rear end supported by a standard in the rear end of the plow beam, *D*, and serves as a fulcrum for the lever. The front end of the lever has a catch to engage with the rack-bar, *P*.

By the use of this compound lever perfect control of the plow is gained, and the driver on the seat readily lifts the plow beams. The operating lever, *M*, is placed at one side of the machine; but by means of the forked or double levers, *L*, with their double bearings and lifting links, the weight is distributed so as to fall equally upon each wheel.

The peculiar action of the compound lever and standard is not only to raise the front ends of the plow beams, but also to raise the rear end of the beam, *D*. As the rear end of the beam, *C*, is supported on the caster wheel and the plows extend in a diagonal line from near this front to the rear end of the beam, *D*, it produces a tendency of this rear end of *D* to drag downward as the plows nearest to it enter the ground, and this combination of levers and standard counteracts this tendency.

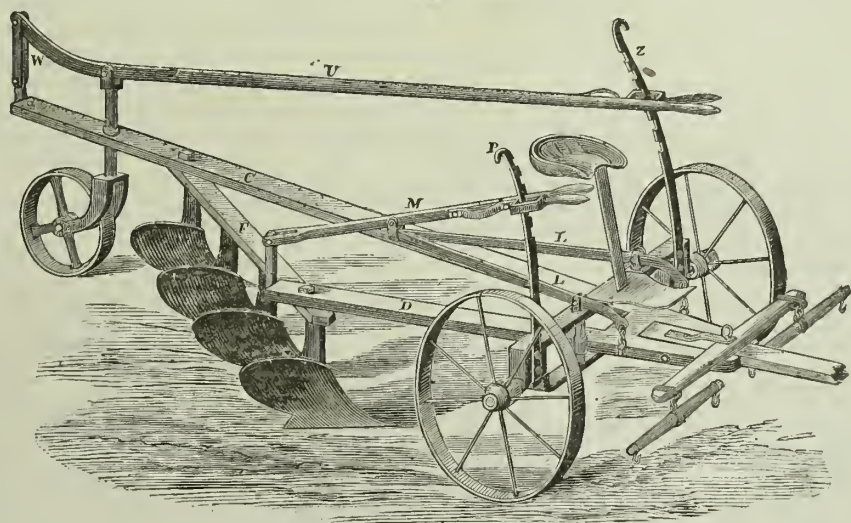
In order to raise and lower the rear end of the beams, *C*, the standard of the caster wheel is fitted to move in a sleeve upon the side of the beam, and its upper end is connected with the lever, *U*, by a swivel shackle, or link, as shown. The rear end of the lever is curved, so that by the operation of the lever, the rear plows will be lifted more or less. This lever extends forward and has a rack and catch to hold it in any position.

The construction described has several advantages over the ordinary sulky or gang plows, among which may be enumerated the method of operating the front and rear ends of the plow-beams independently of each other, each end in turn serving as the fulcrum or point about which the other moves. This admits of the plow being employed to great advantage in laying out land, for which purpose the front end will be raised and the rear end depressed. This causes the rear plow alone to take the land, thus cutting a boundary furrow. By raising the rear end and depressing the front, the front plows alone may be used to finish up the last of a plowing.

When both ends are raised, the plows will be entirely clear of the ground, and as the caster wheel moves freely with its swivel standard, the

machine may move around in either direction, swinging about a center between the wheels, so that the turning may always be accomplished upon solid ground. The arrangement of the levers produces great power, so that the plows may be easily handled by the driver from his seat. The team may be harnessed to the plow, and a load of seed be placed on the frame and hauled to the field, dispensing with the use of a wagon. Further information concerning this invention may be gained by addressing the inventors at the above address.

**INSTRUCTIVE LIVE STOCK FAIRS.**—Now that there are signs that we may be entering an era of agricultural fair reform in this State, we give a note on what strikes us must serve as a very instructive feature in live stock shows. We read that the Mecklenburg-Strelitz Agricultural Society holds special sheep shows once in five years. They maintain that such exhibitions must be held at periodically recurring intervals, if they are to be of any practical service in encouraging the formation of fixed types of breed, and assisting sheep farmers in their efforts to introduce a general improvement of stock throughout the provinces. A shorter interval than that of five years is scarcely advisable, as the same animals would be on show time after time, and there would be no opportunity for



HART & NICHOLSON'S IMPROVED GANG PLOW.

judging whether any particular flock has maintained its purity of type or has changed for either the better or the worse. Of course such a fair would call for systematic and intelligent efforts in breeding toward special points of excellence. It would also necessitate a higher style of judging than commonly exists at fairs. These would both be desirable acquisitions to our stock interests. The subject is worthy the consideration of our breeders.

**STOCK CATTLE.**—We notice that the introduction of stock cattle to feed up for the market is continuing in some counties, although the price of beef is low. There seems to be a feeling that beef will be good property before spring. Several butchers with whom we have conversed seem quite confident that there will be more in the business during the coming months. The *Stockton Independent* says: Mr. George F. Smith, of Stockton, lately received 15 carloads of cattle from Winnemucca. The number of cattle is 450. The transportation was eminently successful, no cattle having been lost on the trip. The herd arrived in good condition, and will be taken at once to Mr. Smith's ranch where they will be kept this winter, and will be put in condition to furnish a first-class article of beef in the spring.

**LIMA BEANS.**—Our friends at Carpinteria made a happy choice of crops this year when they put in Lima beans. Thousands of sacks are being shipped to Eastern cities, yielding tens of thousands of dollars to the growers.

**OLIVE OIL ADULTERATION.**—Our young and promising olive oil interest is certainly deeply interested in the villainy of adulteration, which is now well nigh wrecking the olive interest of Europe. Our avenue toward success will lie in assuring consumers that responsible brands of California olive oil are pure oil from the olive and not otherwise. But there is reason to fear that unscrupulous persons will be just as active in counterfeiting California labels as any other, unless we can adopt some way of infallibly stamping the genuine or furnishing some method of detecting the spurious. The latter protection for honest producers is now receiving official attention from the French government. The Minister for Agriculture and Commerce has addressed to the Academy of Sciences a communication calling attention to the gross adulteration of olive oil which is carried on in some of the southern departments, and notably in the Alpes-Maritimes, by the addition of inferior foreign vegetable oils. The "olive oils" thus doctored are sold as pure olive oil, at prices very considerably below that of the genuine article. The Ministry fears that a continuance of this practice may lead to the abandonment of olive cultivation at no distant date, since it is impossible for growers to compete in the open market on equal terms with the vendors of this adulter-

### Another Review of Wheat Supplies in Europe.

Our English exchanges continue to call the roll of European countries to ascertain the features of the wheat supply and demand. The *London Farmer* still finds reason to think that America will be called upon for a quantity of grain which it will pinch us to spare. This certainly must have an effect to strongly maintain prices fully up to the coming of another harvest. Thus the *Farmer* regards the situation: In Europe we have England, France, Belgium, Holland, Italy, Spain, Portugal and Roumania, importing countries; Russia and parts of Turkey being the only districts possessing a surplus. Central Europe, from Trieste to Danzig, is believed to have a sufficiency of grain for home consumption, but no more. We do not mean by this that central Europe will be shut off from international trade, but that what north Germany and Prussia ship to England will have to be made up in imports from Russia, while Austrian sales to Switzerland and Italy will have to be compensated from the same source. Germany may send to England 1,000,000 quarters of wheat. Russia we believe to have a full average crop, but even supposing an export surplus of 5,000,000, which may be taken as a maximum, the demands of Germany and Austria-Hungary should absorb over 1,000,000 quarters, Roumania wants 500,000 quarters, Italy 1,500,000 quarters, and France a full 2,000,000. Thus at the very best, England would not seem to be able to anticipate more than 3,000,000 quarters of grain from European sources—the Baltic and Black seas. In Asia we have India with prospects of a moderate surplus. How much grain will be shipped between this and October next is most uncertain, but no one can reckon on more than 1,000,000 quarters. Australia may ship from 300,000 quarters, to 500,000 quarters. Allowing 1,000,000 quarters for Egypt, Chile, and odd sources of supply, we have still to depend on America for about 10,000,000 quarters of wheat. Now 10,000,000 quarters is a quantity of grain which the mind does not easily realize, and in order to rely on its being shipped from America to England in a course of one year very strong confidence is required of consumers.

**EGYPTIAN CORN.**—We notice that one of our Arizona exchanges has just heard of Dhoura or Egyptian corn by way of the *Chicago Tribune*, and this surprising statement is made.

Gov. Bross, of the *Chicago Tribune* informed the writer the other day that he had discovered on the farm of Deacon James Hollister, at Kinsley Kas., a grain—yet unknown to American agriculture—that is destined (as the Governor expresses it) to become, in the near future, of more importance to Colorado and the arid plains of the west than all of her gold and silver mines combined.

Then the writer goes on to describe the dhoura. The history of this grain in this State is well known to our readers. It has many good points and some bad ones, one of the latter being the lack of an established market for it. It grows well in all our warmer regions and in protected places elsewhere. It is rather rich, however, to put forth the grain as "new to American agriculture." Some of Gov. Bross' constituents in Illinois can give him points on dhoura "the old fraud"—for such it may be regarded in States not adapted to its growth.

**MOSQUITOES.**—New Jersey must yield her world fame for mosquito resources. A correspondent writing to an English paper from New Zealand says: I have known men place a piece of netting over their hats and tie it down round their necks, then tie strings round the bottom of their trouser legs, and sew up the opening below their shirt wristbands, when the mosquitoes would settle so thickly on the netting as to prevent their being able to see how to use their tools. This is only in the woods, however.

**TWO VIEWS.**—The fact of many men of many minds is seen in the announcement from Los Angeles county, that in one town there are tons of grapes rotting because the owners will not sell them to the winemakers, and in another town a citizen is endeavoring to utilize his surplus tomatoes by making wine of them.

ated product. He consequently appeals to the Academy to point out some simple, practical method of detecting such adulteration, which shall enable purchasers to judge for themselves of the genuineness of the article submitted to them for sale. The Academy has referred the matter for consideration to the sections of Chemistry and Rural Economy, who will send in their report upon it at the earliest possible moment.

**REDWOOD.**—The editor of the *Lancaster Farmer* appends a note to a California letter, which speaks of redwood as follows:

Redwood.—This may be the Red pine or Norway pine (*Pinus rubra*) which is so widely distributed throughout our country, and is so extensively used in shipbuilding, and especially for masts. If not, what is it?

Our redwood is *Sequoia sempervirens*, Engelm. It is quite different from what our contemporary thinks it both in characteristics and uses. A redwood mast would be a vain thing for safety. The timber is light and durable; excellent for general carpenters' uses. It is employed in this State much as the white pine in New York and other Eastern States.

**RETURNING.**—We hear good accounts of our publishers, Messrs. Dewey and Ewer, in the southern counties. They have enjoyed greatly the recreation amid new scenes, and fully appreciate the many kindnesses and marks of esteem which have been extended to them. They are now tending homeward and will be in their accustomed places again in a few days.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

### On the Umpqua.

[Written for the RURAL PRESS by MRS. F. F. VICTOR.]

To go, or not to go, that was the question, as I stood on the platform at Drain's (Oregon), trying to settle in my mind whether the Coos Bay country needed me as an explorer, or whether I should be the better or the wiser for anything I might discover at Coos Bay. How the question was decided will appear by these notes; and I must leave out a whole volume of more or less agreeable personal adventures to make room for that which the reading public are more interested in.

The road from Drain's to Scottsburg is the only one traveled at present by wagons across the mountains to that portion of the coast country embracing the mouth of the Umpqua, Coos Bay, twenty miles south of the Umpqua, and the Coquille river, a little further to the south. A road from the bay to Roseburg has been in use, but has become unsafe; also, another to Oakland, but that also has been abandoned by wagon travel in favor of the Scottsburg and Drain route. It is 36 miles between these two points. The road has cost considerable money, but should have more than as much again expended upon it to make it comfortable, or even safe, especially in the winter season. But, aside from the roughness of the road and the rather primitive accommodations, there is a romantic and interesting country lying in among these coast mountains, well worth the trouble of a visit to see.

The road lies along Elk creek, a pretty stream, which it follows to its junction with the Umpqua, and thence down this more important river to navigable water. Many schemes have been proposed for opening communication between the coast country and the interior valleys, among them the improvement of the Umpqua river. Several years ago the Government expended \$10,000 in such an undertaking, and a small steamboat was built, which made one trip to Roseburg, after which the navigation of the river above Scottsburg was abandoned. Now the talk is of a railroad, an enterprise which, if carried through, will develop a large extent of mineral and lumbering country lying at present in a Rip Van Winkle slumber.

So very slight is the communication between the Coos country and the rest of Oregon that the inhabitants have no hesitation in saying that they belong to Oregon only politically—that otherwise they are a "province of California." Let us see, now, what country this is that turns itself into a foreign province for want of the usual feeling of relationship to its own geographical family. Passing over the incidents of a romantic ride of 36 miles, among small cultivated valleys, over mountains in all their primeval grandeur, and again through a somewhat cultivated country on the west slope of the Coast range, we come to Scottsburg.

This little burg is named after Capt. Levi Scott, of pioneer memory, who settled here in 1850. For a period of about 11 years it was a thriving business place, being the rendezvous of packers who carried the supplies of all southern Oregon and northern California, then actively engaged in mining, over the mountains on mules. Thousands of mules were kept here for this service, the goods being brought by vessels from San Francisco into the Umpqua river, and hence taken to the interior. At that period there was an upper and a lower Scottsburg, about two miles apart. The steamship *Columbia*, well known at Portland, was at one time under contract to run into the Umpqua twice a month, on her way up the coast, to deliver the mails. Upon this promise, a newspaper was started at Scottsburg, by Mr. D. J. Lyons, the present proprietor of the "Scottsburg House," which was to publish the earliest news to the mining districts before mentioned. But Capt. Dall failed to fulfill his contract, and without news the paper was of no value, therefore it was removed by a new publisher to Jacksonville, and Scottsburg has never since aspired to publish a newspaper. At the time referred to there were ten or a dozen stores in the upper and lower towns, and a considerable export of timber for vessels, masts, piles, ships' knees, etc. But the gold mines soon worked out, a good many vessels were lost on the bar at the mouth of the Umpqua, steamers would not come in, and to complete the history of disappointed hopes, the great flood of '61-'62 carried away the whole of the lower town and a large portion of the upper, comprising most of the business houses. Such was the force of the water that it not only carried away buildings, but tore away the ground they had stood upon, and great trees, rocks and earth fell into the roaring flood with frightful noise and tumult. The Scottsburg of to-day is a sleepy little street of half a mile in length, with two small stores, and other business in proportion. But it is a pretty and picturesque place, with a fine climate, and is more suggestive of a Swiss hamlet

than a thriving center of trade, which it once aspired to be.

There is a good deal of historical interest about this section of the Umpqua valley. The Hudson Bay Company had a fort or trading-post where Elk creek falls into the Umpqua; and Allen, McKinley and McTavish, gentlemen of that company, as well as the venerable pioneer, Hon. Jesse Applegate, after the Oregon Territorial Government was established, went into business in Scottsburg.

From Scottsburg, a little steamer runs three times a week to Gardiner, 20 miles further down the river. Gardiner is a lumbering town, doing considerable business in good seasons. Its two mills cut, together, about 75,000 feet of lumber per diem. Vessels of 800 tons and downwards can come to Gardiner to load. The situation of the place is cheerful, and there are several very handsome residences, showing both means and taste in their plan. Three stores and two hotels supply the present demand for food and raiment. One feature of the country about Gardiner struck me particularly—the hillsides are thickly overgrown with red and white digitalis. As I had never before seen the plant growing wild, I inquired into its history here, and was told that it came from seed first planted by Mrs. A. C. Gibbs, who was the pioneer lady of Gardiner. The same plant appears at Scottsburg, but not in such quantity, and also at Marshfield, on Coos Bay. Gardiner was founded in 1851 by a San Francisco company, of which Gov. Gibbs was a member.

There is no better means, at present, of pursuing your journey beyond Gardiner than by a small boat. Into a small boat you go, then, and are rowed over the rather choppy sea of the Lower Umpqua to the beach at Winchester Bay, where a wagon is waiting to carry travelers down the beach to Coos Bay. From Gardiner to old Fort Umpqua is but a distance of three or four miles. This fort was built about 1855, to keep in check straggling Indians from the Reservation above, and prevent their joining the hostiles in the Rogue River country. Three companies were stationed there, under Lieuts. Lorain, Peper and Harding. It was abandoned on the breaking out of the war of the Rebellion, in which Lieut. Harding became a General. I neglected to mention in the proper place another historical point lying just above Gardiner. This is Bolon's island, formerly called Smith's island, and famous for being the place where Jedediah Smith, of the firm of Smith, Sublette & Jackson, American fur traders, was attacked by the Umpqua Indians in the fall of 1828, his furs captured and his party killed, excepting himself and two others, who made good their escape. The incident is fully related in "The River of the West." Considering the inhospitable nature of the country where this event occurred, it appears truly wonderful that these men should have been able to save their lives and reach Fort Vancouver.

At Winchester Bay is what they call in this country, "a farm," though how such a place resembles an ordinary farm I could not discover. There must be grass for stock, and a garden patch no doubt. More than that did not seem probable, as the heavily wooded bluffs come down quite close to the beach, and the shifting sand-hills that seem always to be moving further inland. In truth the high mountains nearest the sea are, many of them of sand, though now covered with a growth of scrubby pines and other evergreen trees. My boatman landed me at a point of rocks on the beach, about two miles inside the bar, which could be seen breaking, though the day was unusually quiet. This latter circumstance was very favorable to comfort, as the wind makes a beach ride anything but pleasant when it comes strong from north-west or south-west. After waiting three-quarters of an hour on the wet sands, the tide being at ebb, my impatience was relieved by the arrival of the beach-wagon, a two-seated vehicle with wheels tired with four-inch broad iron bands, that bowed along smoothly on the firm beach with hardly a jar. In fact the worst feature of this beach ride is its monotony—the sea just the same on one side and the sand hills just the same on the other, for the whole distance, and not the chance of a sensation, if the day be still. I am told, however, in the winter, when the wind comes heavy from the southwest, there is considerable excitement in being chased by the surf, with a strong probability, sometimes, of being overwhelmed in it. The last mile of the drive takes one over sand ridges and through marshes to a station on Coos Bay opposite to Empire City, and about three miles distant, to which place a small steamer conveys you, supposing you do not prefer to go to Marshfield, as I did. But Coos Bay, this "province of California," must have a chapter to itself, and I will close this one by noticing something in the botany and natural history of the country that struck me as interesting.

To begin with the natural history: I had my attention called to a species of lizard that has the head of a snake, and the same movement in locomotion, but had also small legs like a lizard, which it did not seem to use in crawling. The marks upon its skin were like those on a snake, and its length was about one foot and a half. This creature is called by the people where it inhabits, the "jointed snake," because, they say, it falls into pieces if you strike it, and comes together again! The one I saw lost quite a long piece of its tail when it was struck, and was partly separated in another place, but did not come together, as it was soon put into alcohol. Another curious reptile of the Umpqua valley is the snake with a head at each end. As I did not see one I could not be satisfied

that there were really two heads, but from the testimony, I was satisfied there was at least the appearance of two heads. This snake is said to move either way with equal speed, showing that wherever its locomotive power is situated, it is reversible, and that, practically, it is a "double-end."

Of the botany of the country, what made a most agreeable impression, was the abundance of elegant shrubs, such as the myrtle, which is in fact a tree, *Rhododendron maximum*, and a delicate lavender-colored spirea, which goes by the name of "California lilae," though not in any respect like that shrub. The myrtle grows in a cone-shaped mass, the dark, glossy foliage being so dense that the trunk and branches are quite concealed. It has, in spring, small blossoms rising on stems from the bases of the terminal leaves, in the autumn a small green berry is in place of the flower. The odor of the leaves is very pungent. The *Rhododendron* grows six or eight feet high, and presents a profusion of lovely rose-colored flowers, which, as they often grow alongside of the beautiful lavender spirea, are thereby set off most exquisitely. I did not observe any great variety of annuals or humbler wild flowers of any kind. Neither was there anything of interest along the sea beach, neither shells, nor birds, nor even seaweeds. Rather a lonely, voiceless shore, both of river and ocean, but the woods made up in grandeur and beauty for the want of color and life on the coast.

### From Eureka to Ferndale by Stage.

EDITORS PRESS:—The stage left to-day, October 23d, a little behind time, on account of the late arrival of the steamer *Humboldt*. I was one of ten passengers on a six-horse coach, and having a high seat outside, was duly and truly prepared to enjoy all that is grand and magnificent of the rich rural district lying between Humboldt Bay and the hills and mountains to the east. For a long distance the road skirts the bay and the marsh or low lands on the westerly side, with its zig-zag sloughs and creeks, and although the scenery on this side is highly interesting to a new-comer, there is little to interest the farmer.

On the east of the road are farms, on rolling land, and many small fields of potatoes. The ranches are all well fenced, and present an appearance of thrift. There are in the background tracts of timber in clumps and larger bodies, which appear to be very heavily wooded.

At Salmon Creek a railroad terminates at one of the sloughs, its other terminus reaching up into the redwood lands, where the great logs are rolled on to the cars and conveyed to the water and rolled off and towed down to the mills in Eureka. This is near Hoakton, the upper landing for the coast steamers.

Just before reaching the Salmon Creek Hotel, we passed a school-house, and, as the tired horses were being refreshed with cool water, I was amused to see the school children rush out of the pretty white school-house. The boys all came running pell-mell, some with stockings and shoes and others barefooted; but the girls followed in a flock, all huddled together, so that it took several efforts before they could be correctly counted. In fact, there was one little girl who ran around and dodged among the others so smartly, that I did not and could not count her at all. This was a grand country sight, these twenty-one girls, all about of a size. A handsome sight and handsome girls.

At this place we crossed a small low flat, and then the road leads up a long winding grade to the top of Table Bluff. Up this road the land on the left is in stubble fields and seems to be good. On the right, it is covered with dense brush and has not yet been subdued. I observed one field on which the brush had lately been cut, as though preparatory to burn and plow.

As we go farther on, grain, potatoes, beans and other produce are raised in the greatest perfection. I am told that there is but little wheat raised, as the climate and soil so near the coast is much better adapted to the growth of barley and oats.

As for real neat, tidy farming, this country will not compare with many other localities in the State. The fences for miles are grown up to weeds, thimble-berries, wild roses, blackberries, etc. In many places the blackberry brush is so dense that no fences can be seen for long distances, and this heavy mass in many places reaches to a height of eight feet from the ground, or three feet above the fence. There are, however, neat, tidy dwellings and large farm houses nicely painted, and flower gardens, where are found choice selections of ornamental plants and shrubbery, which grow rapidly and produce the most fragrant flowers. Apples are so easily produced that they have but little value in trade, although, as far as I have seen, they are hardly of the highest quality.

There is too much to be seen in Humboldt county to be described under the heading which embraces a ride of only twenty miles. Therefore, it is wisest to defer further comments until your correspondent sees other and greater wonders contained within the borders of this interesting, picturesque coast country.

H. W. R.

## THE SWINE YARD.

### A Plea for Bacon.

Col. F. D. Curtis writes to the *New York Tribune*: I want to urge upon farmer readers the idea of curing their pork into bacon, and keeping some of it for their own tables and making a home market for such as they can spare. If they will have it on their own tables people unused to it may find out its value as a staple article of meat, and a little sold in a town will prepare the way for more demand another year. The truth is, the public, as a body in the north, do not know anything about bacon, and it is time they did. Pork has started in our local market at \$6 per hundred, and will probably run down within two months to \$4. What nonsense it is for farmers to force their pigs upon such a market. Many of them will do it and get rid of their pigs, and because their families do not like pork (pickled pork) they will buy beef. This is a sort of economy which is largely practiced in this vicinity. If the pigs should be killed when they weigh about 100 pounds, and the entire sides with all of the lean left on be made into bacon, the farmer can have in store as nice meat and as palatable as any beef he may buy, and for the surplus he may realize a price which will compensate him for his grain and trouble. With the sides made into bacon a pig can be turned into good account. The hams and shoulders make the best of food, and cost the possessor no extra profits which he has to pay over and above the cost of the beef, besides the freight. In other words, when a farmer buys beef he pays more than twice the cost of the meat to the producer, and when he cures his own pigs into hams, shoulders, bacon and lard, and sells them to the consumer direct, he makes the profit others make out of him when he sells his pigs at the pork price, \$4 per cwt.

When he sells his pork and buys beef, he loses both ways, and if the extra price he pays for his beef over his pork was subtracted from the price of his pork he would really get nothing for it, but when he fits it for food so that it takes the place of the beef and he does not buy it, he really doubles its value and trebles it, as beef retails at an average of more than 12 cents a pound. Pigs must not be extra fat to make the best of bacon, and the spare-rib lean must be left on the ribs, the bone must be cut out, and the sides cut square and smooth; the trimmings can be made into sausage or go with the fat into lard. The first six months is the most growing age for a pig, and at this age they are suitable for the purpose. After that they begin to get too thick and fat. Bacon may be cured the same as hams and shoulders, only it does not require so long salting. Usually the salt is rubbed on the pieces, and they are piled up for a few days to let it strike through. Three rubbings are enough. It should never be allowed to freeze during the curing, and if frozen it must be thawed out by soaking in water. Bacon will take in salt enough, unless the sides are very thick, in three weeks, when it is ready to be smoked. After smoking it may be hung in a dry, cool place or packed in dry salt or in tight boxes. It is always ready for use, and a rasher of good bacon is a treat for breakfast or any meal. As a side dish it has no superior. It may be broiled in dainty bits or fried in more generous slices. It is excellent to flavor chickens or stews, and for a staple meat is far preferable to pork. The black and red Berkshire pigs make the best bacon, as they have more lean mixed with the fat, the red being the best of the two, as they retain more than the others the old characteristics of the Berkshire breed, not having been made so fine and thick in the body by the so-called improvements.

HOG SCRAPING MACHINE.—A Kentuckian in Chicago, Mr. L. Norris, of Bracken county, writes the *Cincinnati Enquirer* as follows: "I have just witnessed a private exhibition of a wonderful machine. Seven hogs, weighing from 100 pounds to 350 pounds, to test a hog-scraping machine just patented by Mr. Stephen Collins, were killed. I am not permitted to describe the machine in detail, but I can say that the working of it was simply marvelous. A hog was killed, placed in the machine, and almost the same instant it came out slick as a whistle, with the exception of a few odd hairs on the legs and head. The seven hogs were passed through the machine in 57 seconds, and the entire body of each animal was as clean as could be desired. This was the initial test of the machine. It is so constructed as to clean any sized hog, and in the test machine to-day animals were selected with a view to test its application to different sizes. I should think from what I have witnessed of its working, that with a few improvements which are contemplated it will have a capacity of 6,000 hogs in ten hours. It will certainly save the labor of 20 men for every 2,000 hogs cleaned. It is very simple, and not liable to get out of repair."

A STRONG BANK.—The Bank of England was incorporated in 1694. It covers five acres of ground and employs 900 clerks. There are no windows on the street; light is admitted through open courts. No mob could take the bank, therefore, without cannon to batter the immense walls. The clock in the center of the bank has fifty dials attached to it. Large cisterns are sunk in the courts, and engines in perfect order are always in readiness in case of fire.



## THE FIELD.

### How Wheat Grows.

As the growing season is at hand some facts concerning the structure of the cereal grain and its method of germination will interest many readers who have not especially inquired into the phenomena. Mr. W. Carruthers, Consulting Botanist to the Royal Agricultural Society of England, gave, not long since, a lecture on "Wheat: the Story of its Life," in which, after reminding his hearers that this plant is an annual, and, like all such, entirely dead in winter, he made an interesting statement of the mechanical construction of the seed, by which alone the plant is perpetuated:

The wheat grain cannot resist atmospheric influences so well as many of our native wild flower seeds, and is therefore protected externally by two coats or layers representing the tissues of the whole seed. The layers have very thick walls, and, like every portion, this part of the plant is made up of little cells or bags, the hardiness of which depend upon the living thereof. The growth of these cells might be best illustrated if they took a sack and lined the interior with paint or paste. Let them repeat the application continually, and the interior would become gradually smaller; and so with the cells which form the coat of the wheat; they are very much thickened by deposits made in their interior, and thus form a protection which suffices to resist the action of the atmosphere and the physical condition which surround the seed. In the case of the seed of the cocoon may be found another instance of the provision of a thick, hard covering which protects it. The parent tree frequently grows by the seashore, the seed is washed away and tossed about for a long period by the sea, yet it has a defence for the delicate little bulb inside, which having at last found a resting place, germinates. Inside this hard covering of the wheat seed is a large body of white matter, together with a very minute body at the lower corner, and if a fresh seed is closely examined, it will be found that the surface, to a great extent, is smooth, while in the lower corner it is corrugated and rough. Then, if they put the seed in the water, and cut it with a sharp knife, they will find the rough portion to be of a greenish hue. This latter part is the essential portion of the seed, and no seed is perfect which does not contain it. It comprises the root, stem and leaves, and though reduced to the very smallest quantity, it will be found, on a microscopic examination, that they are present. It is analogous to the buds which were present on trees a few months ago, and which are now represented by luxuriant foliage, the only difference being that the bud when separated from the branch of the tree dies because it cannot get suitable nourishment, while in the seed a good store of food is laid up for the use of the young plant, enabling it to start on its existence independent of the parent.

After the seed is consigned to the soil and has absorbed moisture into its entire substance, the bud or embryo plant so compactly and wonderfully stored and surrounded, and stimulated by light, heat and oxygen, feeds on the minute granules of starch which fill the sacks that, compacted in a homogeneous whole, make up nearly 60% of the perfect grain. How this starch, which, as is known, we cannot dissolve except in boiling water, is dissolved and passed through the mouthless cell-walls, and appropriated by an indescribable process termed osmose, is a great deal more than science can tell us. And again, how the plant out of this one material builds up all its parts, arranging them in different molecular forms, is another work in the intricate and astonishing laboratory of nature concerning which it must be said that "our eyes are holden that we cannot know." The description of the continuation of the process of growth, as relating to the root, we give in Dr. Carruthers's own words:

The delicate root is first protected by a little cap, which carefully preserves it from injury. The true root, after a time, finds its way through the cap, and after it gets possession of the earth the stem begins to rise. But the seed being a little below ground, it is necessary that the stem be protected, consequently it is provided with a sheath for that purpose. To the plant the earth is simply a great reservoir of water; in his experiments he had grown plants in water without having anything whatever to do with the earth. The roots are specially fitted for obtaining water. They grow first at the points only, being different from the stem, which grows throughout the whole length. If the root were as the stem in its growth, it would continually be meeting with resistance; it would be speedily pressed together, and would not succeed in penetrating the earth. It therefore only grows at the point, so that it may push its way between the small particles of the earth, and then when it has done so it thickens out. The root, like every other part of the plant, is made up of cells closely joined together, every one having the power of drinking water continually through its surface. From these surfaces grow long hairs, as densely as the fur on a sealskin jacket, each of which has also the power of drawing in water, and thus the surface for obtaining the supply is of wonderful extent. The root itself is of enormous length, and it has been found that a single wheat plant may have as much as 150 feet of root underground, the plant itself being only four feet above ground; while barley and oats

have been proved to have a drinking surface of from 130 feet to 150 feet. By apparent instinct, roots travel very long distances sometimes in search of water, and the rapidity with which they take up the water is surprising. They have no opening, although in some books it is stated that there is a tube in the center, a statement proved to be utterly without foundation, for if there were any opening it would be a center of decay, and would injure and destroy the vitality of that portion of the root. The whole of the water is, in fact, taken in through the cells.

Omitting the statement of what is known of the intricate process of elaboration by the plant and storage of starch in the future seed—for which alone the plant exists and in which its whole issue of active life is lodged—we quote, in conclusion, the Professor's views of the duration of vitality in the wheat grain, by which it will be seen that the current fiction of "mummy-seed" may be safely discarded:

He had dissected hundreds and thousands of seeds with a view to discovering how long they would remain of value for growing purposes. He had found that a few years, perhaps three, is the longest duration of their life, and if a farmer sows wheat which has been kept in the barn more than three years, it is almost certain that a large proportion will not come up. Of seed gathered one year and planted the next, 98% would probably germinate; if it were two years' old the percentage would be only 85; if three years' old, 60% or 70%; and if four years' old probably only 5%, the remaining 95% having lost its vital power. If the little bud in the interior of the seed is dead, it is a simple waste of material to plant it, although it may be perfectly good for feeding purposes. Time is not the only thing which kills it. A damp harvest or bad harvesting often does much more injury to the little bud than age, and he found on his examination of seeds that far more injury had been caused to them by very careless harvesting in damp weather. The seed then does not live forever, and all the stories they had heard to the contrary could not be substantiated. The so-called mummy wheat was in reality a plant growing on the east and south coasts of the Mediterranean, and no doubt had been brought over to this country accidentally in the packing of the mummies; it certainly could not have existed throughout the long years that had elapsed since the bodies were originally buried. He had himself proved the fallacy of the supposition. A gentleman gave him some seed which he had himself taken from a mummy, and this, on being grown, produced oats, which would not grow in Egypt, and which, in fact, were unknown to the ancient Egyptians. How they came into the mummy he was unable to explain. So, too, in the case of mummy peas. He once examined specimens of a living plant grown from these peas and found it to be a common pea now generally cultivated in Egypt. It is a vital impossibility that it could have lived many years. In fact the majority of seeds die after three or four years' existence.

## POULTRY YARD.

### Arrangements for Cramming Chickens.

A reader of the PRESS asks for description of the arrangements used for cramming chickens. The following is the method practiced at Heathfield, Sussex, England, as described by the *Agricultural Gazette*:

The Sussex method of cramming poultry of all kinds, which was formerly performed by the floggers, has been rendered possible by a machine first exhibited in 1862, as a sausage-filling machine. Mr. Elphick, of Rye, a gentleman largely interested in the poultry trade, at once secured the invaluable stuffing apparatus and adapted it for cramming poultry. It is now manufactured by Mr. Jackson, of Brighton, and Mr. J. Every, of Lewes. It consists of a cylinder 18 inches long by 6 inches in diameter, forming the food receptacle. A piston fits the cylinder and presses upon the food, being driven by means of cog-wheels and a handle which is turned slowly by a boy, forced through an india-rubber tube into the crop of the duck, goose, or chicken.

The feeding houses at Cluck Hen farm are of a homely kind, roofed with poles and thatched with the native plant of Heathfield, with heather and faggots for the sides of the sheds. The buildings may be rude, but they are healthy. The open roofs and the character of their construction and material secure ventilation, and cleanliness is attained by the daily use and removal of dry earth from beneath the coops, and by the occasional free use of thick lime-water throughout the building. We have never entered poultry houses under better management, with an atmosphere more entirely free from offensive odor. In a shed of 70 feet long by 7 feet wide, we found two rows of fatting coops, each 2 feet 9 inches long by 16 inches high and 18 inches deep. Each coop holds seven chickens. The cramming machine is wheeled down the center between the rows of coops, and the chickens flutter up at its approach. We saw 10 birds crammed in a minute. The crammer takes a chicken in his hands, inserts the tube, and gives a signal—a little grunt, a contraction of the word "turn." The boy moves the handle a very little way

round, and another little grunt conveys the signal "stop." The birds flutter up expectant before cramming, and squat down with a contented chuckle the instant they are returned to the coop when the process is complete. Accidents rarely happen; hardly more than one or two in a season. We observed one bird which had been the subject of too much pressure, and was hopping at the heels of the feeder, sewed up and convalescent, a pet *pro tem*—the subject, perhaps, of a slight remorse. An inquiry about this bird before we knew its history was answered, not in words, but in pantomime; the boy blushed a little and looked at his companion with a sheepish smile; the man turned a handle in the air. Poor cockerel! the fate of the frog in the fable had overtaken him; he had been stuffed too far by mistake, burst and nearly killed, and was now being petted in extenuation, preliminary to being once more, and more successfully stuffed.

The food used in fattening chickens consists of ground oats and a little chopped suet, mixed with water. A cheaper mixture was used by another feeder, consisting of one part rice meal and two parts ground millet. Cramming is resorted to, from the fact that fowls do not fatten satisfactorily even when cooped and supplied with abundant food, unless they are artificially stuffed. The stuffing process is completed in the case of chickens in good order in 10 or 12 days. The higglers deliver the running chickens at about 2s. each. When fat they are killed and picked, or consigned to the London or various local markets. The Messrs. Oliver, of Cluck Hen, a leading firm of feeders, send away from 40 to 100 dozen of chickens weekly throughout the year.

We have seen a statement by a gentleman who inspected the carriers' books, that the weight of packed chickens conveyed to London from Heathfield annually, by one firm of carriers, amounts to nearly 256 tons, or 224 tons after deducting one-eighth as the weight of packing cases, worth more than £25,000 at 1s. per pound. Each chicken weighs four pounds, and the average price received by the feeder is 3s. 10d. The annual value of all the Heathfield-fed poultry is said to be \$350,000.

## HORTICULTURE.

### The Guavas.

This fruit is now being produced in usable quantities on this coast chiefly we believe at Santa Barbara. The following enumeration of varieties by Mr. C. H. Hartmann, in the *Queensland Agriculturist*, will be interesting to many: This semi-tropical fruit is but little known as yet in Queensland. Various varieties have been introduced from the East and West Indies, South America and the southern islands, of which several deserve a place in every fruit garden. The hardier species do very well. The purple even stands exposed situations, and is one of the best for fruiting. I have some of them now—the fourth crop of fruit on since last spring; in fact, this beautiful evergreen shrub is the most prolific fruit bearer that I am acquainted with. It has always fruit or flowers—generally both—and often fruit in three or four different stages, from the small just formed, to the deep red ripe berry of about the size of a small cherry deliciously flavored, sub-acid and very agreeable. They make a most delicate and beautiful jelly, which is highly prized in the East, and no doubt will become so here also. The guava requires no particular treatment to other fruit trees. Any ordinary good soil will suit them, but rich deep soil is the best, with any old manure. Unsuitable ground may be made suitable, and they will luxuriate under the same treatment as described for orange trees. The purple forms only a low, close, very compact shrub; the green-fruited or gooseberry grows larger, and is also more delicate, requiring a warm situation. The Champagne guava is similar to the last, but grows into a large and most ornamental shrub of dwarf pyramid tree.

The large white or egg guava requires also a warm or sheltered situation; it is much more robust in growth, less ornamental, more straggling, but it is a fine large fruit, and for jelly is unsurpassed. I have them all growing and fruiting well, only the last-named variety suffers from the frost and westerly winds.

### The Navel Orange.

A. S. White, of Riverside, writes to the *Southwestern California Horticulturist* as follows: A few weeks since the PACIFIC RURAL PRESS published a letter from S. W. Pye, Esq., of Australia, in which he made the statement that the Navel orange was a very shy as well as light bearer. As this is a matter of great importance to us here at Riverside, where, it being the favorite variety, we have planted thousands of Navel trees, I determined to give the subject a thorough investigation and see if these were the characteristics of the Navel in this country. In pursuance of this purpose I called upon L. C. Waite, Esq., whose trees are from the original Navel stock brought from Australia. He informed me that not only were his Navel trees bearing more heavily than any other variety of the same age, but that the fruit was much larger and finer.

T. W. Cover, Esq., whose Navels were

budded from a tree sent to Riverside from the Department of Agriculture, stated that his trees yielded as much fruit as any other variety in his orchard; that his trees bore as heavily as any trees could and produce fine, large specimens. It was his Navel oranges which took the first premium at the Riverside Citrus fair and at the Supplementary Exhibition at Los Angeles.

Cover and McCoy, who are growing the Washington Navel, agreed with the other gentlemen, and showed me a three-year-old tree with 70 magnificent oranges upon it.

In my own orchard, where I have a large number of Navels, it is bearing as well as either the Mediterranean Sweet or St. Michael.

## ARBORICULTURE.

### Timber Resources of Alaska.

It would appear from the interesting letters to the *Bulletin*, written by John Muir from Fort Wrangel, Alaska, that the operations of nature's works in the formation of a habitable region, may be witnessed at the present time in the Territory of Alaska. In regard to the age of Alaska, Mr. Muir says:

From the universal distribution of the woods, one would be led, at first sight, to suppose that Alaska was an old country, considered with reference to its regeneration at the close of the glacial period, and that it had been long exposed to the disintegrating action of post-glacial forces, and had thus been covered with soil and then planted with trees. But, on the contrary, Alaska is a very young country, and its forests are mostly set on solid rock that had just emerged from beneath the ice-sheet. The existence of forests on so bare a surface is possible only in a wet and temperate climate like this. As soon as the ice leaves the rock it is covered with moss, a deep, bossy blanket of it, in which the tree-seeds find lodgment, and grow and weave their roots together into a sod, so that one supports the other, and thus with a little anchorage here and there in fissured spots they are enabled to stand on steep slopes, even without any soil about their roots, or covering of any sort, save the damp mosses. On the very steepest and smoothest declivities the whole sod of trees will at times give way and slip down in a heap to the foot of the wall. But on the ruins another and another growth is built, until the whole is covered. One has only to go to the banks of the existing glaciers to see this forest work done.

Give to Alaska the climate of California, and these evergreen islands and shores would be treeless, sun-beaten rocks.

The forests are peculiar, and especially in Southeastern Alaska, their bulk is made up of three species of evergreens, all of which are of good size, and grow close together, covering almost every acre of the islands, however rocky, and the margin of the coast and the mountain slopes up to the height of about 2,000 feet.

The most important of these as to timber is the yellow cedar, or cypress (*Cupressus nutkaensis*), a truly noble tree, attaining a height of 150 feet, and diameter of from 3 to 5 feet. The branches are pinnate, drooping, feathery, dividing into beautiful light green sprays, like those of the California libocedrus, but with finer foliage and more delicate plumes. The wood of this tree is undoubtedly the best the country affords, and one of the most valuable to be found on the whole Pacific coast. It is pale yellow, close grained, tough, durable, and takes a good polish; and to these qualities is added a pleasant fragrance, like that of sandal-wood. Some little goes to China, and is made into fancy boxes, it is said, to be returned to us for camphor wood. It is the favorite firewood of the coast region, but an open hearth must be closely screened with a framework of wire netting, as the wood in burning snaps, crackles and explodes, throwing out such a shower of glowing coals that there would be danger of fire without protection against them. The durability of this timber is forcibly illustrated by the fallen trunks lying in the damp woods. Many of the largest of them last for centuries, retaining even the delicate color and fragrance unimpaired. Soon after they fall they are overgrown with moss, in which seeds lodge and germinate and grow up into vigorous saplings, standing all in a row on the backs of their dear ancestors. As they grow larger they stand astride, sending their roots down and out on both sides like the straddling legs of a spider. And, after they have reached an age of several hundred years, the downtrodden trunk when cut into will almost always be found as fresh in the heart as it was when it fell. Decay goes slowly on from the outside, never commencing in the heart-wood, as far as I have noticed, though a good many of the living trees are injured by a fungus which produces a dry-rot similar to that found in thuja and libocedrus. The species is found as far south as Vancouver Island, and is pretty generally distributed along the coast and through the islands, as far north as Sitka.

The white spruce, or Sitka pine (*Abies Menziesii*) ranks next in value as to its timber, while

CONTINUED ON PAGE 298.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### Experimental Farm.

Much of the time of the late meeting of the State Grange was devoted to the consideration of the subject of the establishment of an experimental farm in California by the Federal Government. Most of the arguments offered in favor of the scheme are, in my judgment, the most conclusive proofs of the inutility of the project. It was claimed that greater variety of soil and climate are to be found in California than in any other part of the United States; that adjoining farms are as totally different in soil, climate and productive capacity, as though they were in different zones; that the experience gained by years of patient, observant toil in the Eastern States, only served to mislead the farmer in California; that here the farmer must learn by experiment on the particular farm he proposes to cultivate, first to what crop it is best adapted and then by what mode of culture he can obtain the best results. And the deduction sought to be made is that each one must spend a lifetime in experiments before sufficient knowledge can be obtained to enable the farmer intelligently to prosecute his calling.

Now the fact of the case is, that there are already established in our State thousands of experimental farms under the management of intelligent, experienced, practical, interested farmers, who have done, are doing and can do more by way of demonstrating the agricultural resources of the State, the peculiar fitness and adaptation of each particular locality, and the most efficient modes of culture, than could be done by a thousand of such visionary theorists as would most likely be put in charge of an experimental farm under the patronage and control of the Government. In a Government like ours all such institutions are too likely to be made subservient only to party interests, and at each change of administration, a new experimenter put in charge as a reward for service rendered to the party, rather than on account of fitness for the position.

Such an institution would be a heavy expense to the Government, and the expenses of our Government are to be paid by the people. We are gaining the desired information more rapidly than can be done by the plan proposed, and at no cost to the Government. We should remember that the Government best subserves the purpose for which it was established, which leaves its people, without hindrance or assistance, free, each one to pursue his own happiness in his own way; so long as he trespasses not on the rights of others.

The Department of Agriculture, as already established and managed by the Federal Government, might be rendered infinitely useful to our whole people if we would take the interest we ought in furnishing it the information at our disposal, as we are solicited to do. The farmers all over our State are constantly in receipt of seeds, roots and plants sent out from that department with the request that they be experimented with, the results noted and reported to the Commissioner, that he may embody the information thus obtained in his reports for the benefit of the whole people. What a vast fund of information might be aggregated and spread broadcast over the land if each farmer would contribute what he could, without any great inconvenience to himself; and what a vast return each would receive for the little care and labor given; and how easily and inexpensively could the good be achieved, which is sought to be attained at great expense, by the establishment of an experimental farm.

S. T. C.  
Santa Rosa, Cal.

### Hard Times and High Rates of Interest.

Under this heading in the RURAL of October 11th, Mr. D. A. Learned mixes up money, capital, property, speculative values and his \$50-dog in a remarkable "all-the-same" kind of way. The trouble with our friend's political economy is he "gets the cart before the horse," by making every species of property the controlling representative of money (medium of exchange); while the exact reverse is true, for this is by law, and by universal consent, the representative of all values. It alone possesses a legal-tender power. This is its chief attribute, and to this is the world indebted for its advanced civilization. Yet our friend makes it the mere play-thing of his mixed values. The rate of interest, which this factor will command, is dependent upon the law of supply and demand.

His dog-illustration reads as follows:

"Our Eastern brethren, since the war, have been experimenting on this subject. Most of them discovered that the interest on capital was determined, mostly, by the expectation of gain by its use. Thus before the war a \$50-dog would earn \$3 a year clear. After the war, he became a \$100-dog, and earned \$6. The dog was the same, no better or worse. Some thought the dog had 'ris,' but that was found to be a mistake. After a few wagon loads of paper money had been burned, the value of the dog

came down to \$50 again, when it became apparent the value of the dog and his earnings had remained the same all the time. The change in nominal value and earnings was a change in the value of money, by its abundance or scarcity, and still, all the time, the proportion between the dog and his earnings remained the same. The dog's name was 'property.'"

Now, this proves but very little. But it shows this important fact (which our friend failed to mention), that \$6 lawful money will pay twice as much lawful debt as \$3 lawful money, at all times, and as we are a nation of debtors, the benefit to the debtor class, under the earnings of the \$100-dog, would run up into the hundreds of millions of dollars per annum. Will our friend state by what right or authority he fixes this dog's normal value at \$50; why not \$100?

When "Ricardo built his pernicious and fallacious system," the debtor class received no consideration in his sophisms.

Gold or silver coin divested of its legal functions, becomes a commodity, and with the exception of convenience possesses no advantage over wheat or any other valuable commercial products, as a medium of exchange. The increase of money per capita to any reasonable extent, is no guarantee of reduced rates of interest, for this increased supply may, indeed always will, bring with it a condition of increased demand. Nevertheless, the rate of interest will ever be found true to the law of demand and supply, as the needle to the pole. Arbitrary interposition culminates in a farce at all times.

C. H. IVINS.

Cambria, Cal.

### Other Causes of Hard Times.

EDITORS PRESS:—My attention has recently been called to the articles in the PRESS upon "Causes of Hard Times," and while I do not propose to engage in a newspaper controversy with your correspondent, yet I beg leave to differ with him in regard to the idea that the rate of interest California borrowers have been paying has in any material degree caused the "hard times." Were I in search of a cause for the present depression in business throughout this State, I believe it would be found in the extravagance which so universally prevails among all classes of citizens, and also, in a measure, in man's haste to become rich.

There must be a strain somewhere when men who can only afford bacon and beans attempt to live upon roast beef and plum pudding. I do not believe, with Henry Ward Beecher—provided he ever made the statement attributed to him—that "bread and water are good enough for a working man"; but how much better, in the end, would be the condition of the average poor man if he would live within his means during periods of general adversity, such as we are experiencing just now. Here is a case in hand which came under my own observation: A farmer, recently married, gave his wife a valuable silver tea-set as a bridal present; to be sure, the articles were beautiful, and added to his table a finished appearance, but that man could ill-afford to spare the money they cost, and to-day his cup of tea would be much more refreshing than it is if brewed in an old-fashioned, brown-stone tea-pot, provided he had in his pocket the \$100 that tea-set cost.

I knew also another man, a farmer who, before being married, some years ago, borrowed a few hundred dollars with which to build himself a new house, notwithstanding the one he had occupied was good enough, and would have answered his necessities until he could have afforded a better. His family increased, his necessities multiplied, while the profits of farming diminished, and the result is that in all probability he will lose 40 acres of land, his house and other improvements simply because of his unwillingness to make his mode of living conform to his circumstances.

How little do these men think of what they have done to bring about "hard times" upon themselves! and failing to see the true cause, they may lay the blame upon the rate of interest they have paid, or perhaps upon some political party, or even upon the government bonds.

But as touching the other cause of "hard times," viz., man's haste to accumulate wealth, I would call your attention to the unusual risks of loss which men in California accept in their struggle to gain a fortune in a short period of time.

There have been in the circle of my acquaintance many men who within the last few years who have lost their all in business speculations—not in the legitimate operations of trade. One man, perhaps, endeavors to control the hay-market, but learns after buying a few thousand tons that he cannot accomplish his purpose, and the result of his attempt is the loss of a valuable homestead. Another buys barley, hoping for an increase in price, but the bottom drops from the market, and he loses; or perchance invests his all in bees, and unless the season is favorable for their increase loses the accumulations of years of unremitting toil. None of these men would think of sitting down to stake their property upon the turn of a card, but is not the one about as foolish as the other?

Now, if a low rate of interest brings about what people are pleased to call "good times," as we might infer from your correspondent's articles, why is it that the New England and Middle States, where the interest rate is but

6% or 7% per annum, do not enjoy uninterrupted prosperity? Why is it that Fall River and other cotton manufacturing centers of New England, and Pittsburg, Troy, Cleveland and Youngstown of the Middle States, where iron manufactures predominate, are so often cursed by strikes and all the attendant evils that come in their train? Surely, the labor troubles which been experienced in the East are not caused by any high rate of interest. Let us look at old England, where I believe the interest rate is not more than 4% per annum. Surely, we ought to find "good times" there; but such is not the case, for to-day there is more suffering in England and harder times than California ever dreamed of having, notwithstanding our high rate of interest, the Chinese, the "lecherous bondholders," and the railroad monopoly—such a combination of evils, if our agitators are right, as the world has rarely seen.

It seems to me your correspondent must look for the principal cause of our financial troubles somewhere else than in a 10% interest rate. At some other time I may possibly give other impressions which I have as to the immediate cause of the whole difficulty.

### The Agricultural Press as an Aid to the Grange.

One of the strongest levers at the service of the Grange, and which is not made use of, we fear, to the extent it is capable of being used by the advanced thinkers and workers among the Patrons of Husbandry, is the agricultural press. The press is acknowledged to be the most powerful means known to direct thought and organize men for a purpose. Political parties owe their cohesive power and force more to the public press than any other means employed. The politicians have all the daily and a large majority of the weekly press agitating and discussing questions for them; keeping them constantly before the public by reporting their every utterance and movement. The special industries are all well supported by newspapers and magazines, which compile and collate all that transpires in their line of business. In the case of agriculture there are numerous papers published, but their numbers are few and they are most grudgingly patronized if their numbers and support are compared with the multitudes engaged in agriculture, which amounts to more than half the people of these United States.

We fear that this great lever of strength is not made use of to that extent which its power warrants, by leading men of the Grange. If you can succeed in having a good agricultural paper read weekly in a farmer's family, there will be awakened a train of thought and a knowledge of the objects and benefits of the Grange which will not fail to add to its membership and increase its power and influence. If you have a slow neighbor who does not take an agricultural journal, loan or give him or his family a number when opportunity offers. Get him interested in knowing what is going on in the line of his business, and you will soon gain his co-operation and influence. It would be well if the Granges make it one of the orders of business to inquire and ascertain what farmers were doing without a good agricultural paper, and use proper influence to induce them to subscribe for and read one regularly. Their views of business would be widened, and an interest in their own class be excited, to which before they were utter strangers. To teach is the underlying power of the Grange, by which it must succeed in its mission, if at all, and men cannot be taught much without they cultivate the habit of reading, and by reading, the ability to think correctly in the line of their business.—*Kansas Farmer.*

THE MUSICAL RECORD.—We have received one of the first numbers of the second year's issue of Ditson & Co.'s "Weekly Musical Record," which has finished successfully its first year, which, as every newspaper man knows, is one of trial. It is a 16-page paper, of good appearance, trimmed and stitched, and well printed. There are six pages of news or reading matter, mostly made up of short articles by music teachers, letters, reports from the concert field, and some hundreds of little items. Dexter Smith, the editor, here exhibits his journalistic and paragraphic skill. Then there are six pages of sheet music, a "specimen page," containing a good song, and three more pages devoted to descriptions of new music and music books. Altogether, it seems to be a paper of much value both to professional and amateur musicians. Price, \$2 per year. Specimen copies mailed for six cents.

SOUTHERN CALIFORNIA.—This is the title of a pamphlet just published by C. H. Phillips, of San Luis Obispo, and designed for circulation among immigrants and colonists seeking homes on this coast, with a view to aid in the settlement of southern California, and particularly San Luis Obispo county and vicinity. Arrangements have been made for the free distribution of several thousand copies at Omaha and other Eastern points. The expense of this edition of 10,000 copies, together with the cost of the 20,000 maps, has been more than the small subscription in aid of the work will meet, consequently, a few thousand extra copies are for sale, and will be mailed to any address in the United States, postage paid, at 25 cents each.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### FRESNO.

AN ORCHID.—*Expositor*, Oct. 29: Hon. P. C. Appling informs us that he has discovered in the woods, on the Chowchilla, a vine of most remarkable habit. The plant starts in the spring by throwing out a couple of leaves like corn blades, afterwards it throws up a vine or stem to the height of ten or twelve feet, without putting out a single leaf. It then becomes detached from the root, after which the vine begins to flower, and continues in blossom for several weeks. The plant evidently belongs to the family of orchids or air plants, but must be exceedingly valuable, flourishing as it does in this dry climate.

WILDFLOWER.—From the Wildflower country we have encouraging news. The farmers there are preparing every foot of their land for planting next year's crop. They are independent of rain, as their lands can all be irrigated from the Emigrant ditch. They will double their acreage of grain the coming season, and as there is no question about their raising a crop, unless the river goes dry, a splendid report may be expected from the Wildflower next season.

#### KERN.

EARLY GRASS.—*Courier*, Oct. 30: Mr. C. Miller, of the Tecuyo ranch, near Fort Tejon, informs us that the new grass is now so high on his ranch that the sheep fill up in a few hours in the morning and contentedly lie down the remainder of the day.

#### LAKE.

COYOTE KILLING.—*Bulletin*, Nov. 1: The first bounty of \$25 for a coyote scalp was paid last Friday by the Treasurer of the Sheep Owners' District Association. Mr. Jim True was the lucky man, he herds for W. T. Bayton, of Burns Valley. The coyote was approaching the watering trough when True shot him in the head with a rifle. There is still \$95 in the treasury, and with coyotes as plentiful as they are out that way, some of our hunters who sit around town telling big bear stories might make quite a raise. Mr. True reports having seen ten coyotes on his range during the last week.

#### LOS ANGELES.

PERSIMMONS RIPENING.—*Express*, Nov. 1: We have two Japanese persimmons which are as large as a good-sized apple. They are the residue of about fifty persimmons, all of which fell off before maturity except these two. A fruit man who examined them says they are the largest he has yet seen. They are assuming a fine golden color and are about the shape of an apple.

ALFALFA.—The alfalfa root and stems exhibited by Gen. J. H. Shields, of Florence, has 129 stalks on the single root. The stalks average six feet in length. A multitude of new shoots appear on the same root.

SIXTEEN CULTURES FOR CORN.—Mr. J. H. Martin, of Old Los Nietos, called at our sanctum this morning and exhibited four of the largest ears of corn we have ever looked upon. He stated that, for purposes of experiment this past season, he plowed a tract of his land four times, irrigated twice, hoed twice, and cultivated and worked it in a most thorough manner. In the whole process of raising the corn he went over the land no less than 16 times. The result is attested by the samples shown us. One ear of the white American variety measured 13½ inches in length. Some ears of dent corn were not so long but measured wonderful lengths of circumference. One stalk which Mr. Martin had measured was 16 inches about the butt. The crop will average about 110 bushels to the acre, and beats anything before known in that section. Mr. Martin feels amply repaid for his labor. Southern California needs more farmers of this kind who are not afraid of putting too much elbow grease on their fields.

ACTIVITY IN SAN FERNANDO.—From forty to fifty thousand acres of wheat will be planted in San Fernando valley this fall. Every horse and mule in the valley is busily engaged in dragging the plow, and wholesale purchases of draft horses and mules are being made in every direction.

#### MODOC.

WOOL NOTES.—*Independent*, Oct. 25: It is estimated that the present rise in wool will benefit the sheep men on this side of the mountain at least fifty thousand dollars. Wool is worth 22 cents per pound at the present time, which is five cents more than the fall clip has been known to bring in this county for years. Rine and Henderson have a band of 2,200 sheep which they sheared last week. From a three-months' clip they got 5,569 pounds of wool. This is the banner fall clip of the season.

#### NAPA.

ADVANCE IN LAND PRICES.—*Calistogian*: At present the price of real estate in the upper portion of Napa valley is rapidly advancing, the fact being attributable mainly to the increased interest taken in the culture of grapes, a demand having thus arisen for lands, especially those adapted to vine growing.

#### SAN BENITO.

INTRODUCING CHEVALIER.—*Hollister Enterprise*: Henry Miller considers the growing of the common barley unprofitable as compared with the success that attends the cultivation of the Chevalier variety, and has supplied several of his tenants with the latter. Frank Oldham, who farms the Soap Lake ranch, which contains



about 400 acres, will seed nearly all of it with the Chevalier barley.

#### SAN BERNARDINO.

**RIVERSIDE NOTES.**—*Press*, Nov. 1: Tom Cover has sold his entire crop of limes to San Francisco merchants at \$5 per 1,000. A good price, but then the limes are super excellent. Over \$30,000 in gold coin will be dropped into Riverside's lap within the next few weeks, and all for raisins. Verily the black clouds of disaster for that fair settlement will be chased far away by a few such showers. A sharp competition among buyers forced up the price of raisins to two dollars a box, and the entire crop has passed from the hands of growers to the merchants, who will hold them for speculative prices. The premiums at the fair on raisins were all awarded to Riverside, as follows: G. D. Carlton, first premium, silver medal; H. A. Westbrook, second premium; Jas. Boyd, third premium. One and one-third acres of vineyard belonging to and cultivated by Messrs. Shugart & Waite contained 890 vines. They picked 12 tons from the patch, being an average of 27 pounds to the vine. They obtained one cent per pound for the grapes, making a sum total of \$240, or \$183.60 per acre.

#### SAN DIEGO.

**AT THE FAIR.**—*Union*, Oct. 25: San Diego has sent to the fair at Los Angeles, among other things, fine samples of salt, from the works of Stone & Co., at the head of the bay; guavas, from High Brothers, and guava jelly, from S. Whitmore, Chollas valley; apples, from H. M. Higgins, Sweetwater; olives and lemons, from Kimball Brothers, National; apples, peaches, bananas, guavas and fruit trees, from J. M. Asher; oranges, lemons, apples, olives, dried figs, and shoot of orange tree, growth of season without irrigation, from George C. Swan, Paradise; seedling lemons, from Mrs. Brewster and E. Aylworth, Paradise.

**WOOL.**—Messrs. W. W. Stewart & Co. shipped per steamer *Orizaba*, on Sunday, over 63,000 pounds of pressed wool for the Eastern market. This is about the closing large shipment of the season. The present fall clip of San Diego county has been the largest for several years, and has nearly all been purchased and shipped by the Messrs. Stewart & Co. We might add that this fall clip has been exceptionally fine in quality, as well as large in quantity.

#### SAN JOAQUIN.

**COUNTY WHEAT CROP.**—*Independent*, Oct. 29: One of the most careful and experienced grain dealers of Stockton has made an estimate of the amount of grain produced by the farmers of this county this year. He places the amount at 120,000 tons. This will net \$4,000,000. Estimating the population of the county at 35,000, the grain yielded this year will produce over \$114 for every man, woman and child in the county.

#### SANTA BARBARA.

**RAINFALL FIGURES.**—G. W. C., in *Press*, Nov. 1: The rainfall at Glen Annie for the season of 1878-9 was as follows: 1878—Oct. 14th, .69; Dec. 28th to close of month, 6.91; 1879—Jan., 7.10; Feb., .95; March, .63; April, 2.80; May, up to 19th and close of the season, .26. Total for season, 19.34 inches. The fall of the preceding season, closing April 20th, 1878, was 43.11 inches. There is a close resemblance in the beginning of the present season to that of 1878-9. That began Oct. 14th with .69 inch; while this began Oct. 12th, with .66 inch. But that started the grass quite generally; while this has but partially. After that of the 14th of October, last year, no more fell till the 14th of December. Then followed a few days of heavy rain, which gave us the bulk of the season. Should the present season follow the last as closely as in the beginning, there will be a necessity of husbanding the food supply for stock, which, though now abundant, will need careful protection from fires—saving of cornstalks, pumpkins, etc. But "who knows what a day may bring forth?"

**ARTESIAN WELLS.**—We observe greater activity among artesian well-borers than ever before in the county, and that flowing wells are being obtained in many places heretofore considered outside of the artesian belt. There are a number of companies engaged in boring wells in the county, and each well creates a fertile spot of 40 acres and upwards of what was hitherto sterile land; transforming, in fact, desert wastes to garden spots, which produce grain, fruit, vegetables, grass, etc., in great abundance. The Mull brothers, in addition to carrying on the work of boring the well in the hospital block at Modesto, are also operating with a gang of men and improved machinery in this county with their usual success. Messrs. Galbraith & Gillham are also operating two sets of machinery in this and Stanislaus counties, who are also extending the area of irrigable lands at a rapid rate. These operations are nearly all in localities that have hitherto been regarded as the poorest sections of the valley, but are being developed into the most thrifty settlements, and will soon be most densely populated, as farming operations will be upon a small scale, but with a certainty of good crops.

**FALL WORK.**—*Lodi Review*: The farmers are apparently all busily engaged in putting in their crops. The amount of summer-fallow land in the valley is very large, feed and seed plenty, and the weather good for out-door work of all kinds. In addition to the summer-fallow, there are many large tracts that were sowed to grain last year but failed to produce a crop, leaving the soil in pretty good condition for planting, most of which is being plowed or harrowed, and the seed sown in advance of the winter

raints. The prospect now is that the area planted in wheat this winter will be very much greater than in any former year, and all express confidence in the coming season being favorable for the production of grain crops.

#### SONOMA.

**GRAPE NOTES.**—*Santa Rosa Times*: We have often wondered why viniculturists in this State pay so little attention to the cultivation of the Catawaba, Isabella and Concord grapes. The finest wine produced in the Eastern States is the "sparkling catawaba," in fact its reputation is world-wide. Here in California, in valleys where foreign grapes have failed by reason of mildew, the above-named varieties yield heavily. We have in mind a small vineyard in this vicinity that has proved a success.

**A PRODUCTIVE VINE.**—Three years ago last February Maj. A. H. Loucks set a small slip of the Mission grape at the corner of his establishment on Mendocino street, with careful training and manipulating it "grew apace," and Saturday last the Major gathered from the vine 120 pounds of choice grapes, 100 pounds of which were disposed of "by contract," to I. De Turk, of the Santa Rosa Winery. The vine now covers the entire front of his establishment, serving as an awning, and extending to the roof, from which latter portion one-half of the amount of grapes were gathered. It has been trained upon wires extending from the building to the curb, and has attracted a great deal of attention. The average yield of a vine of the same age we are informed is 25 pounds.

**WINE PRESS.**—*Sonoma Index*, Oct. 30: Mrs. McLaughlin has had an offer of 25 cents per gallon for all the wine manufactured on her place this year, the parties desiring to purchase offering to pay \$500 down. This is an excellent price, and the prospects are very favorable for a wine "boom" this year.

**CIDER.**—Mr. F. Fisher has taken a new departure in the famed industries of Sonoma valley. He produced 2,000 gallons of cider last year and expects, if he can obtain the apples, to make 10,000 gallons this year.

**GRAPE YIELD.**—*Enterprise*: G. K. Bell goes up head on the grape business on Dry creek. He picked 8,564 pounds of them, off of one-half an acre of land. One-half of his vineyard was set out in 1856, the remainder in 1866. He has another vineyard which yielded well.

**SMALL BANDS OF SHEEP.**—*Democrat*, Nov. 1: Parties who own a small band of Merino sheep in the Redwoods, near Guerneville, sold to Riley & Farmer, in Santa Rosa, this week, the fall clip from their sheep at 24 cents per pound, realizing on it \$1.24 per head. The spring clip from the same sheep probably sold for more than 24 cents per pound, which would make the sheep yield their owners per head for the year at least \$2.50, besides the increase. Jerry Farmer, on a small band of Merino sheep, near Santa Rosa, realized on his flock this year \$2.25 per head, besides the increase, which is not less than 75%. These facts demonstrate that small bands of sheep, kept on farms where they do not require the expense of herders to look after them, are a source of great profit to their owners. In addition to the wool and increase, the lambs supply fresh meat for the table; and this is not an unimportant consideration in this county, where fresh meats retail at 12, 15 and 18 cents per pound.

#### TULARE.

**THE FRUIT INTEREST.**—*Cor. Delta*: I learn from the statistics compiled by our assessor, for the year 1879, that we have in this county trees of various kinds in the following numbers: 21,290 apple, 21,380 peach, 3,800 pear, 2,500 plum, 718 cherry, 693 nectarine, 2,259 apricot, 2,713 fig, 132 lemon, 1,123 orange, 243 prune, 1,960 almond. Of vines: 18,900 blackberry, 100,000 strawberry, and 150,000 grape. Now, with the above quantity of trees, what has been the prevalent prices? They can be placed, at the lowest prices, as follows: Apples, 2 cents; peaches, 1½; apricots, nectarines, prunes and plums, 3 cents each; strawberries, 10; blackberries, 10 cents a pound. Apple trees set 20 feet apart each way, require 108 to the acre, and at eight years of age will average 200 pounds to the tree—making the yearly income from an acre \$432; and I know of one orchard of winter apples, within three miles of Visalia, that is about 18 years old, which brings in annually from \$1,500 to \$2,000, which is at the rate of \$900 per acre at three cents per pound, and the owner has no trouble in disposing of the apples at that price. An acre of peach trees—108 to the acre—at the age of four years, if properly cared for, will average 200 pounds to the tree, which gives \$320 per acre. I have some planted 16 feet apart—making 170 to the acre—that produced this season 200 pounds to the tree, or at the rate of \$510 to the acre. Apricots will bear at the age of four years, and when six years old will average 200 pounds to the tree—108 to the acre bringing \$648 per acre. At the prices paid at the San Jose cannery this season, 4½ cents per pound by the ton—a 12-year-old orchard of apricots would bring an income of \$1,200 per acre, allowing only 300 pounds to the tree, which is a low average for trees of that age. There is a large and increasing foreign demand for canned and dried apricots and nectarines, and there is no danger of glutting the market with them. All we have to do is to raise the fruit, and capital will come in and prepare it for market. Three years ago San Jose had only one small cannery and drier; this year there were three canneries and driers in full blast, the gross product of which amounted to \$200,000, with a foreign and Eastern market for the entire amount prepared there.

**NOTES.**—*Delta*, Oct. 28: The late potato crop in Tulare county will be large, and there will be more money in it than there was in the early crop, as there is now a greater demand for them, and the price has risen considerably. Considerable work is being done on irrigating ditches in various sections of the county. The farmers seem confident that the present season will be a wet one, and are preparing to utilize all the water they can get for irrigation. The grain and grass started by the late rain is beginning to show the effects of the dry weather, and more rain will be required to keep it growing. Some fine apples have been raised in Tulare county this year. Our farmers, we are glad to see, are growing the more improved varieties of fruit now instead of the poorer kinds.

#### TUOLUMNE.

**EDITORS PRESS:**—The weather is beautiful, so far as sun and snow can make it. "Italian skies" cannot compare with our incomparable foothill climate at this season of the year. Farmers are seeding, plowing, or hauling off of their abundance to a ready market. Lovers of good fruit would be in ecstasies were they to see the peddling wagons daily passing toward the plains with their golden-hued freight—quinces large as small pumpkins, apples as large as the quinces. Yesterday I viewed Mr. Harriman's weekly load, and, used as I am to the large and beautiful in fruit, his Gloria Mundi apples and Golden quince outrivaled all similar products hitherto seen.—*JOHN TAYLOR*, Mt. Pleasant.

#### VENTURA.

**THE CONEJO.**—*Free Press*, Nov. 1: The hauling of grain from Conejo ranch has ceased for this year. Many more thousands bags of wheat have been stored in the warehouse at Hueneme than in any previous year, and the present high prices have given a new impetus to wheat growing on Conejo. The farmers are going to work in earnest, cultivating and plowing the land preparatory to sowing wheat. The number of acres cultivated this fall and winter will far exceed that of any former season. Wheat will be the principal crop. Barley will be sown; but most for hay and feed, and not much for export. A few of those who farmed here the past year have gone away; but others have taken their places with sufficient teams, feed and seed to do a larger amount of work than was ever done before on this rancho. Just five years ago the pioneer Conejo farmers, Messrs. Alderman, Whitesides, Barnett and Brown began farming operations here, and had to bring with them every pound of hay, grain and everything they used, as no farming had ever been done there before by Americans.

#### YOLO.

**TRESPASSING.**—*Dunnigan Cor. Yolo Mail*, Oct. 30: Farmers owning timber land and ranges have been greatly annoyed of late by unknown persons hauling away their brush fences for fire-wood. Last Saturday, W. J. Clark met two parties, each with a load of wood, and knowing that his fence was being destroyed by marauding parties, he accused them of taking the wood from his place. Upon denying the charge, they were arrested and brought to town for trial, when they plead "guilty," and were released on suspended sentence. This should be a lesson to others who yearly procure their winter's wood in like manner, as the owners of timbered land have resolved hereafter to punish such parties to the full extent of the law.

**ORCHARD AND VINEYARD FERTILIZATION.**—Many of our orchardists and vineyardists are feeling the need of feeding up their trees and vines. The use of bones for this purpose has been known and practiced for generations, and the beneficial results unmistakable. Better than bones, because more readily and quickly attainable by the plant, is bone meal, and we can confidently recommend our readers to try ground bone around a few trees and watch for results. It is now a good time to dig in the fertilizer, that the moisture of winter may aid in its decomposition, and distribute it to the rootlets. We notice that the Pacific Bone-Coal and Fertilizer Co. (of 523 Market street, S. F.) shipped by steamer *Zealandia* 3,250 sacks of bone meal to Australia, and expect to send as much more by the next or following steamer. This is not a good thing for our State. These fertilizing matters should be used at home to retain fertility in our soils.

**THE ENTERPRISE WINDMILL.**—We notice that the Enterprise windmill, Perkins patent, which is being largely sold on this coast by Horton & Kennedy, of Livermore, Alameda county, Cal., was awarded the first premium at the St. Louis fair a few days since. We understand that there were a large number of prominent mills shown in competition, and the success of the Enterprise under such conditions is very gratifying to its friends.

**THE CALIFORNIA HORTICULTURIST.**—The November number of the *California Horticulturist* is the best of an excellent series. It is adorned with a photograph of the dwelling, grounds and greenhouses of A. K. P. Harmon, of Oakland, one of the best kept and appointed suburban residences of the State. The contents of the magazine are fresh, varied and interesting.

A heavy snowstorm prevailed in Aberdeenshire, Scotland, Saturday.

#### News in Brief.

**ELECTIONS** in eight States last Tuesday. **EX-EMPRESS EUGENIE** has returned to Chiselhurst.

**POTATOES** retail at four cents per pound at Eureka.

**BISMARCK** is suffering from neuralgia and sleeplessness.

**CARLOTTA**, ex-Empress of Mexico, is recovering her reason.

**SPAIN** is to dispatch additional reinforcements to Cuba immediately.

A SEVERE gale was experienced on the Atlantic coast last Monday.

**JACOB ABBOTT**, the author, died at Farmington, Me., aged 76 years.

**GENERAL SALOMON** has been proclaimed President of the Republic of Hayti.

**THURSDAY**, the 27th, is named by the President as a day of thanksgiving.

An epidemic typhoid fever and measles prevails at Cape Clear, Ireland.

A RAILROAD is to be built between Santa Barbara and Newhall, 80 miles.

THE Pennsylvania Railroad Company has declared a semi-annual dividend of 2½%.

IT is rumored in London that Russia is preparing to declare war against England.

HEAVY rains have fallen in the Argentine Republic, dispelling all fears of a drouth.

THE death of John Baldwin Buckstone, the famous English comedian, is announced.

An old mining town, hitherto unknown to the whites, has been discovered in Arizona.

SIXTY-SEVEN persons have perished from bush fires in the province of Minas-Geraes, Brazil.

THE French Government will not allow Methodist ministers to preach to the soldiers.

THE Spanish Council of Ministers has decided to abolish the state of siege in the Basque provinces.

THE storm in Nova Scotia last week damaged Prince Edward's Island to the extent of \$60,000.

SILVER in London, 53½d; consols, 97 13/16; 5% United States bonds, 105½; 4s, 105½; 4½s, 109½.

ALL Spanish officers are to contribute one day's pay to the relief of the sufferers by floods in Murcia.

THE report of the suspension of the Russian expedition against the Tekke Turcomans is confirmed.

THE death of Charles Gruneison, the noted theologian and biographer, is announced from London.

LACK of money in the San Francisco school fund compels teachers to discount their pay warrants.

THE total value of the pieces coined at the United States Mint during October is given at \$6,198,254.

THE thermometer at Memphis, Saturday, fell to 37°, sweeping away all lingering germs of yellow fever.

SEVERAL persons have been drowned and 26 houses destroyed by floods in the province of Huascar, Spain.

At Liverpool, wheat is quoted at 10s 9d to 11s 9d for average California white, and 11s 7d to 12s for club.

THE difficulty regarding the shipment of the Egyptian obelisk to New York has been amicably arranged.

OFFICIAL returns show that 3,065 French Communists have been amnestied, about 1,000 remaining excluded.

THE Prussian budget shows the deficit for the next fiscal year to be \$11,901,810, which will be covered by a loan.

DURING the progress of the Grant party through Iowa, the train at one point made 45 miles in 40 minutes.

A DISEASE called the "black tongue" has caused the death of several persons at London, Ont., and vicinity.

FURTHER gales and floods have occurred in Spain, doing great damage to property and drowning 60 persons.

THE Liberals were mostly triumphant in the English municipal elections, wherever political considerations were involved.

IN San Francisco, half dollars are quoted at par; trade dollars, 95 buying, 96½ selling; Mexican dollars, 96 buying, 96½ selling.

THERE is a well authenticated report on the Comstock that the north header of the Sutro tunnel is encountering streaks of ore.

THE wells used by a German colony in Bessarabia were recently poisoned, making 100 persons ill and causing the death of five.

CAPTAIN CAREY, who was with the Prince Imperial at the time of his death, is to retire from his regiment and enter the church.

THE latest news from New Mexico is to the effect that the command of Major Morrow is pursuing Victoria and his warriors into Mexico.

THE annual Christian co-operation of the State of Oregon, is to begin at the Christian church in Independence, Polk county, on Tuesday.

THE bale of cotton donated for the benefit of the orphans of Gen. Hood was sold and resold several times at Houston, realizing \$1,000. Then it was shipped to Waco.

MINISTER KASSON will soon go to Bucharest to formally recognize the independence of Roumania and establish diplomatic relations between that country and the United States.

THOROUGHbred POULTRY.—We would call the attention of those of our readers who are want of fine poultry to the advertisement of Wm. Niles, Los Angeles, which may be found on the last page of this issue of the PRESS.





### A Warning.

It was the old subscriber,  
His eyes were old and dim,  
But he wan't takin' no paper  
That was pokin' chaff at him."

For he picked his paper up one day,  
And it went to his heart like a rocket;  
"Whom the Gods love die young," it said;  
"But they whose hearts are dry," he read,  
"As summer's dust, burn to the socket."

Then he looked through the paper with wrath and doubt,  
And his heart with anger burned;  
For he found a "U" had been left out,  
And he found an "O" that was "turned."  
And he lifted his voice with a mighty shout,  
As the sheet with his feet he spurned.

He stopped his paper; he would not read  
Such a blundering, villainous sheet;  
Of the news it contained he had no need;  
He could hear the news on the street.

Only ten days later he sold his corn;  
But he pounded his head full of dents,  
When he learned, after selling for twelve and a half,  
It was quoted at forty-two cents.

And his farm was sold for taxes, because  
He didn't know when they were due;  
And he bet on a race three days after date—  
And he bet on the wrong horse, too.

He was fined nine dollars and seventy cents  
For going out shooting on Sunday,  
For he didn't know, with no paper to read,  
Whether 'twas Sunday or Monday.

He came to town to the Fourth of July,  
But it had been gone for a week;  
And he felt so mad that he wanted to cry,  
For he didn't know how to speak.

He thought that Grant was President yet,  
And he never had heard of Hayes;  
It was worry, and blunder, and trouble and fret,  
All of his weary days.

So he came to town one summer morn,  
And signed for his RURAL again,  
And went back home to his wheat and corn,  
The happiest man among men.

### Parasitism in Nature and Society.

The following is the concluding portion of Prof. H. B. Norton's lecture, recently delivered at the Independent church, Oakland, of which we printed the first part last week:

Thus far we have worked according to no system or forethought. We have made of these degraded and sinking men, each, a sovereign voter. We have enacted laws imposing short terms of imprisonment upon vagrants; we have given sporadic half-dollars to men who are sunken deeper thereby; we have imposed upon starving and desperate men the stern command, "Move on!" Alas! whither?

But in all our legislation and methods of execution we have followed no large, comprehensive, remedial policy. Our criminal law involves a vast system of makeshifts and temporary expedients. There is in it no healing for the terrible ulcer which is gnawing the vitals of society.

The presumption of our law is that every man has, or can acquire, self-control, the power of self-support; that every criminal may be reformed if he only be punished enough to learn that the way of the transgressor is hard. The presumption is false.

Life is too heavy a burden for thousands. There are men organically weak, needing aid, guidance, the helping hand.

The tendency to crime is a disease, a malformation in many instances. The recent report of the surgeon in charge at an Eastern penitentiary announces that the dissection of the brain of many hundred men who have died in prison and on the gallows conclusively proves that criminals are diseased and deformed in their nerve structure in a vast majority of cases, and this malformation is an hereditary characteristic of great generations of men. We all remember the terrible story which Mr. Dugdale has told us concerning "The Jukes"—how "Margaret, mother of criminals," an abandoned woman, sent down to posterity a generation of whom more than five hundred were known and recorded as felons, sneak-thieves, paupers and prostitutes. One experience came home to me, years ago, of which I have already spoken in print, but concerning which, perhaps, a repetition is pardonable, for it has been the experience of you all. A ring at the door-bell announced the coming of a tramp worthy of special notice. He was a bull-necked giant, with a face on every line of which nature had written "Beast." He wanted clothing and money; he was just out of the penitentiary at San Quentin; he could get work nowhere; nobody wanted a felon in shop or home. I could well believe his story. There was no place for him in society. Seven years of prison-life had blotted out the last vestige of manhood. Only the cowardly cruelty of the hyena remained. Doubtless, my half-dollar was spent at the dram-shop, and paved the way to a renewal of crime; for no other life was possible for such a being as this. A little later, journeying in a coasting steamer

along our lower coast, my thoughts dwelt upon the range of islands enclosing the Santa Barbara channel. At present they are pastured with sheep, but very few people ever set foot upon them. One of them has a considerable stream of water, and a large, fertile valley. Why not purchase this and found a penal colony here? Why not begin to weed these poisonous stocks out of human society? With mere impulses and tendencies law has nothing to do; but, when these have ripened into the overt act, the duty of the executor of the law begins. It should say to the organic criminal: "This island is henceforward to be your home. You shall have abundant, healthful work, sufficient for self-support, rigidly enforced. You shall be cleanly in person and surroundings, and decent in speech. You shall have, at proper seasons and intervals, opportunities for moral and intellectual culture, such as you are capable of utilizing. But here your root shall perish; you shall not go forth again into society, to rear a family in your own likeness, and send the stream of your brutalized life down to curse the coming generations."

I cannot but feel that society has the right to protect its own future; that it is suicidal to turn the organic criminal loose upon the world, to an inevitable repetition of crime. There is no kindness in such procedure: no mercy to the criminal, or to the commonwealth upon which he is parasitic. Healthful labor, restraint, enforced order and cleanliness, and the final extinction of his debased race—these are the highest blessings that can be conferred upon him. As to the criminals who are not organically and hopelessly such, there should be a Court of Pardons, composed of our wisest physicians, which should decide whether any one of these could safely be released to the life of society. Only in some such fashion as this can the criminal elements be weeded out.

As for the pauper and vagrant classes, we must take positive and remedial action. There should be in every county a farm and shops, furnishing work, food, shelter, enforced cleanliness and abstinence from poisons to every tramp, vagrant and habitual drunkard. There should also be a place for worthy men, temporarily needing shelter and food, and willing to give in return honest work. There might also be a school for the children, and such a gradation in rations and style of clothing, among those forcibly restrained, as would encourage well-doing. At present, society supports its parasites at an enormous cost—in the way of arson, highway robbery, insurance, and police expenses. It were far better to do this work in a systematic and orderly fashion, and in a manner which tends to uplift and heal. Very often the vagrant has no organic tendency to evil. His sin is weakness. Place around him the strong arm of legal restraints; keep him busy, clean, well-fed, healthy; stimulate the brain with new ideas; and perhaps we are laying the foundations of a new and higher life for him and his.

I have timidly ventured one or two suggestions, only hoping that these will turn other minds in the direction of social science. The law of human society is yet to be written. Our modern social framework is the product of ages of barbarism, and of blind, stumbling experiment. Like Topsy, it has "grewed," as best it could. It is evidently true of it, as of Topsy, that God did not make it.

It is time to begin, with heart and soul, the study of the science of society. Looking at the seemingly hopeless confusion that prevails,—the questions concerning land limitation, water-rights, suffrage, divorce, and a thousand similar themes—on we can see that society is standing neither upon open sea nor solid land, but is built upon a quaking quagmire. Strong, loving, thinking men and women must drive deep the piles and lay the granite foundations upon which the structure of the redeemed world shall yet arise.

But here we should take our stand; that legal precedents, common laws, existing constitutions, must not be permitted to hamper our thought. Laws and constitutions, if they are not, at least should be, the outgrowth of human needs. Man has no natural rights, especially where such alleged rights are incompatible with the best good of the great social unit. Life, liberty, the pursuit of happiness, for the individual, must stand aside to make way for the needs of our integral humanity.

I rejoice that there is the prospect of a more careful study of these great themes; that the scholarship and culture crystallizing about our University are organizing for such momentous research. It is well that the giant brain of Herbert Spencer has led the way, laying broad foundations for future work; but it is useful that others enter the field, studying the spiritual as he has studied the material relations of man to society; contributing the complement of the vast circle of research. Hitherto, philosophy has been hopeless. This great rolling orb, with its life-long tragedy, its sorrow, sin, suffering, was too much for man's weak arm to grapple. In Epicureanism, in Asceticism, in pleasure or despair, eating the lotus and drinking the nepenthe, men were content to live on, shutting their eyes and ears to the infinite misery, and waiting till God's purifying fires should sweep where the deluge swept before. But I think that the day-spring of a higher hope is arising in human hearts. The measure of human sin and wretchedness is almost infinite, but not too much for divine and human knowledge, labor and love. What sweet suggestions, promises, visions of better days, sometimes come to us out of nature! Such a one came to me, not

long ago, as I looked from the window of my mountain home upon the Pacific, sleeping below. It was still night, but a faint gray glimmer along the eastern horizon showed that the morning was at hand. The ocean was dark and still, and heavy mists hung above it like a pall. But, as I watched and waited, the dawn sent forth its first purple ray, which was caught and reflected upon the bosom of one great mountain-cone that stood, like a mighty prophet, and sent down to the dark world below its first faint promise of the morning. Other peaks caught the radiance; soon the whole earth was illumined with the perfect day. The poisonous night-dews, the shadows, bats and owls, things of darkness, mystery and horror, vanished away, and were seen no more. But the lark flew heavenward; the flowers opened their cups; the earth was full of the forms of beauty and melody. The mists swept away from the surface of the ocean, as we trust they yet will from the soul of a glorified humanity, and it lay like a sea of glass mingled with fire, a perfect image of the gold and crimson skies above. My heart accepted the promise of that hour. Nature whispered hope; and I thanked the Father that he had given to earth a promise of her Golden Age in the dawn of every morning.

### Mrs. Fremont in Arizona.

A St. Louis paper says that Mrs. Jessie Benton Fremont has found in Arizona, where Gen. Fremont is now Territorial Governor, a field for her well-known scholarly talents. Certain grown boys and girls, the children of poor parents, and obliged to work for their livelihood, had formed themselves into a class for the reading of history at such times as they could spare from their labors. They were plucky and bright, and so pleased Mrs. Fremont that she gave her Friday evenings to them. On this work she writes to a friend: "It was a great pleasure to me to find that I could add to the knowledge of these young people, that I could make real and human to them names and personages, that I could link together one event and one personality after another until history became not a dry mass of names and dates and isolated events, but a connected and yet broadening stream of human effort. I cannot, of course, begin to tell you all I said to them, but the thirty-two history talks I gave my Arizona flock of scholars each Friday of the term after I joined them were a panorama of history as my father had taught me to know it, as I had realized it in many a spot of classic ground in Europe, as reading had enriched it with personal belongings and lights, and as I had seen it made both in France and in our own great trial-time. For this, when they would thank me, I would tell them to thank my father. I acquired last winter a practical insight into the vast and spreading influence of the spoken word on receptive and willing young minds. I have never done any one thing that gave me so much content in the doing and the remembrance." It is suggested by an Eastern journal that there are many fashionable maids and matrons in New York who feel a desire to let their light shine into the darkness of the ignorance about them, and that here is the way. But it is forgotten that Mrs. Fremont is one woman in 10,000. Such work as she carried on, simply enough seemingly, calls not so much for knowledge, which may be said to be almost common, as for tact, zeal and discretion, which are rare.

**SOMETHING TO LEARN.**—Learn to strive for much and to be content with little. Do not imagine that the only reason why others fail of accomplishing all they undertake is because of ill-laid plans or misdirected efforts. There may, nay, there probably will come a time, when, weighed in the balance of another's mind, you yourself will be found wanting. We may all strive, but few of us can win even the half of all we hope to win. 'Tis an easy matter to have faith in ourselves, but not so pleasant to be proved by the world. There was but one Alexander the Great, but one Hannibal, one Scipio, one Caesar, one Napoleon. There was but one Shakespeare, and, too, there was but one Lancelot; yet, the world over, there is no fairer truth than the one Tennyson poetically placed before us:

"Lancelot is Lancelot, and hath overborne  
Five knights at once, and every younger knight,  
Unproven, holds himself as Lancelot,  
Till overborne by one."

We should have firm faith in ourselves and in our hopes and plans for the future, but we should never allow ourselves to be literally disappointed if many of our hopes should fail, and many of our plans remain forever undeveloped.  
—Rocky Mountain Husbandman.

**THE RELIABLE MAN.**—The reliable man is a man of good judgment. He does not jump at conclusions. He is not a frivolous man. He is thoughtful. He turns over a subject in his mind, and looks at it all round. He is not a partial or one-sided man. He sees through a thing. He is apt to be a very reticent man. He does not have to talk a great deal. He is a moderate man, not only in habits of body, but also in mind. He is not a passionate man; if so by nature, he has overcome it by grace. He is a sincere man, not a plotter or schemer. What he says may be relied on. He is a trustworthy man. You feel safe with your property or the administration of affairs in his hands. He is a brave man, for his conclusions are logically deduced from the sure basis of truth, and he does not fear to maintain them. He is a good man, for no man can be thoroughly honest and truthful without being good.

### The Old-Fashioned Girl.

She flourished thirty or forty years ago. She was a little girl until she was fifteen. She used to help her mother wash the dishes and keep the kitchen tidy, and she had an ambition to make pies so nicely that papa could not tell the difference between them and mamma's, and yet she could fry griddle-cakes at ten years of age, and darn her own stockings before she was twelve, to say nothing of knitting them herself.

She had her hours of play, and enjoyed herself to the fullest extent. She had no very costly toys, to be sure, but her rag doll and little bureau and chair that Uncle Tom made were just as valuable to her as the \$20 wax doll and elegant doll furniture the children have nowadays.

She never said "I can't," and "I don't want to," to her mother, when asked to leave her play, and run up stairs or down on an errand, because she had not been brought up in that way. Obedience was a cardinal virtue in the old-fashioned little girl.

She rose in the morning when she was called, and went out into the garden and saw the dew on the grass, and if she lived in the country she fed the chickens and hunted up the eggs for breakfast.

We do not suppose that she had her hair in curl-papers or crimping-pins, or had it "banged" over her forehead, and her flounces were no trouble to her.

She learned to sew by making patchwork, and we dare say she could do an "over-and-over" seam as well as nine-tenths of the grown-up women nowadays.

The old-fashioned little girl did not grow into a young lady and talk about beaux before she was in her teens, and she did not read dime novels, and was not fancying a hero in every plowboy she met.

She learned the solid accomplishments as she grew up. She was taught the arts of cooking and housekeeping. When she got a husband she knew how to cook him a dinner.

She was not learned in French verbs, or Latin declensions, and her near neighbors were spared the agony of hearing her pound out "The Maiden's Prayer" and "Silver Threads Among the Gold" twenty times a day on the piano, but we have no doubt she made her family quite as comfortable as the modern young lady does hers.

It may be a vulgar assertion, and we suppose that we are not exactly up with the times, but we honestly believe, and our own opinion is based on considerable experience, and no small opportunity for observation, that when it comes to keeping a family happy a good cook and housekeeper is to be greatly preferred above an accomplished scholar. When both sets of qualities are found together, as they sometimes are, then is the household over which such a woman has control blessed.

The old-fashioned little girl was modest in her demeanor, and she never talked slang or used by-words. She did not laugh at old people or make fun of cripples, as we saw some modern little girls doing the other day. She had respect for elders, and was not above listening to words of counsel from those older than herself.

She did not think she knew as much as mother, and that her judgment was as good as her grandmother's.

She did not go to parties by the time she was ten, and stay till after midnight playing eucher and dancing with any chauce young man who happened to be present.

She went to bed in season, and doubtless said her prayers before she went, and slept the sleep of innocence, and rose up in the morning happy and capable of giving happiness.

And if there be an old-fashioned little girl in the world to-day, may heaven bless her and keep her, and raise up others like her.—N. Y. Examiner.

**ORIGIN OF LANGUAGE.**—A Frenchman named Clairefond has published a small work in which he revives the argument that the earliest attempts at human speech were imitations of natural sounds or the cries of animals; and he contends that out of recollections and repetitions of these sounds the names of certain natural phenomena, and of animals and other objects, originated. He finds numerous examples in the French language, and thinks that proofs might be found in other languages if search were made, and suggests that the Geographical Society of Paris might furnish instructions to their travelers to collect from among the natives of different countries all the sounds traceable to the source indicated above. M. Clairefond is of opinion that the series of sounds, words and expressions thus collected would aid in the discovery of the origin of language. Taken in connection with natural sounds, the origin of words in our own language—such as thunder, sigh, whisper—becomes evident.

**EYE DYING.**—"A learned German doctor," says a Paris paper, "has discovered a means of dyeing the eyes of animals in general, and of man in particular, any color that he pleases. He is accompanied on his travels of propagation by a dog with a rose-colored eye, a cat with an orange-red eye, and a monkey with a chrome-yellow eye. But the most curious specimens of his art are a negro with one eye black and the other blue, and a negress with one eye gold-colored and the other silver-white. The doctor says the process of transformation, far from injuring the sight, strengthens and improves it."



## Chaff.

ORAL INSTRUCTION.—Auntie: "Well, Charlie, what have you been doing to-day in school?" Small boy: "O, nothing much. Teacher's been gabbin'."

"JENNIE, did you divide that chocolate with your little brother?" "Yes'm; I took the chocolate and gave him the label; you know how fond he is of spelling his letters."

"I NEVER argy agin a success. When I see a rattlesnaik's head sticking out of a hole, I bear off to the left and say to miself that hole belongs to that snaiik."—*Josh Billings*.

THE Oneida community have given up complex marriages. They discovered that the simplest marriage is complex enough, when 27 yards of bombazine will hardly fill the flutings of a flounce.

THE onion is not without its uses. A clergyman at Table Grove, Ill., had planned to elope with another man's wife, but he ate onions, and the woman backed out at the last minute.—*Burlington Hawkeye*.

A BOY on South hill toiled hard all the afternoon in looking for material with which to keep a bonfire alive. At six o'clock, when his mother asked him to bring in a load of wood, he said he could never have any fun like other boys; always had to work all day at home.—*Burlington Hawkeye*.

A BRIDGEPORT photographer recently took ignoble revenge on two girls who sat for pictures, and then would not take them, by displaying the rejected photographs in front of his gallery, labeled: "These pictures look too much like the originals. They would not take them."

A LITTLE boy, whose father is a doctor, was taken to the circus the other evening. While one of the equestrians was performing the little fellow said: "I wish he would fall off the horse." When asked why he made that wish, he said: "Then my papa would come."

A GOOD country parson preached a series of sermons on practical morality, and very interesting and instructive they were. A lad in the village who had heard only one of them was coming out of an orchard one day, his pockets bulging out with stolen fruit. He met the parson, who noticed his efforts to conceal the evidences of his guilt. "Have you been stealing apples?" asked the minister. "Yes, sir," answered the boy sheepishly. "And you are trying to hide them from me?" continued the good man. "Yes, sir," said the culprit, and then added, his face brightening up, "You said last Sunday that we must avoid the appearance of evil."

## Likings Prove Character.

"Taste is not only a part and an index of morality—it is the ONLY morality. The first, and last, and closest trial question to any living creature is, 'What do you like?' Tell me what you like and I'll tell you what you are. Go out into the street, and ask the first man or woman you meet what their 'taste' is, and if they answer candidly, you know them, body and soul. 'You, my friend in the rags, with the unsteady gait, what do you like?' 'A pipe and a quarter of gin.' I know you. 'You, good woman, with the quick step and tidy bonnet, what do you like?' 'A swept hearth and a clean tea-table, and my husband opposite me, and a baby at my breast.' Good, I know you also. 'You, little girl with the golden hair and soft eyes, what do you like?' 'My canary, and a run among the wood hyacinths.' 'You, little boy with the dirty hands and the low forehead, what do you like?' 'A shay at the sparrows, and a game at pitch-farthing.' Good; we know them all now. What more need we ask? 'Nay,' perhaps you answer: 'we need rather to ask what these people and children do, than what they like. If they do right, it is no matter that they like what is wrong; and if they do wrong, it is no matter that they like what is right. Doing is the great thing; and it does not matter that the man likes drinking, so that he does not drink; nor that the little girl likes to be kind to her canary, if she will not learn her lessons; nor that the little boy likes throwing stones at the sparrows, if he goes to the Sunday school.' Indeed for a short time, and in a provisional sense, this is true. For if, resolutely, people do what is right, in time they come to like doing it. But they only are in a right moral state when they have come to like doing it; and as long as they don't like it, they are still in a vicious state. The man is not in health of body who is always thirsting for the bottle in the cupboard, though he bravely bears his thirst. And the entire object of true education is to make people not merely do the right things, but enjoy the right things—not merely industrious, but to love industry—not merely learned, but to love knowledge—not merely pure, but to love purity—not merely just but to hunger and thirst after justice."—*John Ruskin*.

MARRIAGE—It is not a pleasant thing to go through the world without sympathy, and to meet only those who have no interest in us, except to make us contributors to their welfare and their selfish ends. In marriage, as it should be, there can be no selfishness. Each member works for the other's good; each contributes to the other's welfare. In the outside world it is different; each seeks to use the other for selfish purposes, and this makes life a contest, a battle. If such a state were to prevail in the home and married relation, then marriage would so far be an evil, and not a good.

## Young Folks' Column.

## Our Puzzle Box.

## Numerical Enigma.

I am composed of fifty-one letters.  
My 44, 4, 10, 13, 48, 47, 50, 20 is agreeable.  
My 43, 17, 46, 49, 11 is to take an oath.  
My 24, 39, 29, 21, 16, 51 is a part of the body.  
My 19, 18, 45 is a kind of fish.  
My 36, 2, 3, 25, 26 is a warehouse.  
My 1, 41, 30, 33, 23 is a stop.  
My 7, 27, 9, 15, 14 is to irrigate.  
My 23, 8, 6 is a boy's nickname.  
My 31, 5, 35 is a number.  
My 32, 34, 40, 37, 42 are vowels.  
My 38, 22 are in ceremony.  
My whole is a proverb.

ALBION.

## Problem.

Two men, A and B, having bought the grass in a triangular meadow, whose sides are 120, 170 and 250 rods respectively, want to divide it equally by having A cut his part first, by mowing continuously around the meadow. How wide a strip must he mow on each side? JERRY.

## Decapitations.

My whole's a curious species  
Of writing, you will find;  
Though if you heed me,  
I an action bring to mind;  
Again, if twice beheaded,  
A sharp tool please to view;  
Transposed, you'll now behold  
I justice give to you.

HENRY B.

## Blanks.

[The blanks are to be filled with same words transposed.]  
1. I fear — man has committed some —  
2. At what — did the volcano — smoke?  
3. — of the birds were caught in a trap.  
4. He — the door —

UNCLE CLAUDE.

## Double Acrostic.

The initials and finals name two musical instruments.  
1. A strong-scented plant.  
2. Agreements.  
3. Feeble.  
4. To regard awkwardly.  
5. Abrogation.

ABBIE.

## Answers to Last Puzzles.

CROSS-WORD ENIGMA—Dictionary.  
CONCEALED COUPLET—  
"Be wise with speed;  
A fool at forty is a fool indeed."  
RIDDLE—Letter M.  
CURTAILMENTS—1. Ton, on; 2. Meant, mean; 3. Liver, live; 4. Ella, ell; 5. Pent, pen; 6. Mark, mar.  
PHILOSOPHER'S QUIZ—An Apple.

## How a Little Girl's Doll Saved Her Father.

The following from the *Water Spout* shows that even dumb things may teach a lesson, and perform a work:

"Come, now, can't you give it to me for that? You've got a girl as will like it as well as you like silver."

The blood rushed to Mr. Grasspall's cheek. He took the prettily dressed doll, with soft curly hair and big blue eyes, into his hand, and pretended to make fun of it, looking at it through a quizzing glass, and then asking, with an attempt to be witty:

"How do you think a doll would look in my till? Pretty change, indeed! The doll currency is new to me."

"For your little girl, for your little girl—the one with the black eyes as I've seen come in for candy. The doll's new, and worth a half dozen glasses. You may have it for one."

"Have you a little girl you bought this for, Clarkson?" asked the man who held the double office of pawnbroker and rum-seller.

"I've got a little girl about the size of your'n; but I didn't buy her the doll. It's one her aunt gave her Christmas, and her mother dressed it o' nights for her. I s'pose there'll be a time when she misses it; but what business have beggars with dolls?"

"I can't take it Clarkson," said the man. His heart was touched in some tender spot, which the doll had suddenly revealed. He thought of his own pleasant nursery, and the scores of toys his only child threw about heedlessly; and a bare, dreary room, with a pinched and heart-hungry child in it, rose before him in contrast, her eyes swelled with weeping for the loss of her one great treasure—a new doll. No, he could not take it, and he could not give the glass of brandy without it.

"Go home, Clarkson, and take your little girl's doll," he said, "she will miss it sadly."

"Give me a glass, won't you?" pleaded the miserable man.

"Take home the doll!" exclaimed the rum-seller, angry with himself for his weakness; "and you'd be better off a thousand times, John, if you'd never touched another drop of liquor as long as you live."

"A pretty lesson for you!" thundered the angry man. "But man, I'll take it." He reached for the doll, and walked hastily away from the store.

Susie Clarkson never knew how near she came to losing her "dear darling Flossy," nor why her father signed the temperance pledge, and made a new home for them all; but Mr. Grasspall knew, and declared the weak spot in his heart had cost him \$1,000.

He is a very small boy, just beyond the limits of babyhood. His precociousness is well recognized by those that know him, and sometimes people try to corner him in a logical way. The other day some one took him up and asked him if he was papa's boy. He answered, "Yes." "And are you mamma's boy, too?" "Yes," replied Charlie. "Well, how can you be papa's boy and mamma's boy both at the same time?" was asked him. "Oh," replied Charlie indifferently, "can't a wagon have two horses?"

## Good Health.

## Comparative Mortality of Rich and Poor.

Dr. Drysdale, Senior Physician to the Metropolitan Free Hospital, called attention in the Social Science Convention, recently in session at Manchester, England, to the comparative mortality of rich and poor. How came it, he asked, that in Great Britain, in the face of improvements in every direction in the domain of hygiene, there still remains a death-rate in our cities ranging from 30 down to 20 per 1,000 of the population annually? If we look to one city, London, for instance, we find that, with all the advances recently made in that wonderfully healthy city, the death-rate was actually 22.2 per 1,000 in 1856, and in 1876 a little higher, or 22.3. Many persons have asked, on reading such figures, "What is the use of medical science if it can effect nothing more than this?" The real cause of the non-effect of the countless hygienic advances was indigence. Villermé, the French medical writer on hygiene, found some 30 years ago, that persons over 40, if in easy circumstances, had a death-rate of only 8.5 per 1,000, whilst the mortality in a similar class among the poor was more than double, or 18.7. He also showed that in Paris, there died, between the years 1817 and 1836, 1 inhabitant in 13 in the 13 arrondissement, chiefly inhabited by the poor, and but 1 in 63 in the second or rich quarter.

The most accurate statistics ever compiled on this subject are from the pen of C. Ansell, Jr., entitled, "Statistics of Families of the Upper and Professional Classes," published in 1874. The author collected information concerning 48,044 children of the well-to-do classes in England and Wales, including members of the legal, clerical and medical professions, as well as that of the nobility and gentry. He found, from these inquiries, that in the first year of life, only 80.45 per 1,000 deaths occurred among the infants of the easy classes in this country, as against 149.49 among the children of the general population. The death-rate then, of the children of the comfortable classes being 80 per 1,000 in their first year, we found it to be 240 per 1,000 in cities like Manchester and Liverpool, and as high as 300 in the poorer quarters of our cities, and in Berlin actually 500. From one to five years of age, 46.84 children of the upper classes die of 1,000 born, and as many as 113.69 in the general population. During the remainder of early youth from 5 to 20, the difference is not marked; but 65.47 per 1,000 deaths occur among the richer classes, as against 74.04 in the general public. Between 20 and 40 there die among the richer classes, 125 per 1,000, and 124 among the general population; and between 40 and 60 there die 147 per 1,000 among the rich against 168 among the general population. The general result of this calculation shows that the average age at death is among the rich in England and Wales 55 years, whilst it is not probably 35 among the artisan class; so that Mr. Ansell estimates that in one year there die in England and Wales under the age of 60, 368,179 persons, which figure should only have been 216,048, if the population had all been in easy circumstances. Thus some 142,000 deaths annually in England and Wales are due to indigence. Health is very imperfectly secured in the lower grades even of respectable citizenship. The public registers have demonstrated that mortality and diseases diminish with every rise in the scale of wealth.

## The Physiology of Recreation.

The next point that I shall consider is the physiology of recreation. It may have struck some readers as a curious question, why some actions or pursuits should present what I may call a recreative character, and others not. For it is evident that this character is by no means determined by the relief from labor, which these actions or pursuits secure. A week on the moors involves more genuine hard work than does a week in the mines, and a game of chess may require as much effort of thought as a problem in high mathematics. Moreover, the same action or pursuit may vary in its recreative quality with different individuals. Rowing which is the favorite recreation of the undergraduate, is serious work to the bargeman; and we never find a gardener to resemble his master in showing a partiality to digging for digging's sake. If it is suggested that it is the need of bodily exercise which renders muscular activity beneficial to the one class and not to the other, I answer, no doubt it is so partly, but not wholly; for why is it that a man of science should find recreation in reading history, while an historian finds recreation in the pursuit of science, or why is it that a London tradesman should find a beneficial holiday in the country, while a country tradesman finds a no less beneficial holiday in London? The truth seems to me to be that the only principle which will serve to explain the recreative quality in all cases is what I may call the physiological necessity for frequent change of organic activity, and the consequent physiological value of variety in the kinds and seasons of such activity.—*George J. Romanes, in Popular Science Monthly for October.*

## Domestic Economy.

## Hints on Soups.

Clara Francis gives the *Prairie Farmer* an essay on soups, from which we extract as follows:

Rules for Stock.—Five pounds lean meat and some cracked bones. Five quarts cold water. It should be at least half an hour in coming to boil. Skim; add a gill of cold water and skim again. Season with salt and vegetables, but be careful to use both sparingly. Cover close and simmer four or five hours. Strain cool, and remove fat. This will make a clear light broth.

Caramel for Coloring Broth.—For the sake of appearance broth is sometimes colored. Put a tablespoonful of butter into a nice bright saucepan, and when melted, add about half a pound of sugar. Stir constantly, over the fire, until it is a very rich dark brown. By no means let it burn. Add a half pint of water and an even teaspoonful of salt. Let the syrup boil until it is very rich and thick, which it will be in a few minutes. Strain and put it in small, close corked bottles; it should be so thick that it will just run from the bottle. A few drops will give the necessary color, and will not impair the flavor unless the sugar has been burnt. Tapioca, sago, macaroni, vermicelli, pearl-barley and rice are nice additions to this amber-colored broth. They should be cooked in water before being added to the soup. Grated cheese is sometimes served with macaroni and vermicelli soups—to be used at discretion.

Noodle Soup.—To one egg add a little salt and as much sifted flour as it will absorb, knead well and roll down very thin. Let it dry for half an hour, then dredge with flour and roll over and over. Shave thin slices from the end of the roll, shake them out and drop them into salted boiling water. Stir with a skimmer and boil for two minutes, then turn into a colander and dash cold water over them. Drain, and put into boiling broth; add a little chopped parsley and serve at once.

White Soup.—If eggs are plenty use the yolks of four, if scarce, take two whole ones instead. Beat them light and add a cup of cream, or use milk, and a teaspoon of melted butter. When these are mixed add to them, gradually, a pint of hot broth stirring all the time. Return to the kettle, let it come to a boil and serve immediately. Too long cooking will curdle the eggs. Instead of beating the eggs they can be poached and served in the broth, one egg to each person, adding the cream to the broth.

Potato Soup.—Peel and slice 10 medium-sized potatoes; add one onion, a slice of salt pork, a stalk of celery, a teaspoon of salt, and water enough to cover. Boil until the potatoes are very soft. Press through a colander; add a quart of milk, a tablespoonful of butter, a teaspoonful chopped parsley; boil up once. It should be like thick cream. Serve with *croustons* (dry bread cut into small diamonds, fried in boiling lard and drained). Place in the tureen and pour the soup over them.

SCIENTIFIC COOKING ASSOCIATION.—In Berlin an association has been formed by housewives of the city. This society initiated last year various useful measures. Thus, it has opened a laboratory for examination of articles of food (now so much adulterated), as, also, of utensils used in cooking. It is directed by a qualified chemist. The nature and quality of the objects analyzed at the Central Bureau are thus guaranteed. The chemist gives the members of the society a course of lectures in practical chemistry, and a cookery school has also been formed. Students are examined in the subjects of study; domestic servants who have remained a certain number of years (five) in one household (of a member of the society) are awarded with prizes. Last year 36 were thus rewarded. Another part of the society's operations consists in procuring places and work for servants with its members.

BAKED STUFFED TOMATOES.—Good sized fruit of regular shape is required. Cut a slice from the blossom end and scoop out the pulp; take crackers or bread crumbs, salt, pepper, a little thyme, butter, mix well together and fill the cavities in the tomatoes, rounding it up well; set in a dish and bake for about three-quarters of an hour. Some replace the top piece or stem end, but we prefer to leave it off and allow as much juice as possible to evaporate. Another way: Cut a conical plug from the seed end of the tomato, cutting half through the fruit or more; mix dry crumbs with seasoning and butter, as above; form cones or plugs to replace those cut from the tomatoes, and bake as before.

HOW TO MAKE TURNIP SALAD.—Take six turnips and slice them on a slow-cutter; put them in a stew-pan with water enough to boil them soft. While they are boiling take another pan and put in a large tablespoonful of butter, and let it get hot, but not burn; as soon as your turnips are tender turn them into the pan containing the butter, having previously drained all the water off the turnips; put in one spoonful of sugar, pepper and salt to suit the taste; let them fry, but not to make them brown. Pour in a half pint of vinegar; stir it a few minutes longer, and serve either warm or cold.

SAUCE FOR PUDDINGS.—One cupful sugar, half cupful butter whipped to a cream; add one cupful boiling water and scald, but do not boil; thicken with two teaspoonfuls of corn starch; add one wineglass of wine (brandy is best) and a well beaten egg.





DEWEY &amp; CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 202 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line..... 25 80 \$2.00 \$ 5.00  
Half line (1 square)..... \$1.00 \$3.00 7.50 24.00  
One inch..... 2.00 5.00 14.00 40.00

Our latest forms go to press Wednesday evening.

Quack Advertising positively declined.

The Scientific Press Patent Agency.

DEWEY &amp; CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, November 8, 1879.

## TABLE OF CONTENTS.

EDITORIALS.—Hart & Nicholson's Gang Plow; Instructive Live Stock Fairs; Olive Oil Adulteration; Another Review of Wheat Supplies in Europe; Egyptian Corn, 289. The Week; Thanksgiving, 296. The Southern California Horticultural Society.—No. 2; Indian Peculiarities; California State Horticultural Society, 297. Patents and Inventions, 300.

ILLUSTRATIONS.—Hart & Nicholson's Improved Gang Plow, 289. War Dance of the Apaches, 297.

CORRESPONDENCE.—On the Umpqua; From Eureka to Ferndale by Stage, 290.

THE SWINE YARD.—A Plea for Bacon; Hog Scraping Machine, 290.

THE FIELD.—How Wheat Grows, 291.

POULTRY YARD.—Arrangements for Cranning Chickens, 291.

HORTICULTURE.—The Guavas; The Navel Orange, 291.

ARBORICULTURE.—Timber Resources of Alaska, 291-293.

PATRONS OF HUSBANDRY.—Experimental Farm; Hard Times and High Rides of Interest; Other Causes of Hard Times; The Agricultural Press as an Aid to the Grange, 292.

AGRICULTURAL NOTES from the various counties of California, Nevada and Idaho, 292-293.

NEWS IN BRIEF on page 293 and other pages.

HOME CIRCLE.—A Warning (poetry); Parasitism in Nature and Society; Mrs. Fremont in Arizona; Something to Learn; The Reliable Man; The Old-Fashioned Girl; Origin of Language; Eye Dyeing, 294. Chaff; Likings Prove Character; Marriage, 295.

YOUNG FOLKS' COLUMN.—Our Puzzle Box; How a Little Girl's Doll Saved Her Father, 295.

GOOD HEALTH.—Comparative Mortality of Rich and Poor; The Physiology of Recreation, 295.

DOMESTIC ECONOMY.—Hints on Soups; Scientific Cooking Association; Baked Stuffed Tomatoes; How to Make Turnip Salad; Sauce for Puddings, 295.

ENTOMOLOGICAL.—The Ailanthus Silkworm; Anise Seed Oil as an Insecticide, 296.

QUERIES AND REPLIES.—Testing Apples; Hint on Lawn-Making; Seedling Pears, 296.

MISCELLANEOUS.—Pioneer Man; Cheap Black for Wool, 298. Southern California Horticultural Fair; Nevada State Fair Awards; Plumage, Lassen and Modoc Fair Awards, 300.

## Business Announcements.

Sweepstake Iron Wagon, Sweepstake Plow Co.  
Thoroughbred Poultry, Wm. Niles, Los Angeles, Cal.  
Keating's Cough Lozenges, Redington & Co., S. F.

## The Week.

Those who make barometers of their sensations have been for a week predicting rain, and as it has been the longer deferred, they have added all the aches together, and now, perhaps, before this sheet escapes from the press, we are to have a heavy and continuous down-pour. A good, business-like rain, would do good in many parts at this time. Already the feed started by the foregoing showers is beginning to need another invitation upward, and so far as our advices go, material likely to be harmed by water is now well nigh withdrawn from the fields. The wine makers have already made considerable progress with the reduced crops produced this year. Winter apples and pears are well under cover, and the transportation facilities have been disposing of the exposed grain at a rapid rate. Of course some are not yet ready for rain, but all can never be ready for anything. In most parts of the State plowing is being pushed ahead with all the horse and mule motors within reach of the ranchers, and from all sides there come reports of greater areas to be conquered than ever before.

The city has well nigh outlived its unwonted round of elaborate amusement. The Authors' Carnival which succeeded the protracted Grant reception has well nigh tired out our society people and exhausted many a paper of pin-money. Fortunately many thousands of dollars have been corralled for worthy charities, and the poor will therefore enjoy the amusement of the rich all during the coming winter. It would be well if all amusements of wealthy people would bear this fruit of comfort to those who are most in need of it.

A GENERAL subscription will be taken among the Catholic temperance organizations of Great Britain for the relief of the distressed in Ireland.

## Thanksgiving.

## Proclamation.

At no recurrence of the season, which the devout habits of religious people has made the occasion for giving thanks to Almighty God, and humbly invoking his continued favor, has the material prosperity enjoyed by our whole country been more conspicuous, more manifold, or more universal. During the past year also unbroken peace with all foreign nations, general prevalence of domestic tranquility, the supremacy and security of the great institutions of civil and religious freedom have gladdened the hearts of our people, and confirmed their attachment to their Government, which the wisdom and courage of our ancestors so fittingly framed, and the wisdom and courage of their descendants have so firmly maintained, to be the habitation of liberty and justice to successive generations.

Now, therefore, I, Rutherford B. Hayes, President of the United States, do appoint Thursday, the 27th day of November, instant, as a day of national thanksgiving and prayer; and I earnestly recommend that, withdrawing themselves from secular cares and labors, the people of the United States do meet together on that day in their respective places of worship, there to give thanks and praise to Almighty God for his mercies, and devoutly to beseech their continuance.

In witness whereof, I have set my hand and caused the Great Seal of the United States to be affixed.

RUTHERFORD B. HAYES.

Let all begin early to have a rousing Thanksgiving this year. The distinctive material is abundant, as the turkey ranches of the interior are said to be well peopled with the gladsome birds. The cranberries have been standing beside the fruit stores for weeks, mute prophets of the coming cheer. Taurine necks, rounds and rumps are at low prices, and wait to join forces with adamantine cider, and choice California raisins and apples to march forth in battalions of traditional mince pies. There seems naught to do but to rally the families and let joy and thanksgiving rule the day.

The President alludes fitly to the awakened spirit and prosperity among our industries as themes of thanksgiving. The result of these material blessings has been to spread abroad a feeling of cheer and hope, which has for years been conspicuous for its absence. The smiles upon the faces, the new coats upon the backs, the new carpets beneath the feet of our Eastern friends are all eloquent witnesses and visible exponents of the new era which breaks the reign of depression. Let these be but the fore-runners of the many weightier blessings of well-remembered toil. Let there ensue a disposition toward the ennobling of purposes and of lives. Let the finer works of moral and intellectual development receive their merited share in the rewards of prosperity. Peace of mind may degenerate into listlessness, ease of circumstances may engender indolence, leisure may pave the way to license, unless each of them is hallowed by the growth of noble purposes. At the basis of all good purposes lies the recognition of higher standards of truth and right than those which generally rule in human affairs. Therefore let the brightened outlook cause the heart of man to look upward. Let the ennobling thought of thanksgiving lead the mind to the source whence comes all good to man. Joy and give thanks: they are among the highest earthly blessings.

Thanksgiving will find our own State in a frame of mind fit for its fullest observance. The activity in our leading industry, which has been born of improved values for its products, is a theme upon which we have commented frequently of late. This, added to the confidence in a favorable season ahead, which seems widespread among producers, will lead to a more general and hearty Thanksgiving than has been our portion during recent years. Aside from these material evidences of improved condition in affairs, there is now existing the peace which succeeds agitation and unrest, and the disposition toward application and enterprise which follows idleness enforced by distrust. We have survived the summer which was pregnant with political excitement, and therefore unfavorable to industry. Primaries, conventions, elections, have passed away, and the results, generally speaking, have led to a return of confidence in the present and future of the State. It is true that the winter with its important issues at Sacramento is still before us, but, though watchfulness and maintenance of the right should continue to occupy public attention, the issues will not unsettle industry as does the confusion of a campaign.

It can be well argued that the experience of the State during the last year has been one which will in the end be profitable. This is a fact which is recognized abroad as well as at home. We have certainly learned some things which should be done, and perhaps there has been plainly declared what should not be done. There is the best ground for full confidence in the future and for the active promotion of laudable enterprises, for these will furnish bulwarks of prosperity and assurances of the realization of the long life and well being of our State, for which we hope.

Added to our own confident words may be the expression of disinterested observers who have studied our progress during the fermentation of the last few months. A bishop, a man who adds much wisdom in public affairs to the learning pertaining to his eminent station, has lately written as follows:

"Despair not of this State. It has proved itself of the true stock. It clings to the American Union. It is the only State in which the day of its entrance into the Union is celebrated by bell-ringing and cannon. September 9th is thus celebrated as its Fourth of July. It will cure itself of all these evils inherent in its ante-national condition and brilliant and most extraordinary beginnings, such as never before

attended the birth of a State, and contribute to the stability of our entire empire. Even these debates purify its air; and its powerful chiefs of wealth and business will gratefully acknowledge their indebtedness to the wrathful suggestions. God save the commonwealth of California."

This is a sentiment fit to enter our public and private thanksgiving.

## ENTOMOLOGICAL.

## The Ailanthus Silkworm.

EDITORS PRESS:—I have seen in some of the papers a small item alluding to a new kind of silkworm from China, tested by M. Ledoux, and regarded as superior to those with which experiments have formerly been made in this country. Can you give us fuller information about it?—F. C. W., Mission San Jose, Cal.

This insect to which reference is made is the "ailanthus silkworm" (*Attacus [Samia] cynthia*), called *ailanthus* because of its feeding naturally on the tree of that name (*ailanthus*, or *ailantus*—"tree of heaven.") This silkworm cannot be called new, for it has been known more than a century to entomologists and has been advocated for culture for many years. It is grown in Europe, and Prof. Riley says it has become so common in some parts of the Eastern States as to be a nuisance. What there is new in the item to which our correspondent alludes is the work of M. Ledoux, and that lies in a discovery or process for securing the silk from the cocoon.

At the last meeting of the American Association for the Advancement of Science, held in July last, a paper was read upon the ailanthus silkworm by Prof. C. V. Riley, U. S. Entomologist, which is a full review of the insect and the possibilities with it, and would be read with interest by all sericulturists. Such space as we have at command will only enable us to glance at the comparison which Prof. Riley makes between the culture of the ailanthus worm and the mulberry worm, and this, we believe, is what our correspondent most desires to know.

In brief, the culture of the ailanthus worm is an out-door affair; that of the mulberry worm, is an indoor industry. Prof. Riley says of the former species: There is little trouble in raising the worms. It is best to raise them in the open air, care being taken to protect them from attacks of birds and predaceous insects, such as ants, ground beetles, etc. The trees, however, may be trimmed that an awning of some light material could be stretched over them during the feeding season. A few cocoons, well chosen for size and quality, might be left on the trees for breeding purposes, and the moths as they issue would soon pair naturally and the females deposit their eggs upon the branches of the trees. Two broods can easily be produced each year, and the time of hatching of the eggs, of the issuing of the moth, and that required for the development of the worm, depends so much on the temperature, that the broods can be produced at the seasons most convenient and favorable. When this control is denied, the eggs and the cocoons must be properly managed. The cocoons intended for breeding purposes may be suspended in chaplets, so that the moths may issue more readily and have a good opportunity to hang their damp wings as they expand. They may then be coupled and placed in wicker boxes or any other well ventilated vessel, from which the eggs, when laid, can be easily removed. The eggs when about to hatch may be fastened to the trees in various ways, so that the young worms, from the first moment of their lives, will find the leaves convenient. They may be pasted on to thin wood, paper or linen, and pinned in small quantities to the leaf stalk; or portioned into lots of fifty, or hundred, and suspended in small muslin bags pinned near a leaf. The young worms are gregarious and generally remain on the side of the leaves; and as they do not consume much at this period, and are more liable to the attacks of their enemies, it may be found profitable to rear them during the first stage indoors upon cut branches or young trees in pots.

The silk of the ailanthus worm is no doubt very valuable, but to what extent, depends on our ability to manufacture it successfully. It has several disadvantages, but native ingenuity may devise some means to overcome them or turn them to account. The value of any silkworm depends on our ability to unwind its cocoon. I cannot see from the accounts that have so far reached that M. Ledoux's invention accomplishes anything more than that of former inventors, and, whatever impetus it may give to *ailanti*-culture, we may rest perfectly satisfied that such culture will never become general, and that the *ailanthus* silkworm will never replace that of the mulberry.

The prime reason why the mulberry silkworm must ever be the silk producer of commerce, aside from the superior quality and quantity of its silk, is that it is a domesticated insect and that the worm can be fed in large quantities in partial confinement and under control; further, that, while enduring this artificial life, it shows no disposition to escape from the shallow trays upon which it is fed. All the other worms suffer more or less when brought together in large numbers, or when confined or sheltered, and in this fact more than in any difficulty in using the silk, lies the secret of the failure to substitute any of them for *mori*. The hardness and adaptability of *Cynthia* to different climates cannot offset this objection; for it remains essentially a wild worm, and it will require many centuries of selecting and artificial rearing ere it can be domesticated to the same extent that is the *Sericaria mori*. There never can be any

dependence placed on the production of silk from worms growing wild on their food-plants, as in such state their exposure to birds and other enemies will always render the cocoon harvest uncertain, and it is far more expensive and troublesome to protect both the wild worms and the trees on which they grow, than it is to rear the mulberry worm by the ordinary methods employed.

## Anise Seed Oil as an Insecticide.

The efficacy of vegetable insecticides is one of the greatest importance to the agriculturist, for if one can grow the insect destroyer on the same land with the product they destroy, the result will be cheap immunity from ruin which now threatens. Such we trust will be ultimately the experience with the Dalmatian *Pyrethrum Cinerarie folium*, which is now growing in this State. We find in a European exchange an account of destruction to weevils from anise seed oil. Anise seed can, we believe, be easily grown in some parts of this State, perhaps just in those parts where weevils are most destructive. At all events the experiment is worth making. The French experience is thus described: A general dealer, whose business obliged him to keep large quantities of grain in store, had occasion, a few weeks ago, to fill a large bin with corn. Within an hour the grain was infested throughout with weevils. On the following day, however, not one was to be seen. This sudden disappearance puzzled him considerably, and the secret of it was ultimately revealed by accident only. Information having been brought to him that a tub of Spanish aniseed, which stood near the corn bin, was leaking slightly, he directed that it should be displaced so that the amount of damage might be ascertained. The leakage proved to be very insignificant, being confined to a patch about 25 centimeters in diameter. Within this small space, however, were found the whole of the missing weevils, lying dead in a layer about four millimeters deep. It would appear from this that aniseed has the power of attracting and destroying weevils.

## QUERIES AND REPLIES.

## Testing Apples.

EDITORS PRESS:—Your correspondent, Mr. John Taylor, does not seem to be as well acquainted with the Rambo apple as its merits deserve. I have known it in Ohio, and in various Western States, for a period of nearly 50 years, and it was always a favorite. I have a goodly number of trees growing here, but not yet large enough to fruit. We got some of the apples this year, raised by a neighbor, and they do credit to their old-time excellence. They are, I think, fully equal to the best, although the size is not large, and the color of those raised by our neighbor is rather dull, which may be owing to local causes.

I had 25 Dominie apple trees that fruited this year, although the trees are very small. This does not seem to be much known in California. It is an excellent apple, and considerably larger than the Rambo. Part of my apple orchard is on a steep side hill, facing north; these trees grow rapidly, look remarkably thrifty and healthy, but do not yet bear. Part face south and east; these bear fruit when quite small and young, but grow slowly, and look unpromising.

I have budded my almond trees to nectarines instead of cutting them down. I saw two or three large almond trees in town, with peach limbs full of peaches this season; farther than this, I do not know.—S. P. SNOW, Santa Barbara, Oct. 30th.

## Hint on Lawn Making.

EDITORS PRESS:—I have noticed some articles of late in your RURAL in relation to lawn making, and I think I can give you a point that I only found out after 20 years' experience, and which I have never seen mentioned in any paper yet; and that is a method to raise a clean lawn grass without any weeds, provided, of course, the seed is clean. I prepare my ground in good shape and manure thoroughly with well-rotted manure if possible, and then allow it to rest until the weeds come up two or three inches high. I then cut off the weeds with a hoe to a depth of three inches; rake them out, smooth up again, and let the weeds grow again to the same height. Then cut them down again; smooth up and put in your grass seed, when it will come up clean.—R. G. SNEATH, San Bruno.

## Seedling Pears.

EDITORS PRESS:—Fearing I will not be able to attend the meeting to-morrow, I forward you to-day, by Wells, Fargo & Co.'s Express, a few specimens of new seedling pears. As you will likely meet some good pomologists, be so kind as to let me hear what they think of seedling C. C.—BERNARD S. FOX, San Jose, Oct. 29th.

We are sorry to state that this package was not delivered in time for exhibition at the meeting, for the seedlings are well worth attention, especially the "C. C." which is a notable fruit. It is large size, unusually fine grain, delicate flavor, very juicy and has the "melting" quality embodied to perfection. It is, we think, a fruit with a future before it. The other seedlings sent were less notable, but possessed several good points.

It is stated that Gen. Sherman has written to a military friend in Chicago, that Gen. Grant has an important message to deliver to the people of the United States, which he will give to them first when he reaches that city.



## The Southern California Horticultural Society.—No. 2.

One of the first and most indelible impressions made upon the mind of the visiting observer while glancing over the exhibits at the late Los Angeles fair, was the apparent fact that this portion of California is blessed with one of the most remarkable climates in the world. At first glance it seemed almost impossible that the productions there shown could have been collected from so limited an area, but when we were assured that such was the fact, we were forced to the conclusion that southern California must possess within its limits parallels of all the climates of the earth, which produce either the necessities or luxuries of life. Of course, the few years that have elapsed since any special efforts have been made to test the capacities of the soil and climate here, have been quite insufficient to determine their possibilities; but enough has been done to show that nature has been most wonderfully lavish in her benefactions. It now becomes the duty of the cultivator to enter upon a course of experimental research to determine how far he can economically go in rendering himself and California independent of the balance of the world in the production of those things which advanced civilization renders necessary for its progress and happiness. To assist in reaching this result is the chief object for which the Southern California Horticultural Society has been formed; and it stands pledged, both as a body and as individuals, to embrace every opportunity to collect and disseminate such information as will tend to place this portion of the State in the position to which by nature and position she is justly entitled to.

From statistics hitherto, we learn that Los Angeles county contains, between the Sierra Madre on the east and the ocean on the west, upwards of 1,000,000 acres of land, susceptible of the highest cultivation, admirably sheltered by high mountain ranges on three sides and open only on the south, from which direction the pure, mild and health-giving air of the Pacific ocean finds its way. Something over 100,000 acres of this land will produce good crops without irrigation, another 100,000, or more, is already fully brought under a system of most perfect irrigation by ditches, flumes and pipes, which system may be extended to fully 400,000 more, making in all 600,000 acres entirely independent of rainfall, and all of which is admirably suited to the cultivation of fruits of the temperate zone, both large and small, and the most of which will produce in perfection the orange, the lemon, the lime, the olive, guava, pomegranate, banana, date and fig, as well as the finest and most delicate grapes of Europe, whether for the table, for wine, or for raisins. In addition to the above there is a large amount of upland soil—not less than half a million acres—much of which is suited to the growth of the olive, which delights in a dry soil, to vines, peaches, apples and other fruits. The grapes produced on this soil, when the vines are thoroughly started, are said to be much superior to those which are irrigated. Grapes, with good culture, produce from three to five tons per acre, and at the average price here—about \$20 per ton—are probably the surest and most profitable crop that can be raised. There is no practical limit to the demand for choice varieties, when devoted to the production of wine or raisins.

The exhibit of dairy products at the fair was in no way behind that of any other portion of the State in quality, and was sufficient to prove conclusively that it might be made an important, if not a leading industry even in Los Angeles county. The Los Angeles Grange store had an exhibit of samples of butter from three different dairies—from L. A. Carey & Sons, from M. Bixby, of Compton, and from Rose & Ball, of Ballona. Mr. D. M. Grow exhibited a case of butter made upon the ranch of F. S. Clough, at an altitude of 2,500 feet above the sea level.

Messrs. Kellogg and Tearwall, of Santa Paula, made a very fine and somewhat unique exhibit of cheese. The curiosity of their exhibit consisted in the variation of a portion of it from the regulation round cheese, which has come down to us from the ages, to the form of bricks or blocks, which is certainly a very convenient form for transportation. It also offers the further advantage that, when cut, it presents an exposure of only one surface, and that so that it can be readily covered from the atmosphere. We look upon the innovation as a very proper and useful one. A very good market for Los Angeles dairy products is found in Arizona. We noticed a shipment of 20 boxes of roll butter, a few days since, at 55 cents a roll. Orders for both cheese and butter, suitable for the Arizona market, are said to exceed the supply at this time. Only first-class butter will be taken there, as none other will stand the hot weather. With the prospect of such a demand as must soon spring up in Arizona, in addition to the home market, there is no reason why the products of the dairy might not soon become a leading interest for southern California.

Mr. O. N. Cadwell, of Carpinteria, Santa Barbara county, in addition to his fruit, made a very fine exhibit of Lima beans, shelled and in the pod. We were informed that he planted 10 acres, and harvested a little over 2,200 pounds to the acre, which he sold on the Santa Barbara wharf for four cents a pound. Eighty-eight dollars per acre is a pretty good result for beans.

The stock exhibit, at the park, gave evidence

that this important branch of agriculture was not neglected. During a somewhat hasty stroll among the cattle pens, we were pleased to note that the exhibit of thoroughbred stock was very fine and quite extensive. Mr. Waters, of San Bernardino, showed a very good selection of Short Horns. Mr. Barreto, of Downey, had a full representation of his herd of Jerseys. A number of splendid Merinos, exhibited by Mr. Camillo Garnier, formed an interesting feature of the pens.

The hog family was also well represented. Among others, Mr. William Niles, of Los Angeles, exhibited ten Berkshire-hred swine, which attracted special attention. "Prince Consort," "Queen" and "Victoria," dish-faced Berkshires, were worthy of extra mention as among the choicest yet imported. They were purchased, at a high cost, of H. M. Queen Victoria, having been bred and raised at the Prince Consort's show farm, Windsor, England, and are recorded in the "American Berkshire Record," as the owner will show to any party interested. We visited the farm of Mr. Niles, where we found that he is devoting his time chiefly to choice swine and poultry raising. He exhibited 20 distinct varieties of foreign and domestic fowls, making a display that attracted much attention by all who took any particular interest in poultry raising. We have seen no finer specimens in any part of the State than were some of the varieties exhibited by Mr. Niles.

One of the most pleasing and interesting exhibits at the pavilion was a large number of carp shown in the basin of the fountain by Mr. R. W. Waterman, of San Bernardino. There

been used by the inventor upon his extensive orange orchard the past year, and by its aid it is claimed that one man can easily do the work of three or more by the ordinary use of steps and ladders, with much less liability of injury to fruit or tree in the process. We had an ocular demonstration of the practicability of the device in seeing a sufficient number of rich, ripe oranges gathered by its use to fill the capacious pockets of the two proprietors of the RURAL PRESS. The fruit was taken from the top of one of the tallest trees in the orchard.

The Asbestine Sub-Irrigation Co. made a working exhibit in front of the pavilion of their apparatus for making and laying their irrigation pipe. The crowds which gathered around it gave evidence of the great interest that is being taken in the subject of irrigation. We propose to speak further of this enterprise at an early day and illustrate the way in which it is done.

As we intend to visit portions of this county and San Diego we shall in future issues of the PRESS be able to speak from personal observation of the various localities where the exhibits already described were produced.

### Indian Peculiarities.

The aborigines found in America by the discoverers were termed Indians, because the objective point in voyages to the West was India, and hence when the Western Continent was discovered it was hailed as the long-sought-for country of fabulous wealth and mystery. In many respects the manners and customs of the



WAR DANCE OF THE APACHES.

were some hundred of them, varying in size from the old patriarch of the family, which was about one foot in length, down to the tiniest size. We understood that Mr. Waterman paid \$4 apiece for several fish two years ago, one of which "still lives," and led the finny tribe in its ceaseless procession round and round the tank. Their owner has them so well domesticated that, it is said, when undisturbed by the crowd of visitors they would come to the surface of the water and take their food from his hand. Mr. W. we believe was the first to introduce pisciculture into southern California. The carp is well and favorably known for its rapidity of growth and superior excellence for the table.

There was a very fair display of agricultural implements and machinery; but the only novel thing which we noticed was a corn-stalk cutter, invented and exhibited by Mr. Jacob, of Downey City, and a portable ladder for gathering fruit, invented by L. H. Titus, of San Gabriel Mission. Both machines are deserving of special mention.

The corn-stalk cutter has a set of revolving spiral knives which are made by pressure to sink several inches into the ground, by which means the stalks, which are already bent down by the machine passing over them, are cut up into lengths of about eight inches and buried in the soil. The machine cuts one row at a time with two horses, and eight to ten acres of land may then be entirely cleared of stalks, with a change of horses, in from 10 to 12 hours. This is the first time the invention has been placed before the public, although it has been well tested by actual work, something over 100 acres of land having been cut with a machine upon a farm at El Monte.

The portable ladder for gathering fruit has

Indian tribes showed evidences of a tradition which must have descended to them from the human race in Asia. Their religion, theory of origin and acquaintance with the events related in the Bible, and of general mythological belief among the Asiatic nations, show a remarkable similarity. One element in Indian customs remarkable for its similarity to the peculiarities related of the more civilized nations of the old world, is that of dancing upon occasions of joy, sorrow or war. In all, however, there is a natural grotesqueness which is supposed to indicate the ideas thought to be indicative of the sensations or of preparation for some important event. The feeling is natural, even the white man is desirous of "dancing for joy," and uses the expression, when the Indian practically demonstrates it.

The solemn religious dance of the Hindoo finds a parallel in the sun dances of some of the Indian tribes, and is even perpetuated in the dancing feature common among the Shakers of civilization. In the war dance of the Indian, which we illustrate on this page, the grotesque and horrible form a dreadful accompaniment which even to a savage mind can be excused only by the dread uncertainty of the war to follow the uncouth ceremony. The devil is particularly materialized for the occasion and the enemies of the tribe turned over to his domain, while the wild bull of the happy hunting grounds is propitiated in the hope that his prototypes in the opposing camp will become the loot of the victors.

LARGE BEETS.—We are famed for large roots in this State, but the allowance of land required by them has not yet been accurately set forth. We read that a Santa Barbara man "proposes to plant two acres to the beet."

## California State Horticultural Society.

This society was fully organized at the meeting at the Academy of Sciences in this city on October 30th. The meeting was quite well attended and active interest was manifested in the proceedings. A number of new names were added to the roll, including several ladies. We trust the list of lady members may be largely increased, for many women dwelling both in town and country are devoted and skillful horticulturists and can do much to advance the work of the organization by their support and active participation in the deliberations.

The society needs, above all things, a wide membership, both of those directly and indirectly engaged in horticultural work. To carry on its proposed work of promoting the general horticulture of the State there will be occasion to draw upon several funds: the fund of practical experience, the fund of results attained by systematic research and experiment in the art of horticulture and the sciences underlying it, and it will require certain amounts of grosser funds in the treasury to carry on the work of disseminating the values secured by the society, so that the whole horticultural interest of the State may be pushed forward to a higher plane of understanding and skill in all the directions which lead to success. Therefore the society will be the richer, and the more beneficent, the wider its circle of membership extends among those honestly and zealously working in their several ways toward horticultural achievement; whether it be as the producers of marketable fruits and vegetables, or as professional propagators of desirable trees and plants, or as amateurs pursuing the work for its own sake, or as scientific investigators laboring untiringly for the laws which underlie practice and govern its success or failure. It will be a happy thing for the society if all these classes rally to its support, and it will be fortunate for each individual therein, for to each will then come the aid of all in his chosen work.

The society takes to itself the name of the State, because thus wide are its aims and ambitions of usefulness. It recognizes to its fullest merit the work undertaken by the various local horticultural societies of the State, and it regards them as indispensable to its own fullest success. To each of these local societies there will be ample field, and some of them are already occupying it gloriously. But their work must be supplemented by that of an organization embracing the wider field, in order that the fullest intelligence of the whole State may be centered upon points of general interest, and the strength of a general union be exerted toward the securing of general benefits. It is to be hoped that the local societies will be well represented in the membership of the State society, so that in deliberation, all parts may be shown forth, and the conclusions reached be reported back to the parts for local consideration and application.

It is provided by the rules of the society that regular meetings shall be held monthly in this city, at which there will be discussions of all matters relating to horticulture in all its branches. The society will also be ready to receive specimens of all new fruits, plants and vegetables, and to pass its judgment upon their desirability. It will aim to do good service ere long in the regulation of the nomenclature of fruits and vegetables. It will do its best to discover the hidden cause of injuries and diseases to which horticultural material is incident; and will, we trust, grapple manfully with the growing evils of injurious insects in our orchards and gardens. Upon all these important lines of inquiry there will be standing committees, composed of the most competent specialists who can be enlisted in the work of the society, and their labors will be at the command of members. It will be the aim of the organization to win for itself the respect of the whole community by its intelligent and disinterested efforts in promoting one of the most important interests of our State.

At the meeting last Thursday the time was fully occupied in the choice of officers and in making preliminary arrangements for the meetings of the society. The following is the list of officers chosen: President, Prof. E. W. Hilgard, State University, Berkeley; Vice-President, J. Lewelling, St. Helena; Secretary, Edward J. Wickson, 414 Clay street, San Francisco; Treasurer, G. P. Rixford, San Francisco. Directors—W. B. West, Stockton; Dr. John Strentzel, Martinez; Dr. Behr, San Francisco; C. H. Shinn, Niles; John Rock, San Jose.

It is provided by the constitution that all members shall be elected by ballot, the names having been announced at a previous regular meeting. The Secretary will receive the names of any of our readers who may desire to apply for membership, and will announce them at the first regular meeting thereafter. The membership fee is \$2.50, which is due upon notification of election by the Secretary. The dues are 50 cents per month.

The society has secured for approaching meetings the hall of the Young Men's Christian Association, on Sutter street between Kearny and Dupont. The hall is commodious, well lighted and very easy of access. Street cars direct for the ferries pass the door.

As the next regular date for meeting will fall upon Thanksgiving day, it is probable another day will be appointed and notice given in due time.



## Timber Resources of Alaska.

CONTINUED FROM PAGE 291.

it is far more abundant than the first. Perhaps one-half of all the individual trees in southeastern Alaska belong to this species. In the heaviest portions of the forest it grows to a height of from 150 to 175 feet, with a diameter of from 3 to 6 feet, and in habit and general appearance resembles the Douglas spruce, so common about Puget sound. It is somewhat less slender, however, the branches cover a larger portion of the trunk, and the needles, radiating all around the branchlets, are stiffer and so sharp-pointed that the younger branches cannot be comfortably handled without gloves. The timber is tough, close-grained, white, and looks much like pine. It splits freely, and for general house building takes the place of pine.

The other species is the beautiful hemlock spruce (*Abies mertensiana*). It is more slender than its companion species, but nearly as tall, and the young trees are more graceful in habit, but the timber is inferior, and though very abundant is seldom made use of for any purpose where any other may be had. Of the other species found in these forests, but forming only a small portion of the whole, the most noteworthy is the grand arbor vitae (*Thuja gigantea*), called red cedar hereabouts. It is distributed all the way up the coast from northern California, to about latitude 56°. From the soft, easily-worked boles of this tree the Indians make their canoes, some of them large enough to carry 50 or 60 men. A specimen nibbled out of a single log cut on the west coast of Vancouver Island is 60 feet long, 8 feet wide, and 4 feet deep.

Of pines I have seen only one species (*P. contorta*), a few trees of which, 50 or 60 feet high, may occasionally be found about the open edges of lakes and bogs. In the interior, beyond the mountains, it forms extensive forests. Cottowoods, two or three feet thick, and from 40 to 60 feet high, grow on beds of flood-soil along the banks of the larger streams.

A fir like *Picea grandis* is common on the mountain slopes of the mainland. It is usually quite small however, seldom found to exceed a height of 60 or 70 feet, and the timber is of a very inferior quality. And up on the cold canyon sides along the banks of the glaciers, there is a very handsome little spruce like the Williamson of the upper forests of the Sierra. The only hardwood I have seen in Alaska is alder, maple, wild apple and birch—one species of each. The birch grows mostly on steep declivities well back in the Coast range in company with spruce and fir. The largest specimens are about 40 feet high and a foot thick. The other species are found only about the margins of the main forests. The trees are quite small, mostly about eight or nine inches in diameter or less.

It appears, therefore, that, with the important exception of the yellow cedar, timber trees for every use, as good or better in quality, abound in California, Oregon, Washington Territory and British Columbia, while those sources of supply are also nearer the markets of the world. And it will only be after those are exhausted on the more accessible portions of the coast that these grand Alaska forests will to any considerable extent be made available. Seward expected Alaska to become the shipyard of the world. So it may a century hence. In the meantime this supply will keep. These Alaska forests are not threatened with fire, or any other destruction dependent on the agency of man. They are too wet to burn. I have never yet seen a trace of fire in all these woods. The roots are set in a deep sponge of wet mosses, kept saturated by the abundant rains that fall throughout all the seasons, so that running fires are impossible here while the climate remains as it is. Beyond the mountains in the interior forests the conditions are different—less rain and greater summer heat—so that these woods are oftentimes scourged with fires as destructive as those that sweep the forest belt of the Sierra. In the vast region drained by the Yukon the principal tree, according to Kellogg and Dall, is the "white spruce" (*Abies alba*). I saw it on the Arctic divide, near the headwaters of the Yukon. It is an exceedingly slender tree, spiry, erect and closely clad with short, leafy sprays, forming the sharpest and most arrow-like spires I ever saw in any forest. The tallest are about 125 feet high. Some of this inland timber may sometimes be made available for ship spars by floating it down to tide water; but centuries will probably elapse before this time of need will come.

The coast and island forests of this south end of Alaska wear a grayish brownish color in the foreground, black in the middle ground and dark blue in the distance. The gray and brown is derived from lichens that depend from the branches, and from mosses that grow not only on the boles, but from large nest-like masses on the horizontal palmate portions of the main branches 50 or 100 feet above the ground. It is only where snow and rock avalanches have occurred that a bright grass-green is seen.

Landing almost anywhere to take a walk in these woods you have first to fight your way through a fringe of bushes tediously intertangled—rubus, huckleberry, dogwood, willow, elder, etc., and a strange looking woody plant about six feet high, with limber, rope-like stems, and a head of broad leaves spread out horizontally like those of a palm. Both stem and leaves are covered with keen spires, so that it is impossible to grasp it anywhere without getting a multitude of thorns in the flesh.

This is *Echinopanax horrida*, popularly known as the Devil's Club, and used by the Indians to thrash witches—the most truly diabolical thrashing instrument conceivable. It is the only plant that seems out of place here. It seems, rather, from its vine-like leaning stems and heads of ample translucent leaves, to belong to the tropics. Back in the shady depths of the woods the ground is covered with a thick felt of mosses, but little roughened with bushes of any kind, and not a track will you see of bird, beast or man on this yellow elastic carpet, not even those of the deer or bear that inhabit these woods.

## Pliocene Man.

An interesting review in *Science News*, by Dr. Charles C. Abbott, of Prof. J. D. Whitney's chapter on "Human remains and works of art of the gravel series," is of local interest, inasmuch as it refers to discoveries in the auriferous gravels of the Sierra Nevada of California. Dr. Abbott says: Without doubt, the memoir by Prof. Whitney is the most valuable and interesting contribution yet made to the subject of American pre-historic archaeology. Not only has the topic great interest in itself, but this phase of it has an additional interest, because a portion of the evidence he brings forward has been subjected to much adverse criticism, not only by men of some scientific attainments, but by the popular secular and the biased religious papers of the day. The author, however, effectually disposes of all objections, as we think, and clearly demonstrates the correctness of the conclusions he drew, years ago. While being occasionally hinted at in various ways, these conclusions have never been published in *extenso*, until the appearance of the present volume.

We shall give in briefest outline the character of the evidence which Prof. Whitney here produces; it does not stand alone, but supplements and, we believe, confirms the indications of Tertiary man, both of Europe and Eastern North America. In his introduction the author remarks, that "gradually the evidence has accumulated from widely separated regions, until the idea of prehistoric man has become familiar to geologists." He then asks, "How far back can man and his works be traced?" The memoir supplies an answer to this question, so far as it relates to California. Any one who has spent days and weeks in searching for fossils or stone implements in gravel deposits, can testify how discouraging such work is. Millions of pebbles are to be glanced at and overturned, and often there is nothing but millions more to look at, when the surface of a bluff has been removed. In California, where the hydraulic method of attacking the gravel deposits is almost wholly employed, there is still less chance of finding objects of interest than there was in the older method of tunneling. Whether of bone or stone, traces of man subjected to violent displacement by streams of water are pretty sure to be destroyed or again buried by the rapid overturning of the gravel beds.

Much of the material on which Prof. Whitney bases his paper has been collected by Mr. C. D. Voy, and is now in the museum of the University of California. This material has been gathered principally from Mariposa, Merced, Stanislaus, Tuolumne and Calaveras counties. In Mariposa county stone implements and mastodon remains have been found intimately associated, at a depth of 12 feet. Much of like nature has been found in the two counties next referred to, while Tuolumne county is particularly mentioned as a region more prolific in human remains and prehistoric works of art than any other in California. This evidence of early man has been very carefully sifted by Prof. Whitney, and it appears that the fact of the remains being really found in such positions as to indicate great antiquity is fully demonstrated.

Calaveras county is more fully treated of, as the evidence is of somewhat different character, and has given rise to much discussion. "We now come," says Prof. Whitney, "to a county where occurrences of human remains do not seem to have been as frequent as they were in the adjacent Tuolumne, but where one specimen has been obtained which has excited more interest than all the others put together, and which is popularly believed to be the only instance of the kind which has been met with in California. A perusal of the following pages will, however, it is thought, satisfy the reader that the belief of the existence of man in that region previous to the cessation of volcanic activity there, is not by any means supported by one item of evidence alone." The history of this "one item," the now celebrated Calaveras skull, is then given in minute detail. Suffice it here to state, that it was found at a depth of 132 feet, and exhibits many peculiarities which tally with the statements of the finder, and are conditions which could only exist in a cranium found as this specimen is said to have been. This alone, as is most ably demonstrated by Prof. Whitney, should satisfy any one disposed to question the truthfulness of the statements made by the gentleman who found the specimen. Were nothing else ever to be found, there is in this Calaveras skull, as we believe, all that is necessary to demonstrate the existence of

Pliocene man in California; but Amador, El Dorado, Placer, Nevada and Butte counties have all yielded corroborative evidence. As Prof. Whitney remarks, "the passage from Pliocene through Post-pliocene, if such a division can hereafter be maintained in this region, has been a gradual one, and some of the Pliocene animals have certainly lived close up to the recent period. That a portion of the human remains and implements described in the preceding pages are as old at least as Pliocene, it seems hardly possible to doubt."

"The discoveries in California, India and elsewhere seem clearly to indicate that the human race must have existed, over a large portion of the world at least, for an immense period of time, in the primitive condition, that is, at the lowest possible stage of humanity—civilization it cannot be called. So far as California is concerned, the evidence all points in this direction. The implements, tools and works of art obtained are throughout in harmony with each other, all being the simplest and least artistic of which it is possible to conceive. Whether found in the strata under the basaltic lava, or above, at any point in the detritus, we always recognize the same type."

The conclusions of Prof. Whitney's volume are as follows:

"Finally, as the summing up of the discoveries and investigations made by the Geological Survey in California, we have:

"1. The clear and unequivocal proof beyond any possibility of doubt or cavil, of the contemporary existence of man with the mastodon, fossil elephant, and other extinct species, at a very remote epoch as compared with anything recorded in history.

"2. That man, thus proved to be contemporary with a group of animals now extinct, did not essentially differ from what he now is in the same region and over the whole North American continent.

"3. That there is a large body of evidence, the strength of which it is impossible to deny, which seems to prove that man existed in California previous to the cessation of volcanic activity in the Sierra Nevada, to the epoch of the greatest extension of the glaciers in that region, and to the erosion of the present river canyons and valleys, at a time when the animal and vegetable creations differed entirely from what they now are, and when the topographical features of the State were extremely unlike those exhibited by the present surface.

"4. That man existing even at that very remote epoch, which goes back at least to the Pliocene, was still the same as we now find him to be in that region, and the same that he was in the intermediate period after the cessation of volcanic activity and while erosion of the present river canyons was going on.

"5. That the discoveries in California and those in other parts of the world, notably in Portugal and India, present a strong body of evidence going to prove the existence, during an immensely long period, of the human race in its primitive condition—that is to say, in the simplest and rudest condition in which man could exist and be man.

"6. That, so far as we know, there is no evidence of the existence of any primordial stock from which man may have been derived, so far back at least as the Pliocene. Man, thus far, is nothing but man, whether found in Pliocene, Post-pliocene or recent formations."

That some of these conclusions, here so positively stated, may be modified by future discoveries, is highly probable. Especially as to the discovery of some "primordial stock," do we think this to be the case. That such stock once existed is necessarily true; that all trace of it has vanished is improbable; and not earlier than the dawn of the Pliocene is it necessarily needful that one should go to seek for such traces. The Pliocene epoch was not a matter of a few years, and what the formations of that age, in other continents, may contain that shall throw light on man's origin, have yet to be gathered. When the Pliocene strata of Africa and Asia have been carefully examined, and they are found to contain no traces of man more primitive than those of California and elsewhere, then it will be proper to expect that such traces will be found in the Miocene. That unquestionable traces of the missing link are now resting in some tertiary deposits, we have not the shadow of a doubt.

**CHEAP BLACK FOR WOOL.**—The cheapest black for wool is obtained by treating the wool in a mixture of dilute sulphuric acid and dichromate of potassium, or of sulphuric acid, potassium dichromate, potassium bitartrate and copper sulphate, and subsequently dyeing with logwood. Reimann now proposes to use, instead of either mixture, one of chrome-alum and bitartrate with logwood. For the chrome-alum, the impure solutions of it obtained as bye-products in many manufactures may be used. The iron-alum in this process not only serves as an oxidizing agent, taking the place of chromic acid and copper sulphate in the first two mixtures, but also deepens the black by itself forming a compound with the logwood. The advantages of the new process are: (1) there being no chromic acid in the mixture, the wool is not oxidized, and remains soft to the touch; and (2) the black is a mixture of chrome and iron-black, and while free from the drawbacks of either, possesses the good qualities of both. Chrome-black is unaffected by acids, but is injured by alkali and exposure to light; iron-black has exactly opposite properties.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

PETER SAXE & SON, 520 Bush St. S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

## SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

## POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Ducks, etc. Eggs for hatching. Send for price list.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Daus's Cattle, Hog and Sheep Labels.

T. G. STARR, San Bernardino, Cal. Poland-China Swine and Black Cochins for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

## BEES.

JOS. C. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## Grangers' Bank of California, SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000,

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$400,000.

## OFFICERS:

G. W. COLBY, President  
JOHN LEWELLING, Vice-President  
ALBERT MONTELLIER, Cashier and Manager  
FRANK McMULLEN, Secretary

## DIRECTORS:

G. W. COLBY, President, Butte Co.  
JOHN LEWELLING, Vice-President, Napa Co.  
J. V. WEBSTER, Alameda Co.  
URIAH WOOD, San Benito Co.  
J. C. MERYFIELD, Solano Co.  
THOMAS McCONNELL, Sacramento Co.  
I. C. STEELE, San Mateo Co.  
SOLOMON JEWETT, Kern Co.  
C. J. CRESSEY, Stanislaus Co.  
SENECA EWER, Napa Co.  
A. D. LOGAN, Colusa Co.

The Bank was opened on the first of August, 1874, for the transaction of general banking business.

CURRENT ACCOUNTS are opened and conducted in the usual way.

GOLD and SILVER deposits received.

CERTIFICATES of DEPOSIT issued for Gold and Silver.

TERM DEPOSITS are received and interest allowed as follows: 6, per annum if left for 3 months; 7, per annum if left for 6 months; 8, per annum if left for 12 months.

EXCHANGE on the Atlantic States bought and sold.

ALBERT MONTELLIER,

Cashier and Manager.

San Francisco, Oct. 15th, 1879.

## PIANOS

## LARGEST MUSIC HOUSE

On the Pacific Coast.

WHOLESALE AND RETAIL.

Lowest Prices and Best Goods.

Write for information concerning any Musical Instrument, and terms of sale. It will be given with pleasure.

ESTABLISHED IN 1850.

## KOHLER &amp; CHASE,

137 and 139 Post Street, San Francisco.

## Engraving

Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the MUSIC AND SCIENTIFIC PRESS, San Francisco, at favorable rates. Send stamp for our circular and samples.



## Lands for Sale and to Let.

## FARMS FOR SALE.

IN THE FERTILE AND HEALTHFUL

San Pasqual Valley,  
San Diego County, Cal.

## TITLES PERFECT.

The owner (an architect) having recovered his health by a residence of four years in this Valley, is desirous of returning to the city, and so offers the following farms for sale

## At a Great Sacrifice:

The Home Farm of 200 acres is well fenced and subdivided. There is beside 600 yards of movable panels, 50 Acres in Alfalfa.

Yielding five and six crops a year. There is an abundance of water on the place for stock, besides running water for garden, orchard, etc., and a one-sixth interest in the S. P. V. Ditch Co. House 28x36, enclosed in a lot 200x130, barn and stable, 54x35, two sheds 24x14 and 18x14, smoke-house, 20x14, with an adobe cellar under it, and every convenience as regards large tanks, etc., for making bacon. The implements are of the best, nearly all new, and in good order. They consist of two farm wagons, 10-foot header, header beds, hay rack, mower, gang plow, single do, harrow, 10-foot seeder and cultivator, small do, sulky rake, two sets of strong harness, together with a lot of other tools, hay, grain seed, etc.

Price for the whole, \$4,000; one-half cash, balance on time at 1 per cent.

## For Sale Also,

A farm under cultivation of 116 acres, adjoining the above, suitable for grain, corn or alfalfa, with a one-sixth interest in the Ditch Co., and about one and one-quarter miles of fencing, no other improvements. Price, \$1,200; one-third cash, balance on easy terms.

## For Sale Also,

A farm of 120 acres, one-quarter mile from the above ranches, mostly damp land, suitable for a nursery, alfalfa, corn, etc. There is a small house, etc., and a ditch running along its upper side. Price, \$900; one-third cash, balance on easy terms.

The neighborhood is exceedingly healthful and growing. Two schools are in the valley, one within one-quarter mile, and the postoffice within one mile, neighbors with families are all round.

My stock consists of superior brood mares, colts, hogs, etc., and they may be taken at a valuation if wanted.

For particulars apply to **W. B. STEWART,**  
San Pasqual Valley, San Diego Co., Cal.

## FARMING LAND

For Sale in large or small tracts, on easy terms, in the best parts of the State.

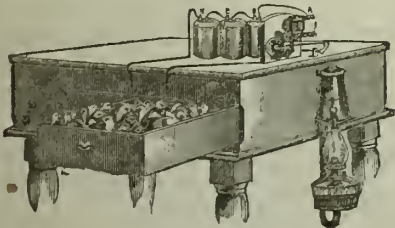
## McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

## LAND

Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

## MONEY in CHICKENS



## If You Want to Make Money

By raising any number of Chickens at any season of the year without setting hens, procure an

## ECLIPSE INCUBATOR

(E. A. SAMUEL'S Patent).

In both public and private trials on this coast as elsewhere, the "ECLIPSE" has proved itself a perfect and successful Egg Hatcher. It may be examined and its merits proven to customers before they make purchases. Write for particulars and circulars to

**G. G. WICKSON, 319 Market Street, S. F.**  
Agent for the Pacific Coast.

TRADE



MARK.

## LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price, \$2 per gallon. For directions and testimonials, apply to **FALKNER, BELL & CO.,**  
Sole Agents, 430 California Street, S. F.

## The New Beekeepers' Text Book.

By N. H. and H. A. KING. The latest work on the Apia, embodying accounts of all the newest methods and appliances. Fully illustrated. Sent by mail, postpaid, for \$1. **DEWEY & CO., 202 Sansome Street, S. F.**

## Nathaniel Curry &amp; Bro.,

113 Sansome Street, San Francisco,



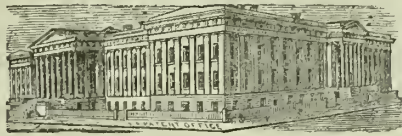
Sole Agents for the

## Sharps Rifle Co., of Bridgeport, Conn.

FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO.

Also Agents for W. W. GREENER'S Celebrated Wedgefast, Chokebore, Breech-loading DOUBLE GUNS; and all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America. AMMUNITION of all kinds in quantities to suit.

## DEWEY &amp; CO.'S



Scientific Press

Patent Agency.

[ESTABLISHED 1860.]

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old, experienced, first-class Agency. We have able and trustworthy associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other Agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us to often give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address **DEWEY & CO., 202 Sansome St., S. F.**

A. T. DEWEY.

W. B. EWER.

GEO. H. STRONG.

In consequence of spurious imitations of

## LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature thus,

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of **CROSS & CO., San Francisco.**

## MISSION ROCK DOCK AND GRAIN WAREHOUSES.

SAN FRANCISCO, CAL.

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

GRAIN consigned to us by water insured in open policy at Special Rates. Wheat shipped by railroads via Stockton, care of the CALIFORNIA STEAM NAVIGATION CO. will be received by them at Stockton and delivered at Mission Rock Warehouse at same rate of freight as to Oakland Wharf. Freight paid, Fire Insurance and Loans effected and proceeds forwarded free of commission. Money advanced at bottom rates, Interest payable at end of loan. Fire Insurance 1% per annum. Short Rates of Storage—First month, 30 cents per ton, or 40 cents per ton if delivered. Each month thereafter 20 cents per ton. Weighing in, free. Weighing out, 10 cents per ton.

**CHAS. H. SINCLAIR, Superintendent,**

Or to the California Dry Dock Co., Office, No. 318 California Street, San Francisco.

## Pocket Map of California and Nevada.

Compiled from the latest authentic sources, by Chas. Drayton Gibbs, C. E. This map comprises information obtained from the U. S. Coast and Land, Whitney's State Geological, and Railroad Surveys; and from the results of explorations made by R. S. Williamson, U. S. A., Henry Degroot, C. D. Gibbs and others. The scale is 18 miles to 1 inch. It gives the Judicial and U. S. Land Districts. It distinguishes the Townships and their subdivisions; the County Seats; The Military Posts; the Railroads built and proposed, and the limits of some of them; the occurrence of gold, silver, copper, quicksilver, tin, coal and oil. It has a section showing the heights of the principal mountains. The boundaries are clear and unmistakable, and the print good. 1878. Sold by **DEWEY & CO.** Price, postpaid, \$2; to subscribers of this journal, until further notice, \$1.

## AMERICAN MACHINE AND MODEL WORKS.

Experimental and Fine Special Machinery, Planing, Gear Cutting, Patterns, Models for Inventors, etc. Printing Press and General Machine Repairing.

Punches, Dies, Taps, Reamers, etc., made and repaired.

**I. A. HEALD, Proprietor.**

514 Commercial Street, above Sansome, San Francisco.

## Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.

## HEALD'S BUSINESS COLLEGE,

24 Post Street  
Near Kearny,  
San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, **E. P. HEALD,**  
President Business College, San Francisco, Cal.

## ROOMS TO RENT.

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

## Seedsman.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc. Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

**B. F. WELLINGTON,**

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.

## CUZCO CORN.

Fresh Seed Direct from Peru.

Price, \$1 per pound in 5-pound bags.

**JOHN GARDNER,**

Care Wightman Bros., 117 Clay St., S. F.

**EXOTIC GARDENS.** F. A. MILLER & CO., Mission St., opposite Woodward's Gardens. Send for Catalogue and Price List.

## Nurserymen.

1,000,000!

Strawberry, Raspberry, Blackberry and Cranberry Plants.

STRAWBERRY PLANTS.—The Essex Beauty, Crescent, Cinderella, Forest Rose, Glendale, Jucunda, Monarch of West, Langthorn Prolific, Triomphe d' Gaud, Wilson Albany.

RASPBERRY PLANTS.—Cuthbert Early, Early Prolific, Reliance, Pride of the Hudson, Brandywine, Herstine, Philadelphia Red, Clark, Heuricetta, Hornet, Belle de Fontenay, Delaware Bristol.

BLACKBERRY PLANTS.—Deering Seedling. Early and the most productive of all. I will give satisfactory proof that these Berries have realized \$750 per acre. It paid more than twice as much as the old varieties; also the Early Cluster, the Vina Seedling, Kittatinny, the Mammoth Cluster, Missouri Mammoth, Dorchester and Lawton.

CRANBERRY PLANTS.—The Cherry Cranberry Vines at \$10 per 1,000, by mail 64 cents more. I will sell to responsible parties on time, part cash, 10-acre field of Cranberry vines under cultivation. Can be seen at the place. Seed for Catalogue.

**H. NYLAND,**

Boulden Island, San Joaquin River.

## Phylloxera-Resisting Vines.

Vineyard proprietors desiring to plant American Grape Vines, which resist the attacks of the Phylloxera, either as Grafting Stock, or for direct production, which proves to be the only salvation and means of reconstructing the destroyed Vineyards of France, will do well to address **BUSH & SON & MEISSNER,**  
Bushberg, Jefferson Co., Mo.

## PEPPER'S NURSERIES.

(Established 1858.)

For sale at reduced prices, a general assortment of Fruit Trees and Small Fruits; also choice Ornamental Shrubs, Roses, etc. A limited supply of Cook's Seedling Apple, one and two years old. Catalogue and list of prices furnished on application. Address

**W. H. PEPPER,**

Petaluma, Sonoma Co., Cal.

## PLANTS GROWN

for transplanting, and Fruit for the market. 100 Acres planted with Berries 100 Varieties of Selected Fruits 100 See New Catalogue for what sorts to plant. Sent free. **JOHN S. COLLINS, Moorestown, N. Jersey.**

## THOROUGHbred POULTRY.

SAFE	UNLIMITED
ARRIVAL	RANGE.
OF	Healthy Stock
FOWLS	116 ACRES
AND	Devoted to the
EGGS	Business.
Guaranteed.	

LANGSHANS. I now breed this justly celebrated Fowl. Send 3c. stamp for price list and circular describing the different breeds I keep. Incubators.

**M. EYRE, Napa, Cal.**

Pamphlet on Breeding, Hatching, Diseases, etc., adapted especially to Pacific Coast, sent for 15c.

## ST. DAVID'S.

A FIRST-CLASS LODGING HOUSE. CONTAINS 113 ROOMS.

715 Howard St., near Third, San Francisco.

This House is especially designed as a comfortable home for gentlemen and ladies visiting the city from the interior. No dark rooms. Gas and running water in each room. The floors are covered with body Brussels carpet, and all of the furniture is made of solid black walnut. Each bed has a spring mattress, with an additional hair top mattress, insuring them the most luxurious and healthy beds in the world. Ladies wishing to cook for themselves or families, are allowed the free use of a large public kitchen and dining room, with dishes. Servants wash the dishes and keep up a constant fire from 6 A. M. to 7 P. M. Hot and cold baths, a large parlor and reading room, containing a Grand Piano—all free to guests. Price single rooms per night, 50 cts.; per week, from \$2.50 upwards.

**R. HUGHES, Proprietor.**

At Market Street Ferry, take Omnibus line of street cars to corner Third and Howard.



## PATENTS AND INVENTIONS.

### List of U. S. Patents Issued to Pacific Coast Inventors.

[From Official Reports for the "Mining and Scientific Press," Dewey & Co., Publishers and U. S. and Foreign Patent Agents.]

FOR THE WEEK ENDING OCTOBER 21st, 1879.

220,803.—WASHING MACHINE—James Carroll, S. F.  
220,751.—WINDMILL—Z. and F. M. Cottle, Oakland, Cal.  
220,757.—APPARATUS FOR MAKING AND LAYING CONCRETE PIPE—E. M. Hamilton and C. N. Earl, Los Angeles, Cal.  
220,758.—ELEVATOR—P. Hinkle, S. F.  
220,766.—TUTTER—McCaffery, S. F.  
220,728.—ELECTRIC LAMP—D. Pendleton, S. F.  
220,789.—CANDLESTICK—A. J. Smith, Ukiah, Cal.  
220,780.—PHOTOGRAPHIC EMBOSSEING PRESS—N. Weston, San Francisco.  
220,777.—STEAM OR WATER ENGINE—A. G. Waterhouse, Sacramento, Cal.  
7,745.—CANNED SALMON AND OTHER FISH—Trademark—W. T. Colman & Co., S. F.  
7,746.—MEDICAL COMPOUND—Trademark—W. McCurdy, Stockton, Cal.  
2,098.—TITLE "NICHOL'S INFALLIBLE INJECTION"—Label—E. H. Baxter, S. F.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect accuracy and in the shortest possible time.

### Horticultural Depot.

Many people have watched with interest the improvements and extensions prosecuted by Thomas Meherin at his old stand on Battery street opposite the postoffice building. He has thoroughly revived the place from the ground upwards. A trim one-story brick building now occupies the frontage on Battery street. In this Mr. Meherin is now fitting up a seed store in neat style, and will soon have it stocked with a full assortment of fresh field and garden seeds. This branch of business is a new feature of Mr. Meherin's establishment, but one rightly belonging to his enterprise, for seeds, plants and trees are nearly related in nature and in purchaser's desires. The rear of the store opens into a conservatory through an archway. The floor of the conservatory is raised a few steps, and to one entering from Battery street the view is very pleasing, embracing, as it does, glimpses of the varied colors and forms of choice indoor plants. From the conservatory the visitor descends steps into the tree yard, which has been well coated with fresh, moist sand, excellent material for preserving the roots of the thousands of young trees which will be on exhibition. As agent for the well-known nursery of B. S. Fox, of San Jose, Mr. Meherin will continue his tree business as heretofore, except that he will have better facilities for showing and handling. Other improvements on the place are a large light basement for potting, another glass house for the propagation of small basket plants and the like, and other minor arrangements. We are glad to see these marks of prosperity in the horticultural trade, and congratulate Mr. Meherin upon his improved facilities for business.

NEW JOURNALISTIC VENTURE.—*La Sonora* is the title of a little weekly just started at Tucson, Arizona, under the editorial management of Mrs. Josephine Lindley Corella. The growing social and commercial relations between Arizona and the State of Sonora suggested the idea of publishing a paper in Spanish, with occasional articles in English, to serve as an interpreter between the two countries; "a paper that, by endeavoring to destroy old prejudices and explain misunderstandings, shall strive to give both peoples, Americans and Mexicans, a better knowledge of each other." Mrs. Corella, the daughter of Judge Lindley, formerly of Los Angeles, is an intelligent and accomplished woman, well fitted, we believe, to succeed in her praiseworthy undertaking, and we extend to her a cordial welcome and Godspeed.

TELEGRAPHING WITHOUT WIRES.—Professor Loomis continues his experiments in the mountains of West Virginia to demonstrate the theory that at certain elevations there is a natural electric current, by taking advantage of which, telegraphic signals may be sent without the use of wires. It is said that he has telegraphed eleven miles by means of kites flown with copper wires. When the kites reached the same altitude, or got into the same current, communication by means of an instrument similar to that of Morse was easy, but ceased as soon as one of the kites was lowered. He has built towers on two hills about twenty miles apart, and from the tops of them has run up steel rods into the region of the electric current.—*Journal of the Telegraph.*

PAMPAS PLUMES.—Mr. H. J. Rhodes, of Carpinteria, Santa Barbara county, is now in this city with a quantity of pampas grass plumes, which are among the best we have ever seen. They are extra large, of fine color, and more elaborately feathered than usual. Mr. Rhodes believes he has a new variety of the plant, and by extra culture has brought it to great perfection. He is acting as his own distributor, and may visit the cities of the coast to bring his plumes to the attention of home decorators.

### Southern California Horticultural Fair.

We are indebted to Secretary Holt for the following list of awards at the fair held in Los Angeles, from October 20th to 26th:

**Vehicles and Agricultural Implements.**  
F. G. Hanna & Co., agl mchry, silver medal, hand corn sheller, dip, harrow, \$5, sulky rake, dip, gang plow, \$5; E. J. Holly, 2-horse cultivator, \$5; C. N. Wilson, beehive, \$3; D. M. Osborne & Co., mower, dip; Bower & Baker, hand plow, \$5; L. H. Titus, fruit gatherer, dip; L. Lichtenberger, 2-horse family carriage, \$10; J. R. McManis, 2d, *Horticultural*; T. D. Culter, open buggy, \$5; Rees & Wirsching, 2d, *Horticultural*; S. W. Luitweiler, 2-seat open carriage, dip, farm wagon, do; Columbus, O., Buggy Co., by H. R. Heslop, agt, lady's phaeton, dip.

**Embroidery, Needlework, Etc.**  
Los Angeles Woolen Co., woolen goods (by factory) silver medal; Mrs. N. C. Carter, hearth rug, \$5; Mrs. A. Parker, 2d, dip; Mrs. de la Guerra, double carpet coverlet, \$2; Mrs. ft. Turner, stocking yarn, \$3; Mrs. L. Utz, rag carpet, \$4; Mrs. E. Naud, knit bedspread, \$5; Teresa Ernst, 2d, dip; Mrs. H. D. Barrows, ottoman cover, \$2; Mrs. S. A. Hicks, table cover, \$2; Mrs. S. J. Hammond, fancy chair cushion and back, \$2, 2d embdy with beads, h m, embdrd picture, \$3; Mrs. Dr. H. Shaw, woolen shawl, \$2, embdy, h m; Mrs. P. W. Dooner, crocheted shawl, \$2; Mrs. Des Autels, lamp mat, \$1; Mrs. E. M. Lindbury, ornamental needlework, \$3; Mrs. T. McCauley, silk embdy, \$3; Miss Julia B. Reichard, embd sofa cushion, \$2; Misses Shackelford, ladies' embd robe, \$2; embd dress gown, \$2, chenilla embdy, \$1; C. Messmer, embdrd children's clothes, \$2; Mrs. E. S. Gillett, embdy with beads, \$1, leaf wk, \$3, pin cushion, \$3; Miss M. Thomas, tatting collar, \$1, 2d wkdk hdkf, h m; Mrs. R. A. Rising, 2d tatting collar, h m; Mrs. L. H. Michener, calico dress, \$5; Delphina Morano, wkdk hdkf, \$2; Prenta Ballesteros, var linen embdy, \$3; Stella Lanterman, 2d, h m; Miss K. S. Smith, wax flowers, \$3, wax wk, \$5; Amy S. Smith, moss wk, \$3, flower wk, \$3; Mrs. L. C. Serrot, braid of straw or grass wk, \$2; Mrs. M. S. Baker, 2d, embdrd picture, h m; Mrs. R. Turner, wrkdt quilt, \$3; Mrs. J. B. Reichard, silk quilt, \$3; Mrs. W. T. Lambie, patchwk quilt, \$3; Mrs. A. M. Barthell, 2d, h m; Rafaela Zuniga, hair wk, \$5, wrstd wk, h m; Manile Ball, hair wk, h m; Obdulla Niemeyer, wrstd wk, \$3; Mrs. M. Starr, tidy, \$3; Mrs. ft. L. Shaug, pin cushion, h m; Mrs. T. H. Smith, lamp mat, \$2; Mrs. R. Malcolm, pillow sham, \$2; Mrs. Dr. H. Shaw, 2d, h m.

**Various Manufactures.**  
H. Heinsch, harness and saddlery, silver medal, double harness, \$5, single harness, \$5, Mexican saddles, \$5, saddles and bridles, \$5, saddle trees, \$3; Anaheim Tannery, leather, \$5; G. Stone, home made boots and shoes, silver medal, dress boots, \$3, heavy boots, \$3, gents' dressshoes, \$3, Congress gaiters, \$3, ladies' slippers, \$2, ladies' gaiters, \$2, booties, \$2; Perry, Woodworth & Co., marbleized iron, dip; C. E. Day, parlor organ, dip; Dotter & Bradley, bureau, \$5, sofa, \$3, display table, \$5, parlors chairs, \$5, parlor furniture, \$10, extend furniture, \$10, spring bed, \$3, bed-room furniture, \$5, upholstery, \$5; Mirror printing office, book-binding, \$5, printing, silver medal; T. Dunne, broom corn, brooms and brushes, silver medal; A. E. Sanford, acroll sawing, \$3; J. S. Taylor & Co., yeast powder, silver medal; G. A. Armstrong, matches, \$5; Asbestine Stone Co., water pipe of water line, \$5, drain tile, \$3, flooring, \$2; Stone & Co., sk salt, \$2; G. N. Wilson, bbl lime, \$3; John T. Reed, colleen minerals, dip; R. W. Waterman, colleen fishes, dip; Asbestine Sub-Irrigation Co., system sub-irrigation, silver medal.

**Agricultural Products.**  
N. W. Blanchard, sk flour, \$5; W. Gillette, white corn meal, \$3; D. Rabb, wheat, \$5; Miles Bros., 2d, *Horticultural*; J. L. Lauterman, barley, \$5, rye, \$5, oats, \$5; F. R. Slaughter, 2d oats, *Horticultural*; J. S. Ward, alfalfa seed, \$5; S. Washburn, yellow corn, \$5; A. J. Spencer, white corn, \$5; S. C. Hammer, red potatoes, \$3, var fresh potatoes, \$2, sweet potatoes, \$3; O. N. Cadwell, white potatoes, \$3; M. Boardley, any other var, \$3; S. Washburn, carrots, \$2; J. G. Durrell, Hubbard squashes, \$2; J. R. Truman, pumpkin, \$3; M. Serrott, cream sweet corn, \$2; Asbestine Sub-Irrigation Co., mountain sweet watermelons, \$2; F. A. Coffman, watermelons, any other var, \$3; O. N. Cadwell, Lima beans in pod, \$2, garden peas in pod, \$2; L. De Bequette, white beans dry, \$2; M. Serrott, kidney bush beans, \$2; G. H. Peck, castor oil beans, \$2.

**Dairy and Domestic.**  
B. Machado and R. J. Valdez, cheese, \$5; F. J. Baretto, butter in roll, \$10; M. W. Talbot, 2d, *Horticultural*; Mrs. E. K. Green, domestic corn bread, \$2, domestic rye bread, \$1; Mrs. C. Boyd, biscuit, \$1, brown bread, \$2, display bread, \$5; Mrs. E. Graham, wheat bread, \$2; Lizzie Spencer, bread made by young lady not over 16 yrs, silver medal; O. N. Cadwell, syrup from grapes, \$10.

**Produce, Fruit, Etc.**  
M. Thomas, northern fruits grown by one man, silver medal, apples, \$5, 12 varieties apples, \$5; O. N. Cadwell, 2d apples, *Horticultural*; pears, \$5, 6 varieties pears, \$3, 3 do, \$2; J. McCoy, 2d 12 varieties apples, *Horticultural*; P. A. Forsee, 6 varieties apples, \$3; M. D. Halladay, 3 varieties apples, \$2; Rev. C. F. Loop, 2d pears, *Horticultural*; Dr. O. H. Congar, peaches, \$5; J. M. Asher, 2d peaches, *Horticultural*; E. M. Hamilton, peaches, \$2; G. D. Compton, plums, \$2; R. Strong, green figs, \$3; J. Grelek, dis Japanese persimmons, \$5; R. Strong, grapes, silver medal; Mrs. N. O. Stafford, 12 varieties table grapes, \$10, 1 variety table grapes, \$3, 6 varieties white grapes, \$5; J. Boyd, 2d variety table grapes, *Horticultural*, 2d variety white grapes, *Horticultural*; F. A. Kimball, white grapes, \$3; G. D. Carleton, raisins, silver medal; H. A. Washbrook, 2d raisins, \$10; J. Boyd, 3d raisins, *Horticultural*; A. J. Twoogood, raisins, crop of 1873, \$5; C. N. Wilson, honey, \$3; A. J. Davidson, 2d do, *Horticultural*; Mrs. E. Doan, fruit in glass, \$5; Miss J. Harrold, raspberry jelly, \$2; Miss F. Dye, red currant jelly, \$2; Mrs. L. C. Serrot, blackberry jelly, \$2; Miss S. H. Smith, strawberry jelly, \$2; Mrs. L. C. Serrot, quince jelly, \$2; Mrs. M. A. Collier, apple jelly, \$2; Miss F. C. Grova, blackberry jam, \$2; Miss J. Harrold, raspberry jam, \$2; Mrs. M. A. Shields, preserves in glass, \$5; Mrs. C. E. Robinson, pickles in glass, \$2; Mrs. M. A. Shields, branded peaches, \$2; J. De B. Shorb, olive oil, silver medal; W. C. Kimball, pickled olives, silver medal, soft-shell almonds, \$3; O. N. Cadwell, dried apples, \$2, dried pears, \$2, dried apricots, \$2, dried nectarines, \$2, English walnuts, \$3; H. A. Washbrook, dried figs, \$5; Mrs. D. H. Shaw, 2d Eng. walnuts, *Horticultural*; M. Serrott, peanuts, \$1; Cook & Sons, package for shipping small fruits, \$2, do for shipping grapes, \$2, do for shipping peaches, \$2, do for shipping plums, \$2, do for shipping pears, \$2; J. Boyd, dried peaches, \$2.

Fisher, Richardson & Co., exhibit citrus family, silver medal; G. D. Compton (by T. A. Garey, agent), 2d exhibit citrus family, *Horticultural*, seedling orange trees, \$5; Fisher, Richardson & Co., budded orange trees on orange stock, \$5, do on other stock, \$5; G. D. Compton (by T. A. Garey, agent), budded lemon trees on other stock, \$5; L. L. Bequette, exhibit deciduous fruit trees, \$10.

**Wines, Etc.**  
J. De B. Shorb, grape brandy, \$10, 2d white wine, h m, sweet wine, \$10, California sherry, \$10, largest variety brandies, silver medal; W. Konig, white wine, \$10, argelia, \$10.

In regard to port wine, the committee were unable to decide between W. Konig's and J. De B. Shorb's.

**Floral.**  
J. Grelek, ornamental foliage plants, \$5, new and rare plants, \$5, roses in bloom, \$5; Mrs. H. M. Rosenbaum, cut flowers, \$5; A. Strauss, bouquets, \$5.

**Fine Arts**  
Mrs. J. C. Littlefield, portrait in oil, \$10; Mrs. W. H. Mace, landscape in oil, \$10; Mrs. T. H. Smith, 2d do, h m; Mrs. C. E. Robinson, landscape in water colors, \$10; Tuttle & Parker, photographs, silver medal; Mrs. E. B.

Clark, paintings by 1 artist, \$20; Mrs. T. H. Smith, animal painting, \$10; Mrs. E. B. Clark, landscape crayon drawing, \$10; Mrs. A. J. Davidson, crayon portrait, dip; Kysor & Hennessy, design for farm house, dip, architectural design, dip.

**Miscellaneous.**  
Miss T. Ernest, painting on velvet, h m, scrap bag, h m, straw and worsted work, h m; Miss L. Condit, wall pocket, h m; Mrs. E. F. Kysor, putty paper-holder, h m; Mrs. A. de Aults, lace work, h m; Mrs. H. M. Winter, lady's silk dress, h m; E. B. Robinson, cord net, h m; Mrs. M. Hinde, china and glassware, h m, silk apron, h m; Miss M. F. Weber, painting on shells, h m; Mrs. M. S. Baker, Applique bracket, h m; Mrs. Mary Shields, handkerchief box, h m; E. Wyatt, leather work, h m; Miss V. Barthill, darned lace work, h m; Miss S. Bailey, corn husk and quilt basket, h m; Miss L. Condit, crocheted basket, h m; Miss T. Ernest, spatter work, h m; Miss L. Condit, crocheted collar, h m; Wheeler & Wilson Mangle Co. (by E. C. Glidden, agent), sewing machine work, h m; Miss F. Dye, felices, dip; Mrs. A. L. Price, melon-rind preserves, dip; Mrs. F. C. Howes, lemon cling peaches, h m; S. Whitmore, Guava jelly, h m; Mrs. Dr. ff. Shaw, limes, h m; Jewett & Keith, Italian chestnuts, h m; L. H. Titus, semi-tropical fruits, h m; W. S. Chapman, Navel oranges, h m; J. Boyd, oranges, h m; C. Grelek, passion fruit syrup, h m; E. K. Green, medlars, h m; J. Boyd, fruit dried by children, h m; J. M. Asher, bananas, dip; J. N. Cooper, variety pears, dip; J. B. Clapp, pomegranates, dip; J. McCloy, guinea, dip; J. W. Venable, canary seed, dip, chufas, dip; J. A. Nichols, early amber cane, h m, snapbeans, h m; Ynez Shorb, toilet set, h m.

### Nevada State Fair Awards.

We print below the awards in the Agricultural, Horticultural, Dairy and Culinary Departments at the recent fair of the Nevada State Agricultural, Mining and Mechanical Society, which was held in Reno and closed on the 11th ult. The data for publication could not be obtained sooner, as the books were undergoing revision by the officers of the society:

**Horses.**  
Thoroughbred Horses—J. W. Dean, stallion, Chancellor, dip; T. Winters, stallion, dip.  
Graded Horses—A. A. Longley, mare, Maggie, \$15.  
Horses of All Work—J. Mayberry, stallion, Gen. Mack, \$25; R. Jones, 2-yr-old stallion, \$15; G. S. Smith, stall, 1 yr, Prince, \$10; L. Dean, mare, Lizzie, 4 yrs and over, \$20; G. S. Smith, 3-yr-old filly, \$15; E. G. Winnie, 2-yr-old filly, Lottie, \$10.  
Draft Horses—J. A. Perry, 3-yr-old stallion, Pathfinder, imported Norman, \$25; W. Ede, 2-yr-old stallion, Young Franklin, \$15; L. Dean, mare, Georgia, 4 yrs and over, \$20; S. Ede, filly, Lady Norman, \$5; A. A. Longley, Norman stallion, Barum, sire and 5 colts, \$40; S. Ede, matched team, "The Kite," \$20; L. Dean, gelding, Charley, 4 yrs and over, \$15, 3-yr-old gelding, Sam, \$10.  
Roadsters—G. Doherty, stallion, Thoughtful, 4 yrs and over, \$20; F. M. Cramer, 3-yr-old stallion, Sir Whiz, \$20; R. V. Borden, gelding, Col. Perry, 4 yrs and over, \$25; B. V. Winnie, 2-yr-old, Bud L, \$15; F. M. Cramer, mare, Nettie C, 4 yrs and over, \$20; G. Doherty, mare, Lillie D, 3 yrs, \$15.  
Saddle Horses—J. J. Marsh, gelding, Prince, \$15.  
Sweepstakes—W. A. Perry, stallion, Royalty, gold medal; A. A. Longley, mare, Maggie, medal.

**Jacks.**  
Jacks—W. J. McKee, Golconda, \$20.  
**Cattle.**  
Durhams—Mrs. R. H. Hickman, bull, King David, 4 yrs and over, certificate; C. Younger, bull, Ardria Thorndale, 4 yrs and over, \$50, Second Ardria Duke, 1 yr, \$5, cow, Rosa Nell, 4 yrs and over, certificate, cow, Gem, \$30, cow, Second Rosa Nell, 3 yrs, certificate, Red Dolly Second, \$10, Fourth Rosa Nell, 1 yr, \$5, herd of Ardria Thorndale and cows Rosa Nell, Second Rosa Nell, Gem and Red Dolly Second, \$50; R. F. Leete, Roan Maggie, 3 yrs, \$20.  
Alderneys—Mrs. R. H. Hickman, Maud, 4 yrs, \$30.  
Graded Cattle—B. F. Leete, cow, Cherry, 4 yrs, \$10, Suke, 3 yrs, \$5.  
Sweepstakes—Mrs. R. H. Hickman, bull, King David, medal, corn recm medal for Jersey cow, Maud; B. F. Leete, cow, Maggie, medal.

**Sheep.**  
Spanish Merinos—J. Guthrie, ram, 2 yrs, \$10, ram, 1 yr, \$5, 3 lambs, \$5.  
Shropshires—J. Guthrie, 5 graded lambs, \$5, ram, 2 yrs, \$10.  
French Merinos—Mrs. R. Blacow, ram, 2 yrs, \$10, ram, 1 yr, \$5, 5 ewes, 2 yrs, \$10.

**Goats.**  
Angoras—J. S. Harris, buck, 2 yrs and over, \$10, buck 2 yrs, \$5.

**Swine.**  
Essex and Berkshire—J. Guthrie, pig under 1 yr, \$2.50, pig, 6 mos, \$2.50.  
Sweepstakes—J. Guthrie, boar, medal, sow, medal.

**Poultry, Etc.**  
E. Bates, Houdans, \$3; G. Starling, Black B. R. Games, \$3; Pyle Games, \$3; G. Manning, Bantams, \$3; G. Wolfenburger, Guinea fowls, \$3; C. Pollard, Bronze turkeys, \$3; Mrs. C. S. Varian, ducks, \$3.

**Farm, Orchard, Dairy, Etc.**  
(Competition limited to products of Nevada or California east of the Sierra Nevada.)

Grain—G. Alt, wheat, \$5, barley, \$5.  
Hops—C. Reed, \$2.50.  
Hay—E. C. Sessions, baled hay, \$2.50.  
Vegetables and Fruits—Wm. Frost, Early Rose potatoes, \$2.50; M. Flugoli, Peerless potatoes, \$2.50; Wm. Frost, Peerless potatoes, \$2.50; O. Sessions, Centennial potatoes, \$2.50; C. Reed, parsnips, \$1, carrots, \$1; J. M. Huyek, blood beets, \$1; C. Reed, lump beets, \$1; H. Steiner, sugar beets, \$1; C. Reed, tomatoes, \$1; M. Flugoli, 25-lb cabbage, \$1; C. Reed, lettuce, \$1, marrowfat squash, \$1; J. M. Huyek, Hubbard squash, \$1, crooked necked do, \$1; C. Reed, sweet corn, \$1; O. C. Ross, watermelons, \$1; H. Steiner, cucumbers, \$1; Mrs. F. B. Marshall, cantaloupes, \$1; W. N. Knox, butter beans, \$1, cranberry beans, \$1, white field do, \$1; C. Reed, peas, \$1, table of vegetables, medal; C. C. Powning, sample oats, from R. ff. Crocker's farm, hon man; W. Marsh, broom corn, hon man; A. Barges, corn stalks, hon man; H. P. Stickney, Neshanock potatoes, dip, Centennial do, hon man; G. Alt, superior potatoes, prem; Mrs. J. Gault, yellow tomatoes, hon man, musk melons, do; M. Flugoli, musk melons, dip; H. H. Hogan, egg plant, hon man; Fannie Coates, sunflower, hon man; H. Steiner, Guinea eggs, hon man; R. P. M. Greeley, 6 squashes on 1 vine, dip; M. Flugoli, sweet potatoes, \$1; T. E. Haydon, strained honey and beeswax, dip.

Fruits—F. Whitney, var apples, \$5; C. Reed, var apples, \$5; F. Whitney, pears, \$5; J. C. Lewis, peaches, \$5; C. Reed, currants, \$2.50; D. Utley, S. Brown and Mrs. J. Mullen, each hon men for samples of apples; Eddie Northrup, strawberries, dip.  
Flowers—R. P. Chapin, collen flower plants, \$1, collen foliage plants, \$5; Mrs. C. McNealey, flowers, \$5; R. P. Chapin, bouquet, \$5, conservatory plants, \$5, hanging baskets, medal.  
Vick's Floral Premiums—Mrs. C. McNealey, for ornamental floral work.  
Dairy Products—E. S. McClellan, cheese, \$5; display of cheese, \$10; O. Sessions, butter in rolla, \$5; Mrs. G. Alt, Arkin butter, \$5.  
Domestic Products—Miss E. Frieza, bread, \$1.50; Mrs. L. W. Lee, jellies, \$2.50, preserves, \$2.50. For Mises under 10 and over 12: Cora Manning, raspberry jam, \$1.

For Mises under 12: Hattie Lane, hop yeast bread, \$1; Nellie Gault, biscuits, \$1; Lillie Stalkor, mince pie, \$1; Cora Manning, cakes, \$2.50; Kitty Loomis, jelly cake, \$1.

### Plumas, Lassen and Modoc Fair Awards.

The following are premiums for stock exhibits at Susanville, October 27th to 31st:

**Horses.**  
Thoroughbred Horses.—Stallion, G. M. Stratton's Echo, \$40. Mares, G. M. Stratton's Mollie II, \$35; 2d, D. Mitchell's Maggie S, \$15.  
Horses of all Work.—Stallions, 4 yrs and over, A. L. Tunison's Geo. Culver, \$25; 2 yrs, C. Hart's Champion, \$15; 1 yr, F. J. Brown's Newton, \$10. Mares, C. Hart's Nancy, \$10, colt under 1 yr, C. Hart's Nellie.  
Draft Horses.—Stallions, 4 yrs and over, A. Bantley's Gilbert, \$25; 1 yr, Wm. Brockman's Bismark, \$10. Mares, 4 yrs and over, F. J. Brown's Dinah, \$20; matched team, J. P. Sharp's mares, Kit and Colly, \$20.  
Roadsters.—Stallion, 4 yrs and over, S. Lee's Red Cloud, \$25. Gelding, 4 yrs and over, C. W. Moulthrop's Carlisle, \$25. Mares, 4 yrs and over, E. V. Spencer's Belle Spencer, \$20; 3 yrs, Geo. Doherty's Lily D, \$15.  
Carriage Horses.—Matched span, D. Newman's Washoe and John, \$20.  
Saddle Horses.—P. J. Goumaz's Jim, \$15.  
**Mules.**  
Span Mules.—L. E. Winchester, \$20. Jack, E. Bonyman's Stonewall, \$20.  
**Sweepstakes.**  
**Cattle.**  
Short Horned Durhams.—Bulls, 4 yrs and over, Brown Prince, \$20, calf under 1 yr, Stonewall, \$5. Cows, 4 yrs and over, Florie, \$20, Fannie, \$5, M. Cain.  
Graded Cattle.—Bulls, 1 yr, Harry, \$5, calf under 1 yr, Roudo, \$5. Cows, 4 yrs and over, Kit, \$2, 3 yrs, Annie, \$5, 2 yrs, Rose, \$5, 1 yr, Nellie, \$5, M. Cain.  
Sweepstakes.—Yoke work oxen, P. Bagan's Red and Roan, \$20.  
**Sheep.**  
French and Spanish Merino.—Merino buck, \$10, lot ewes, \$10, Perkins Bros.  
Sweepstakes.—Ram, any age or breed, \$10, ewe, \$5, Perkins Bros.

**Advertising Hints.**  
My success is owing to my liberality in advertising.—*Bonifer.*  
How can the world know a man has a good thing unless he advertises the possession of it?—*Vanderbilt.*  
Advertising is the oil which tradesmen put in their lamps. They that are unwise put no oil in.  
People are quite apt to go where their attention is called. If they find things as represented, they will purchase in preference to spending their time elsewhere.  
The road to fortune is through printer's ink.—*P. T. Barnum.*  
Frequent and constant advertising brought me all I own.—*A. T. Stewart.*  
Success depends upon a liberal patronage of printing offices.—*J. J. Astor.*  
My son, deal with men who advertise, you will never lose by it.—*Benj. Franklin.*  
Where is "parts unknown?" asks a correspondent of the *Danbury News*. Bailey answers: "Where they don't advertise." Though Bailey does say it, this is no joke.

**OUR AGENTS.**  
OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.  
J. L. THARP—San Francisco.  
B. W. CROWELL—California.  
A. C. KNOX—Pacific Coast.  
S. V. BLAKESLEE—California.  
G. W. MCGREW—Santa Clara county.  
MILTON KENNEDY—Kern and Inyo counties.  
J. B. BACHLEDER—Shasta County, Cal.  
H. H. MESSENGER—Arizona.  
THOS. H. MANNING—Nevada, Idaho and Montana Ter.  
CAPT. W. H. SEAMEN—Arizona.  
M. P. OWEN—Santa Cruz County.  
H. E. HALLERT—Los Angeles County.

**Books on Agriculture, Etc.**  
The following among other books will be sent post-paid on receipt of publishers' prices, annexed:—Tobacco, its culture, manufacture and use, 500 pages, \$3.50.—The Patrons of Husbandry, 500 pages, \$3.75.—The Women of the Bible, 77 engravings, \$4.—Wells' Every Man His Own Lawyer, 612 pages, \$2.75.—American Husbandry, 2 vols., \$1.50.—Gray's Agricultural Essays, \$1.—Langstroth's Honey Bee, \$1.50.—Randall's Sheep Husbandry, \$1.50.—Agricultural Engineering, \$1.50.—New Bee-Keepers' Text Book, \$1.—Pacific Rural Handbook, \$1.—Ropp's Easy Calculator, \$1.—U. S. Land Law, 50 Cts.—Woodward's Grapes, Etc., \$1.—Sugar from Melons, 25 Cts.—Strawberry Culture, 50 Cts.—Laynes' Belles Lettres, \$1.—Holt's Map of California, and Nevada, to subscribers, \$1.—Back Volumes PACIFIC RURAL PRESS (bound \$5; unbound, \$3)—Picturesque Arizona, \$2. Address DEWEY & CO., Publishers, 202 Sansome St., S. F.

We have received a copy of the "Pacific Rural Handbook," from Dewey & Co., publishers, San Francisco, an elegantly written, printed and bound volume devoted to horticulture, fruit growing and kindred subjects of interest to farmers and others who have an inclination to beautify their homes. The author is Chas. H. Shinn, a gentleman who has many acquaintances and friends in this locality. Mr. Shinn brings to his aid a long experience in the matters upon which he treats, which gives his theories and ideas the advantage of being of practical worth. The book is written in a pleasant and instructive vein, and should be read by all those having a desire to receive instruction in the culture of trees, vegetables and flowers. It is a valuable addition to any library. Price only one dollar, postpaid. Address Dewey & Co., publishers.—*Haywards Journal*, April 12th, 1879.

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zooglyphicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

HOW TO STOP THIS PAPER.—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing to it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate the copy sent.

JOHN RIDER, of Sacramento city, shipped on October 11th, to J. H. Orcutt, of San Luis Obispo, one pair of thoroughbred Berkshire pigs.

EXTRA COPIES can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.

THOMAS DENBORN will oblige us by sending his P. O. address to this office.



# S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, November 5th, 1879.

The Grain trade has been marked by general quiet, except a larger list of transactions in Barley and an advance of about 5c per cbl on Corn. Wheat is selling at a decline of 5c to 10c per cbl from the extreme rate fixed two weeks ago, but trade is slow at these figures and holders are confident of improvement.

The English market has advanced 1d during this week, as may be seen by the following:

#### Range of Cable Prices of Wheat.

This course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday.....	10s	9d@11s	8d	11s	6d@12s	—	—	—
Friday.....	10s	9d@11s	8d	11s	6d@12s	—	—	—
Saturday.....	10s	9d@11s	8d	11s	7d@12s	—	—	—
Sunday.....	10s	9d@11s	8d	11s	7d@12s	—	—	—
Monday.....	10s	9d@11s	8d	11s	7d@12s	—	—	—
Tuesday.....	10s	9d@11s	8d	11s	7d@12s	—	—	—
Wednesday.....	10s	9d@11s	8d	11s	7d@12s	—	—	—

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1877.....	12s	7d@12s	11d	12s	10d@13s	3d	—	—
1878.....	9s	8d@9s	11d	9s	10d@10s	2d	—	—
1879.....	10s	9d@11s	9d	11s	7d@12s	—	—	—

#### The Foreign Review.

LONDON, November 4.—The *Mark Lane Express* says: Really sound Grain fit for milling or sowing has been comparatively rare, and was unaffected by a decline of 1s@2s per quarter, which has been generally quoted. Trade has been very dull. If no further decline occurs in foreign Wheat before the approaching closing of the Baltic ports by ice, there appears sufficient strength in trade to withstand the action of America, without the present range of values undergoing much alteration during the winter. Even if a slight further fall occurs, it is more than likely it will be speedily recovered under the influence of the increased demand for France. The local trade has been very quiet throughout the week, with only a moderate speculative demand. Speculators are anxious to realize. The prices received about 1s per quarter for all descriptions of foreign Wheat. Indian Wheat has been arriving more freely, and has attracted a fair share of attention, though activity therein will probably be less marked than in 1878, when large arrivals very sensibly interfered with the sale of Russian and American descriptions. The depression in Wheat continued until Thursday, when the decline since Monday amounted to 2s per quarter. Sales, however, were few. A reaction has since occurred, and 1s@1s 6d of the decline has been recovered. The demand for Maize has been small, and it has receded 6d per quarter. Business in Wheat to arrive has been very restricted, and Red Winter declined 2s@2s 6d per quarter during the week, both on passages and for shipment, but 1s@1s 6d has since been recovered. Barley is quiet and steady. Maize has fallen fully 6d per quarter.

#### Freights and Charters.

The latest charters are the ship *City of Philadelphia*, 1,547 tons, Wheat to Cork, £3 2s 6d, prior to arrival; ship *Florida*, 1,414 tons, Wheat to Cork, £2 5s, also prior to arrival. Ships continue to arrive in ballast and otherwise, to load Wheat.

#### Exports of Breadstuffs.

There was quite a lively demand for Flour at this port last month. Orders were free from Great Britain, Central America and China. An advancing market brought in buyers and hastened transactions. The shipments were 50,692 bbls, valued at \$276,646.

The Wheat cargo clearances at this port last month were the most numerous in a long time. The details are as follows: 1,078,302 cbls, valued at \$3,834,096.

#### Eastern Grain and Provision Markets.

NEW YORK, November 3.—The Merchandise markets generally are quiet, but firm. Flour is steady. Wheat is quiet, irregular. Barley is dull. Provisions are quiet. Rio Coffee is steady, in moderate demand. Refined Sugars are in good demand, firm.

CHICAGO, November 1.—The week closing to-night, although not as exciting as the two weeks preceding, has been crowded with business, and the aggregate movement of Grain has been over 7,000,000 bushels, and would have been very much larger, but for the embargo on business caused by the paucity of cars. Every department of business is so active that the railroad cannot begin to supply the demand for cars, and receivers and shippers of Grains are much annoyed at the poor accommodations accorded them. Wheat was very unsettled and other grains sympathized closely with all its movements. Provisions were unsettled and irregular, the general tendency being to very much lower prices under the influence of heavy receipts of Hogs, which were 223,000, against 150,000 the corresponding week last year. There is some reason for the belief that parties are running the Grain and the Provision business. Closing prices for November: Wheat, \$1.15; Corn, 42c bid; Oats, 32c; Pork, 89.35 bid; Lard, \$6.20@6.25.

#### Eastern Wool Markets.

NEW YORK, November 1.—Wool continues in demand at full prices. Offerings are made with indifference. Lots of California, fall clip, now coming forward, have to a considerable extent been sold to arrive, and from both first and second hands are offered indifferently. Sales embrace 225,000 lbs Fall California at 20c@27c; 9,000 lbs Spring, 2,000 lbs scoured, private.

PHILADELPHIA, November 4.—Wool firmer and higher, with an upward tendency. Supply very light. Oregon fine, 30c@35c; medium, 33c@37c; coarse, 30c@35c; California fine, 30c@35c; medium, 33c@37c; coarse, 30c@35c; New Mexico and Colorado fine, 25c@30c; medium, 25c@30c; coarse (carpet wool), 22c@25c; pulled, extra Merino, 37c@43c; super, 37c@43c; lambs' super, 38c@45c.

BOSTON, November 1.—In Wool, the past week has been the most active on record, total sales reaching 6,719,300 lbs, of which 1,181,500 lbs were foreign. The prices of nearly all kinds advanced from 2c to 3c per lb, and the tendency of the market is decidedly upward. It is doubtful if any considerable amount of Wool could now be bought without leading to another advance of 2c. Notwithstanding the large transactions, there is no unusual excitement in the market. There is more or less speculative inquiry, but the bulk of sales have been to manufacturers, who are free purchasers of all desirable Wools. All available lots of Combing and Delaine fleeces have been taken; Foreign Wool is in good demand. Sales include Ohio, and Pennsylvania, XX, XXX and No. 1, at 42c@49c; Michigan X and No. 1, 40c@45c; Wisconsin X and No. 1, 40c@44c; New Hampshire X, 40c@42c; New York X and medium, 38c@45c; Combing and Delaine fleeces, 40c@47c; unwashed combing, 32c@35c; Kentucky and Missouri, 32c@37c; Georgia, 43c; Oregon, Eastern and Valley, 28c@36c; Texas Fall, 25c@35c; Territory, 24c@33c; unwashed and unmerchantable fleeces, 25c@37c; tub washed,

42c@50c; scoured, 45c@72c; Super and X pulled, 37c@50c. California Wool is active. Sales are the largest ever reported, comprising for the week 869,000 lbs of Spring and No. 1 at 22c@37c, and 224,000 lbs Fall at 18c@32c.

#### New York Dried Fruit Markets.

NEW YORK, November 4.—There continues an active demand for leading foreign Fruits at full prices, but business is restricted by the smallness of supplies in first hands. The season thus far has been the most active on record. The distribution of Raisins has been unprecedented. The market is very firm. Sales of Layers at \$2.40; halves, \$1.25; London Layers, \$2.60@2.70. Prunes are less active, but firm. Figs are in good demand and unchanged. Dried Apples are active and firmer; evaporated, 10c@14c; new State, 5c@6c; quarters, 6c@6c; Western quarters, 3c@5c; Southern, 6c@10c; quarters, 5c@5c; State Plums, 15c@16c.

#### Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon to-day as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Oct. 15.	WEEK. Oct. 22.	WEEK. Oct. 29.	WEEK. Nov. 5.
Flour, quarters sacks.....	30,790	49,576	88,908	59,237
Wheat, centals.....	582,824	483,130	353,222	465,381
Barley, centals.....	73,644	66,311	62,933	46,039
Beans, sacks.....	5,006	9,925	17,167	18,510
Corn, centals.....	2,823	2,703	3,619	4,305
Oats, centals.....	22,116	12,134	6,502	22,819
Potatoes, sacks.....	22,683	26,237	27,200	18,921
Onions, sacks.....	2,416	3,066	2,574	1,551
Wool, bales.....	7,214	6,252	6,739	4,075
Hops, bales.....	2,698	927	562	868
Hay, bales.....	2,026	1,542	1,732	1,268

BAGS.—The only change is a fraction off on prices of Gunnies and Bean Bags.

BARLEY.—There has been more life in the trade, but prices are within former ranges. We note sales of 1,000 sks choice Coast Brewing at 65c; 700 and 200 do good do, 85c; 700 do bright Coast Feed, 77c; 1,500 do old do, and 1,000 cbls new do, 72c; 500 do old do, 70c.

BEANS.—An advance of 3c@5c per cbl is noted for Pea, Red, Pink and Small White Beans. Limas have improved about 50c per cbl, owing to active demand for Eastern shipment.

CORN.—The market advanced on Monday and since then has held firm without change. We note sales of 320 sks Large Yellow at 95c; 200 cbls White at 95c; 200 cbls Large Yellow at 97c per cbl.

DAIRY PRODUCE.—The decline of Butter and the advance of Cheese have continued during the week. Single boxes of fancy brands still bring occasionally 37c@37c, but the bulk of really good lots has dropped to 25c@32c, or below. Cheese has sold as high as 18c per lb thus far.

EGGS.—The range is unchanged.

FEED.—There has been a sharp advance in Mill Feeds.

BRAN is \$17@18; Corn Meal, \$22.50@23.50; Mill Feed, \$20 @21 per ton; Hay is quiet and unchanged.

FRUIT.—Muscats and Tokays have increased arrivals somewhat and have lost last week's advance. The fancy varieties, Cornichon and Purple Damascus, still hold above the dollar. Larger receipts of Mediterranean Lemons have reduced prices. Pears are selling higher. The market is well supplied. Raspberries and Strawberries have advanced considerably.

FRESH MEAT.—Fresh Beef is abundant and prices unchanged. Hogs are a shade firmer, with plenty arriving; Mutton and Lamb are a shade firmer.

HOPS.—The top is now 37c for choice California. We note sales: 27 bales California, 37c; 29 bales Washington Territory, 32c; 30 bales do, 35c. Emmet Wells, in his New York circular, of October 24th, says:

The continued heavy export movement has caused a further advance on choice new Hops of 3c per lb; sales having been effected this week at 43c, and bids as high as 45c made in some instances, but declined by holders. Our brewers are just beginning to wake up to a realizing sense of the situation, and are feeling around to see what they can buy; they find but few good Hops offering below 40c, while 45c is generally asked.

OATS.—Large amounts of Oats are now arriving from the north, and the market is less firm than for several weeks past. We note sales: 400 sks Humboldt Feed at \$1.25@1.32, and 100 do at \$1.27c per cbl.

ONIONS.—Silverskins now range from 60c to 75c per cbl. Choice lots are now sought after.

POTATOES.—There is a slight tendency toward better prices in the last two days' trade.

POULTRY AND GAME.—There is no change from the rates given last week.

PROVISIONS.—The prices of Meat products are unchanged since our last report, and the demand remains about the same. The price of the raw product has advanced both here and at Eastern packing points.

VEGETABLES.—Chile Peppers and Green Peas have gained a little. Marrowfat Squash is in excess and weak, \$6 per ton being a high price for it to-day. Summer Squash and Tomatoes are also lower.

WHEAT.—Ruling rates are about 5c@10c lower than two weeks ago, but sales are few. We note the following sales: 200 sks good Milling at \$2; 1,000 do No. 2 at \$1.97; 500 do do at \$1.95; 200 do Coast at \$1.72; 3,800 sks and 50 tons No. 1 at \$2.05; 450 tons good Shipping at \$2.03; 217 sks good Milling at \$2; 400 sks Coast at \$1.88; 120 tons off grade at \$1.87; and 80 tons fair Shipping at \$1.95.

WOOL.—Our price list shows an enhanced value in nearly all grades. We note sale of 200,000 lbs Northern at 22c@27c.

#### BAGS AND BAGGING.

JOBBER PRICES.			
WEDNESDAY M., November 5, 1879.			
Eng Standard Wheat, 11 @12	Eighths.....	33c @	4
California Manufacture.	Hessan, 60 inch.....	— @	4
Hand Sewed, 22x36, 11 @12	45 inch.....	9 @	10
24x36.....	11 @12	40 inch.....	8 @
24x40.....	12 @12	Wool Sacks.....	8 @
24x40.....	12 @12	Hand Sewed, 34 lb. 44 @45	
24x40.....	13 @13	4 lb do.....	47 @
Machine Sd, 22x36.....	11 @11	Machine Sewed.....	45 @
Flour Sacks, halves.....	8 @10	Standard Gunnies.....	14 @
Quarters.....	5 @ 6	Bean Bags.....	6 @

Gold, Legal Tenders, Exchange, Etc. [Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, November 5, 3 P. M.

SILVER. GOLD BARS, \$90@910. SILVER BARS, 10@18 3/4 cent. discount. EXCHANGE on New York, 20 on London bankers, 49 1/2 @ 49 1/2. Commercial, 60; Paris, 5 francs 50 cent; Mexican dollars, 92. LONDON Consols, 97 13-16; Bonds (4%), 106 1/2. QUOTATIONS in S. F., by the task, 1/2 lb, 3 1/2c.

## DOMESTIC PRODUCE.

(WHOLESALE.)

WEDNESDAY M., November 5, 1879.

BEANS & PEAS.  
Bayo, cbl..... 1 30 @ 40  
Butter..... 1 60 @ 70  
Castor..... 3 00 @ 30  
Peas..... 1 65 @ 75  
Red..... 1 15 @ 20  
Pink..... 1 15 @ 20  
Sm'l White..... 1 65 @ 75  
Lima..... 5 00 @ 60  
Field Peas, yellow..... 1 37 @ 50  
do, green..... 5 00 @ 60  
BROOM CORN.  
Southern..... 2 @ 24  
Northern..... 2 @ 4

CHICORY.  
California..... 4 @ 44  
German..... 6 @ 7  
DAIRY PRODUCE, ETC.  
BUTTER.  
Cal. Fresh Roll, lb..... 25 @ 32  
Fancy Brands..... 35 @ 37  
Pickled Roll..... 21 @ 25  
Firklin..... 18 @ 22  
Western..... 12 @ 15  
New York..... — @ —

CHEESE.  
Cheese, Cal. lb..... 14 @ 13  
N. Y. State..... — @ —  
EGGS.  
Cal. Fresh, doz..... 38 @ 40  
Ducks..... — @ 35  
Oregon..... — @ —  
Eastern, by expts..... 27 @ 32  
Pickled here..... — @ —  
Utah..... 30 @ 35

FEED.  
Bran, ton..... 17 00 @ 18 00  
do, Country Mills..... 22 50 @ 23 50  
Hay..... 7 00 @ 12 00  
Middlings..... 20 00 @ 21 00  
Oil Cake Meal..... 34 00 @ —  
Straw, bale..... 40 @ 42

FLOUR.  
Extra, City Mills..... 6 25 @ 6 50  
do, Country Mills..... 5 75 @ 6 00  
do, Oregon..... 5 25 @ 5 75  
do, Walla Walla..... 75 @ 80  
Superfine..... 4 25 @ 4 50  
Extra Superfine..... 4 25 @ 4 50

FRESH MEAT.  
Beef, 1st qual'y, lb..... 5 @ 5 1/2  
Second..... 3 1/2 @ 4 1/2  
Third..... 3 @ 3 1/2  
Mutton..... 3 @ 3 1/2  
Spring Lamb..... 4 1/2 @ —  
Pork, undressed..... 3 1/2 @ 3 3/4  
Dressed..... 5 @ 5 1/2  
Veal..... 4 @ 5  
Milk Calves..... 6 1/2 @ 6 1/2  
do, choice..... 6 1/2 @ 7 1/2

GRAIN.  
Barley, feed, cbl..... 65 @ 82 1/2  
do, Brewing..... 80 @ 100  
Chevalier..... 1 50 @ 1 75  
do, Coast..... 1 00 @ 1 15  
Buckwheat..... 1 40 @ 1 60  
Corn, White..... 90 @ 95  
do, Yellow..... 92 @ 97 1/2  
Small Round..... 55 @ 62 1/2  
Oats..... 1 00 @ 1 40  
Milling..... — @ 50  
Rye..... 1 10 @ 1 25  
Wheat, No. 1..... 2 00 @ 2 05  
do, No. 2..... 1 95 @ 1 97 1/2  
do, No. 3..... 1 70 @ 1 75  
Choices Milling..... — @ 10  
HIDES.  
Hides, dry..... 19 @ 20  
Wet salted..... 8 @ 9 1/2

HONEY, ETC.  
Beeswax, lb..... 20 @ 25  
Honey in comb..... 12 1/2 @ 13  
do, No. 2..... 10 @ 15  
Do..... 8 @ 10  
Extracts..... 10 @ 12 1/2

HOPS.  
Oregon..... 26 @ 31  
California, new..... 32 1/2 @ 37 1/2  
Wash. Ter..... 32 1/2 @ 35  
Old Hops..... — @ —

NUTS—JOBBER.  
Walnuts, Cal..... 10 @ 11  
do, Chile..... 8 @ 9  
Almonds, hd shi lb..... 6 @ 7  
Soft shi..... 12 1/2 @ 16  
Brazil..... 13 @ 14  
Chestnuts, Italian..... — @ 37 1/2  
Pecans..... 16 @ 17

## FRUITS AND VEGETABLES.

(WHOLESALE.)

WEDNESDAY M., November 5, 1879.

FRUIT MARKET.  
Apples, box..... 40 @ 1 00  
Apricots, box..... 3 00 @ 5 00  
Bananas, bunch..... 3 00 @ 5 00  
Blackberries, ch'et..... — @ —  
Cherries, ch'et..... — @ —  
Citrons, Cal, 100..... — @ 6 00  
Cocoanuts, 100..... 5 00 @ 6 00  
Crab Apples..... — @ —  
Cranberries, hbl 10..... 50 @ 11 50  
Currants, chest..... — @ —  
Figs, box..... 50 @ 75  
Gooseberries..... — @ —  
Grapes, bx..... 60 @ 85  
Damascus..... 1 25 @ 1 50  
Muscat..... 40 @ 75  
Isabella..... 1 00 @ 1 25  
Comichon..... 1 00 @ 1 25  
Tokay..... 40 @ 65  
Limes, Mex..... 6 00 @ 8 00  
do, Cal, box..... 2 50 @ 3 50  
Lemons, Cal M. 25..... 0 30 @ 0 40  
Sicily, box..... 7 50 @ 8 50  
Australian..... 4 00 @ 5 00  
Nectarines, bsk..... — @ —  
Oranges, Cal M..... — @ —  
do, small..... — @ —  
do, Tahiti..... — @ —  
do, Panama 25..... 0 30 @ 0 40  
Peaches, bsk..... — @ —  
do, Mountain..... — @ —  
Pears, bx..... 60 @ 1 50  
Bartlett..... — @ —  
Sackel..... — @ —  
Pineapples, doz..... 6 00 @ 9 00  
Plums, box..... — @ —  
Pomegranates lb..... 4 @ 6  
Prunes, bsk..... — @ —  
Quinces, box..... 50 @ 75  
Raspberries, ch'et 10..... 0 12 @ 0 20  
St'berries, ch'et 10..... 0 12 @ 0 20

DRIED FRUIT.  
Apples, sliced, lb..... 4 @ 5  
do, quartered..... 3 @ 4

## LUMBER.

WEDNESDAY M., November 5, 1879.

CARGO PRICES OF REDWOOD.		REDWOOD.	
RETAIL PRICE.		RETAIL PRICE.	
Rough, M.....	12 00	Pickets, Rough.....	15 00
Rustic.....	18 00	Pointed.....	16 00
do, No. 2.....	14 00	Fancy.....	22 50
Flooring.....	20 00	Siding.....	20 50
do, No. 2.....	13 00	Surfaced & Long Beaded.....	30 00
Beaded Flooring.....	23 00	Flooring.....	25 00
Refuse.....	13 00	do, No. 2.....	17 00
Half-inch Siding.....	16 00	Rustic, No. 1.....	25 00
Refuse.....	14 00	do, No. 2.....	18 00
Half-inch Surfaced.....	20 00	Battens, lineal ft.....	2 00
Half-inch Battens.....	16 00	PUGET SOUND PINE	
Pickets, Rough.....	11 00	RETAIL PRICE.	
Rough, Pointed.....	12 50	Rough, M.....	15 00
Fancy, Pointed.....	18 00	Fencing.....	15 00
Shingles.....	1 75	Latbs.....	3 50

## Signal Service Meteorological Report.

SAN FRANCISCO.—Week ending November 4, 1879.

HIGHEST AND LOWEST BAROMETER.											
Oct. 29.	Oct. 30.	Oct. 31.	Nov. 1.	Nov. 2.	Nov. 3.	Nov. 4.	Oct. 29.	Oct. 30.	Oct. 31.	Nov. 1.	Nov. 2.
20.062	30.003	30.149	30.235	30.241	30.230	30.244	29.884	29.927	30.021	30.170	30.154
MAXIMUM AND MINIMUM THERMOMETER.											
70	59	64	62	63	62	60	55	52	56	54	53

MRAN DAILY HUMIDITY.  
73 | 79.7 | 69 | 76.3 | 78 | 86 | 81.7

PREVAILING WIND.  
W | SW | SW | W | N | W | W

WIND—MILES TRAVELED.  
93 | 201 | 127 | 95 | 159 | 107 |

STATE OF WEATHER.  
Fair. | Cloudy | Fair. | Fair. | Fair. | Clear. | Fair.

RAINFALL IN TWENTY-FOUR HOURS.  
Total rain during this season, from July 1, 1879, 0.81 in.

## Commission Merchants.

### DAVIS & SUTTON,

No. 75 Warren Street, New York.

### Commission Merchants in Cal. Produce

REFERENCE.—Tradesmen's National Bank, N. Y.; Eli Wanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

CHARLES NAUMAN. FRANK NAUMAN.

### C. & F. NAUMAN & CO.,

### Wholesale Commission Merchants

— AND DEALERS IN —



## Agricultural Articles.

## The Famous "Enterprize."

PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babitted boxes.

Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs.

All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

**HORTON & KENNEDY,**

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

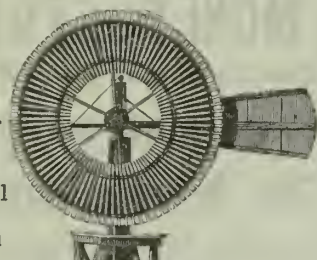
**MATTESON & WILLIAMSON,**  
STOCKTON, CAL.

**\$50.**

The New  
**Worthing-**  
**ton**

Windmill

Manufactured  
by



**W. D. PARSON,**

1364 San Pablo Avenue, Oakland, Cal.  
Also, maker of the "Colorado Wind Engine," Wind Grist Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern of Deep Well and Artesian Lift Pump Cylinders. Circulars free.

## Windmills!

**HORSE POWERS!  
TANKS AND PUMPS**

Built and Repaired at  
No. 51 Beale street, S. F.  
Send for Circulars.  
**F. W. KROGH & CO**



## The Boss Pruner.

Patented Jan. 8, 1873.

**ENTIRELY NEW!**

Works on a cog principle. Smallest size cuts one inch, and largest size two inches in diameter. Has been thoroughly tested, and given perfect satisfaction. Sold by

**GEORGE LARKIN,**  
Newcastle, Placer County, Cal.

## A Card to Grangers and Farmers.

**HAY, GRAIN, HORSES and CATTLE.**

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nos. 11 and 13 Buixome St., San Francisco.

**JOHN ROGERS & SONS,**

**GENERAL STOCK AND SALE YARD,**

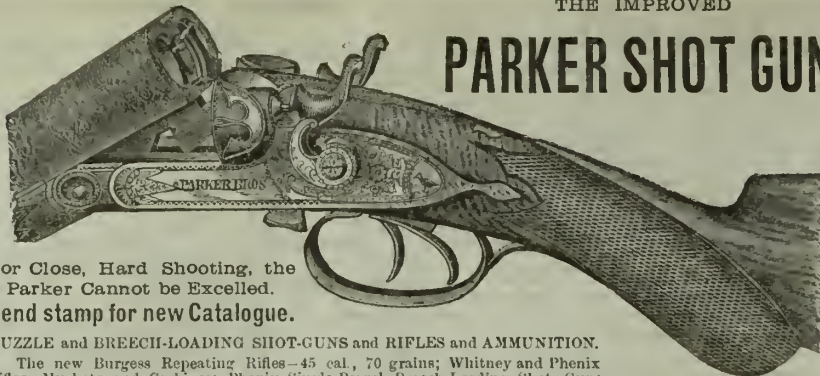
Corner Market and 9th Sts., San Francisco,

**HORSES and MILCH COWS** sold on commission. Also, dealers in **HAY and GRAIN.**  
Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

50 Pertumed, Snowflake, Chromo, Motto Cards, name in gold and jet 10c. G. A. SPRING, E. Wallingford, Ct.

THE IMPROVED

## PARKER SHOT GUN.



For Close, Hard Shooting, the  
Parker Cannot be Excelled.

Send stamp for new Catalogue.

MUZZLE and BREECH-LOADING SHOT-GUNS and RIFLES and AMMUNITION.

The new Burgess Repeating Rifles—45 cal., 70 grains; Whitney and Phenix Rifles, Muskets and Carbines; Phenix Single-Barrel Breech-Loading Shot Gun; Allen Rifles, 22, 32, 33 and 44 caliber, rim fire, very cheap; Lovell & Sons Revolvers: the best and the cheapest.

**E. T. ALLEN, Agent for Pacific Coast,**

NO. 515 MARKET STREET, - - - - - SAN FRANCISCO, CAL.

## Week's Grape, Fruit and Flower Picker.

SIZE NO. 1.



Valentine's Patent, Aug. 1, 1865.

any kind, it is an invaluable assistant. Sent by mail on receipt of \$1.25.

These cuts represent one of the most useful articles of its kind yet invented, and supplies a want that has long been felt. Every one engaged in picking fruit knows the difficulty of detaching the fruit from the branch, and depositing it in the basket or other receptacle for receiving it, without bruising the fruit, and particularly with grapes, unless very great care is exercised, each bunch will be more or less injured. The tool is a pair of shears arranged with an elastic holdfast that cuts the stem and holds it, so that the fruit can be deposited in the receptacle for receiving it, without touching it with the hands.

It will take the smallest cherry, or hold a bunch of grapes weighing five pounds.

FOR PICKING ORANGES, where the branches are full of thorns, it will save many a hard word.

FOR LARGE PEARS, AND CHOICE FRUIT of

## FLOWER PICKER.

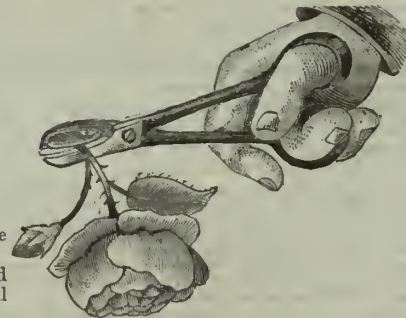
THE NO. 2, OR SMALLEST SIZE,

Is Particularly Adapted for

**FLOWERS,**

And will be found an invaluable assistant in the Garden or Hot-house.

THEY ARE MADE OF THE BEST MATERIAL, and finished in a workmanlike manner. Sent by mail on receipt of \$1.00.



FOR SALE BY

**Dunham, Carrigan & Co.,**

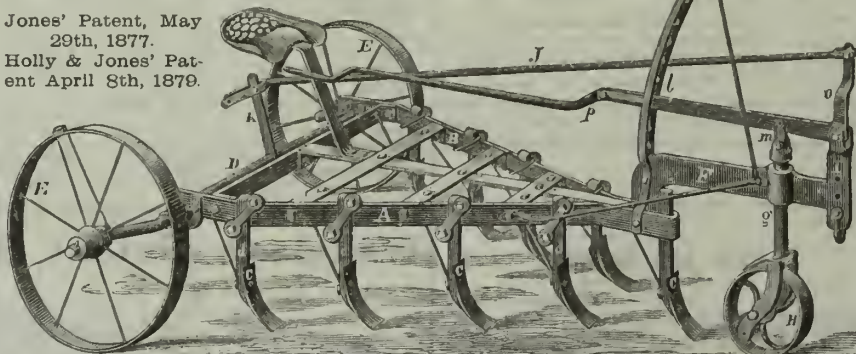
**SAN FRANCISCO.**

## HOLLY &amp; MAGOON'S CULTIVATOR.

Manufactured by Holly & Magoon, Stony Point, and E. J. Holly, Lakeville, Sonoma Co.

Jones' Patent, May  
29th, 1877.

Holly & Jones' Pat-  
ent April 8th, 1879.



For further particulars address the Manufacturers, or **M. C. HAWLEY & CO., Agents,** San Francisco and Sacramento, Cal.

## WELLS, RICHARDSON &amp; CO'S PERFECTED BUTTER COLOR

Gives Butter the gilt-edge color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. **WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.**

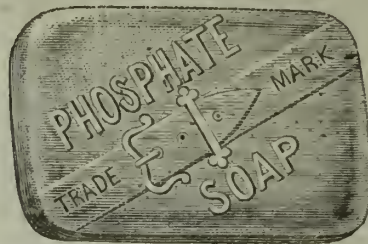
50 Perumed, gilt edge & chromo Cards, elegant case, name in gold, 10c. ATLANTIC CARD CO., E. Wallingford, Ct.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. **STEVENS BROS.,** Northford, Conn.

Patents

OBTAINED IN U. S. AND FOREIGN COUNTRIES; trademarks, labels and copyrights registered through DEWEY & CO.'S MINING AND SCIENTIFIC PRESS Patent Agency, San Francisco. Send for free circular

## PHOSPHATE SOAP



THE BEST soap for toilet use ever manufactured. BEST because it contains all the excellencies of the most expensive foreign or American soaps without their defects. BEST because it combines strength with delicacy in such a way that its strong detergent qualities do not injure the skin. BEST because it is the result of years of study and experiment in the soap manufacturing business, assisted by modern chemical discoveries. BEST because it contains ingredients beneficial to the skin, which unite chemically with the soap in such a manner as to increase its saponaceous qualities. Every chemist familiar with soap manufacture knows that some ingredients which are in themselves beneficial to the skin cannot be saponified; some are partially neutralized, while others injure the quality of the soap. There are soaps in the market which are to some extent beneficial to the skin, but they are inferior articles for toilet use. PHOSPHATE SOAP is the ONLY article offered to the public which combines all the best elements of toilet soap with medical ingredients beneficial to the skin.

If your wife is in the habit of using cosmetics of any kind, advise her to give up the pernicious practice, as the most harmless face powders obstruct the pores of the skin and sooner or later injure the complexion, while PHOSPHATE SOAP removes all impurities and assists nature in developing a natural, healthy and beautiful skin.

It is an old proverb that an ounce of preventive is better than a pound of cure. Twenty-five cents invested in a cake of PHOSPHATE SOAP will save hundreds of dollars in doctors' bills. It acts as a constant disinfectant, preventing Salt Rheum and other skin diseases.

If your wife will persist in the use of cosmetics, buy her a cake of PHOSPHATE SOAP and tell her to use it every night before retiring. In that way much of the harm will be avoided, as the skin will thereby be able to retain much of its natural vigor and beauty.

No salve or ointment can heal a wound or sore of any kind. Every educated physician will tell you that nature alone can do this. PHOSPHATE SOAP, by its cleansing, soothing and purifying qualities, gives nature a chance to act freely.

Natural beauty surpasses anything which can be imparted by artificial means. PHOSPHATE SOAP gives health to the skin simply by removing impurities and eradicating the poisons which give rise to skin diseases.

Not only for daily use on the face and hands, but for bathing the entire body, there is nothing equal to PHOSPHATE SOAP. It is a thorough disinfectant and removes offensive odors of every kind.

Ladies who have injured the skin by the constant use of cosmetics may do much to restore their faces to that beauty which nature alone can give by constantly using PHOSPHATE SOAP.

For all diseases of the skin use PHOSPHATE SOAP. There is nothing like it for removing impurities and giving the skin a healthy and natural vigor.

Cheap toilet soaps manufactured from rancid and refuse grease injure the skin and are really more expensive than PHOSPHATE SOAP, which retails for 25 cents per cake.

Thousands of articles are palmed off on the public which have no genuine merit, but PHOSPHATE SOAP is the result of modern discoveries of celebrated chemists.

PHOSPHATE SOAP costs no more than other good toiletsoaps, while its medicinal qualities make it worth ten times its price to every man, woman and child.

If you want a nice article of Toilet Soap and something that is beneficial to the skin, buy PHOSPHATE SOAP.



## NEW OPERAS!

**Carmen.** Opera by Bizet.....\$2.00  
Carmen is an Opera that has gradually and surely won its way to a great popularity. Although the book is large, in fact what one might call a "four dollar book," it is got up in elegant style with music and all the words, English and foreign, for \$2.00.

**Fatinitza.** Opera by Suppe.....\$2.00  
Splendid new Opera that is a decided success. A large, fine book, with English and foreign words, and the opera in every way complete, for a low price.

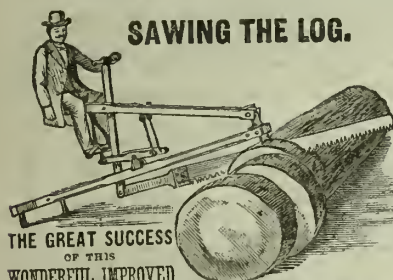
**Doctor of Alcantara.** By Eichberg.....\$1.50  
A famous opera, now brought, by the popular price, within the reach of all. Orchestral parts, \$15.

**Bells of Corneville.** By Planquette (nearly ready).....\$1.50  
A great success. This, with the "Doctor" and the "Sorcerer" (\$1.50) are well worth adopting by Companies who have finished Pinafore (still selling well for 50 cts.), and who are looking out for new and easy Operas.

Remember our first-class Singing School and Choir Books, VOICE OF WORSHIP and THE TEMPLE, each \$9 per dozen, or \$1 each. Send for copies. Also always remember the MUSICAL RECORD, published weekly. It keeps you well posted as to musical matters, gives six or seven pages of music per week and costs but \$2 per year.

OLIVER DITSON & CO., BOSTON.

C. H. Ditson & Co., 843 Broadway, N. Y.



**WONDERFUL IMPROVED**  
Labor Saving RIDING SAW MACHINE is fully demonstrated by the number in use and the present demand for them. It saws Logs of any size. One man can saw more logs of cord wood in one day and easier than two men can the old way. It will saw a two foot log in three minutes. Every Farmer needs one. Township agents wanted. Send for Illustrated Circular and Terms.  
Address W. W. BOSTWICK & CO.,  
178 Elm St., Cincinnati, O.

E. T. ANTHONY & CO.,

DEALERS IN ALL KINDS OF

TOBACCO

— FOR —

SHEEP WASH PURPOSES.

THE NEW SHEEP DIP.

We invite our Wool Growers to call on us and examine the NEW OMAHA SHEEP DIP, the best preparation yet offered—one gallon dip makes 150 gallons wash.

407 and 409 Commercial St.,  
Near Battery Street, - - - SAN FRANCISCO.

P. JONES. J. THOMPSON.

JONES & THOMPSON.

Wholesale and Retail Dealers in

Hay, Grain and Feed.

Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,

1535 Mission St., San Francisco.

M. COOKE. R. J. COOKE

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order, AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREGORY.

**DO**

NOT FAIL to send for our NEW PRICE LIST. More complete than ever. Contains descriptions of every thing required for personal or family use, with over 1000 Illustrations. Send nine cents for it. (Stamps will do.) We sell all goods at wholesale prices in quantities to suit the purchaser. The only Institution in America who make this their special business. Address,  
MONTGOMERY WARD & CO.,  
227 & 229 Wabash Ave., Chicago, Ills.

SEND FOR THE

\$1.50

Homœopathic Medicine Case.

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address  
BOERICKE & TAFEL,  
Homœopathic Pharmacy, San Francisco.

## Winchester Repeating Rifle,

MODEL 1873.



The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

String measuring from center of target to center of each shot, 32 inches. Average distance of each shot, 1 9-100 inches.

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and cheek stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carabines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder,

JOHN SKINKER, No. 115 Pine Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.

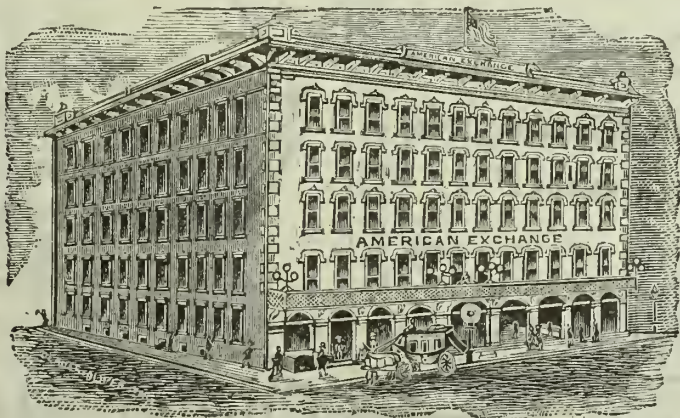
## The American Exchange Hotel,

SAN FRANCISCO, CAL.,

Is situated on Sansome street, next adjoining Bank of California, and is in the very center of the great city.

Sansome Street is one of the finest and principal business streets in S. F.

The Hotel is situated within two blocks of the U. Land Office and U. S. Surveyor General's Office; also within



two blocks of the City Hall, Supreme Court and all the District Courts; within two blocks of the Postoffice and Custom House. All places of amusement are convenient to the Hotel. Street cars for all parts of the city pass the Hotel every minute.

### THE AMERICAN EXCHANGE HOTEL

Having been recently renovated and refurnished throughout is in every respect the BEST FAMILY HOTEL in San Francisco. It has Two Hundred Rooms, well ventilated and neatly furnished, and being easy of access, fire-proof and sunny is decidedly the Hotel for comfort and convenience for the traveling public.

— OFFICE OF THE —

## BLACK POINT PACKING AND SLAUGHTER HOUSE.

MERRY, FAULL & CO., Proprietors.

### TO OWNERS OF LIVE STOCK!

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

### SQUARE DEAL and FULL MARKET PRICES

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices. Please address our

Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.

60 Elegant Perfumed Cards, Chromo, Motto, Lily, Etc., | Dewey & Co { 202 San- } Patent Ag'ts  
15c. Gift with each pack. H. M. SMITH, Clintonville, Ct. some St.



Pyrethrum Cinerariae Fium—A California Production.

THE MOST WONDERFUL DISCOVERY OF THE NINETEENTH CENTURY.

This wonderful Insect Powder will exterminate Flies, Weevils, Caterpillars, Mosquitoes, Midges, Crickets, Cock roaches, Spiders, Tarantulas, Scorpions, Ants, Hawk-bugs, Phylloxera, Plant Lice, Moths, Beetles, Grasshoppers, Locusts, Bed-bugs, Fleas, and every species of Insects. Remember that none is genuine unless my Trade-Mark is attached to every package.

\$100 WILL BE PAID IF IT FAILS TO KILL ANY INSECT.

Endorsed by Prof. E. W. Hilgard, of the University of California, and by Prof. C. V. Riley, Chief Entomological Commissioner at Washington, D. C., and pronounced superior to any imported article, and perfectly harmless to man and beast.

G. N. MILCO.

Patentee and Sole Manufacturer, Stockton, Cal.

CHARLES LANGLEY & CO., Wholesale Druggists, Sole Agents, S. F.

### THE WILSON ADJUSTABLE CHAIR,

With 30 Changes of Position.

Patented in the United States and Foreign Countries. BEST CHAIR IN THE WORLD.

Parlor,	Combining
LIBRARY,	Beauty,
Invalid Chair	Lightness,
Rocking,	Strength,
BED or	Simplicity
LOUNGE.	and
	Comfort.

Same Chair in Cane Seating, very desirable for summer. Manufactured of the best of wrought iron and rivets. Castors made purposely for the Chair. Everything to an exact science. **IT WILL LAST A LIFE-TIME.** Has been awarded Medals, Prizes and Diplomas for its superiority and merit wherever it has been exhibited. Orders by mail promptly attended to. Goods shipped to any address, C. O. D. Send for Illustrated Circular. Address the WILSON ADJUSTABLE CHAIR Mfg Co., 535 Washington St., Boston

### PLEASANT SUMMER READING.

#### THE NEW PENELOPE

— AND —

### Stories of California Life.

By MRS. F. F. VICTOR.

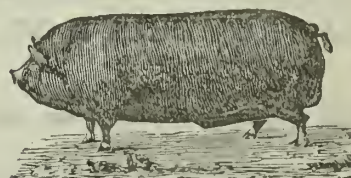
The best delineations of Western character and incident ever produced on this coast. Agents wanted for this popular work. Easy sales and large commissions. Address

MRS. F. F. VICTOR,

721 Market St., S. F., Bancroft's Building, top floor.

PRICE, \$2 00.

### BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

18th and A Streets, Sacramento City, Cal

### MONEY TO LOAN

AT LOWEST RATES

On Country Real Estate and Grain in Warehouse.

McAFEE BROTHERS.

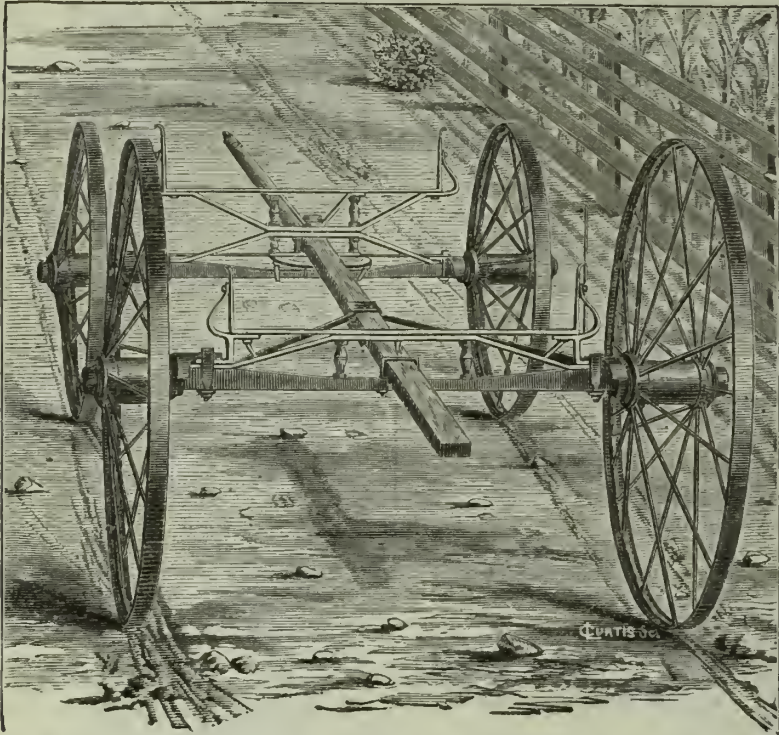
202 Sansome Street, San Francisco.

### FREE GIFT!

A copy of my Medical Common Sense Book will be sent to any person afflicted with Consumption, Bronchitis, Asthma, Sore Throat, or Nasal Catarrh. It is elegantly printed and illustrated. 144 pages, 12mo, 1879. It has been the means in the providence of God of saving many valuable lives. Send name and post-office address, with six cents postage for mailing. The book is invaluable to persons suffering with any disease of the Nose, Throat or Lungs. Address Dr. N. B. WOLFE, CINCINNATI, O.



# THE SWEEPSTAKE IRON WAGON.



## The Best Farm and Freight Wagon in the World.

These Wagons are now in extensive use on this coast, and are giving PERFECT satisfaction. Not a word of complaint has been received concerning them, but on the contrary we are in receipt of numerous letters from purchasers saying that they are stronger, lighter, and easier running than wooden Wagons, and their durability is such that there is no comparison between them and wooden Wagons.

Send for Illustrated Catalogue containing numerous testimonials.

## SWEEPSTAKE PLOW CO.,

San Leandro, Cal.

N. B.—We also make and keep on hand Iron Spring Wagons that possess the same advantages that our Farm Wagons do.

## Geo. F. Silvester,

IMPORTER, WHOLESALE AND RETAIL DEALER IN

# SEEDS,

Fruit and Evergreen Trees, Plants, Etc.

ALFALFA, GRASS AND CLOVER SEEDS

In large Quantities and offered in Lots to suit Purchasers.

GREAT REDUCTION IN PRICES.

Seed Warehouse, 317 Washington Street, San Francisco.

## R. J. TRUMBULL & CO.,

SUCCESSORS TO

R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

\*"Guide to the Vegetable and Flower Garden will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL & CO., 419 and 421 Sansome Street, S. F.

Acknowledgement and Thanks

LAKEPORT, Lake Co., Cal., Nov. 2d, 1878. MESSRS. DEWEY & Co.—Gentlemen:—I hereby acknowledge receipt of patent, for which please accept my sincere thanks. When I have any further business in this line I shall certainly employ you. With kind regards, I am, Yours very truly, CHAS. SLATTERSACK.

Baling Fencing Telegraph Telephone Galvanized

# WIRE

Barbed Fence Wire.

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the Trademark.



A. S. HALLIDIE

Wire Mills.

Office, No. 6 California St. SAN FRANCISCO.

WIRE ROPE and CORDAGE

Of every kind on hand or Made to Order.

60 Chromo, perfumed, Snowflake & Lace cards, name on all 10c. Game Authors, 15c. Lyman & Co., Clintonville, Ct.

## READING RANCH,

Shasta Co., Cal.

Good Land!

Sure Crops!

HEALTHY CLIMATE!

Prices Low. Terms Easy.

TITLE PERFECT.



The Reading Ranch, in the Upper Sacramento valley, originally embracing over 20,000 acres of choice grain, orchard and pasture land, is now offered for sale at low prices and on favorable terms of payment, in subdivisions to suit purchasers.

The ranch was selected at an early day by Major P. B. Reading, one of the largest pioneer land owners in California. It is situated on the west side of the Sacramento River and extends over 20 miles along its bank.

The average rainfall is about 30 inches per annum, and crops have never been known to fail from drought.

The climate is healthy and desirable. The near proximity of high mountain peaks give cool nights during the "heated term" which occurs in our California summers.

Pasturage, wood and good water are abundant. The tillage land is mostly level, with complete drainage.

Figs, Grapes, Peaches, Prunes, Almonds, English Walnuts, Oranges and other temperate and semi-tropical fruits can be raised with success on most of the tract without irrigation. Also, Alfalfa, Vegetables, Corn and all other cereals ordinarily grown in the State.

The soil throughout the tilled portions of the ranch proves to be of great depth and enduring in its good qualities. It is quite free from foul growths. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

The title is U. S. patent. Prices range principally from \$5 to \$30 per acre.

The California and Oregon railroad traverses nearly the entire length of the tract. There are several sections, stations and switches, besides depots at the towns of Anderson and Reading, all of which are located within the limits of the ranch.

The Sacramento River borders the whole tract on the southeast. Its clear waters are well stocked with fish. Good hunting abounds in the surrounding country.

Producers have a local market, which enhances the value of their produce. The railroad transportation route is level throughout to San Francisco. A portion of the land is auriferous and located near rich mines now being worked. Land suitable for settlers in colonies can be obtained on good terms.

Town lots are offered for sale in Reading, situated on the Sacramento river, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

Purchasers are invited to come and see the lands before buying here or elsewhere. Apply on the ranch, to the proprietor.

EDWARD FRISBIE,

Anderson, Shasta Co., Cal.

P. S.—Send postage stamp for illustrated paper containing information about Shasta county and these lands, and say advertised in this paper.

Location of Shasta County.

Shasta County lies not far from midway between the two most important ports on the Pacific shore, i. e., San Francisco and Portland, Oregon, and directly on the overland route, which in the future will become the grand thoroughfare from Mexico to British Columbia. The town of Reading, at present, and probably for years to come, the head of railroad transportation on the California side of the mountains intervening below Oregon, is distant from San Francisco by railroad (via Vallejo) 255 miles; from Sacramento City, 169 miles; from Marysville, 117 miles.

LAND FOR SALE OR RENT IN SUB-DIVISIONS.

## Thoroughbred Poultry.

LARGEST STOCK OF IMPORTED FOWL

ON THE PACIFIC COAST.

Bone Meal and Poultry Supplies Always on hand.

General Pacific Coast Agent for the AMERICAN POULTRY FOOD.

It will make your hens lay, and prevent disease. For raising young chicks it is almost indispensable. Letters of inquiry, enclosing stamp, cheerfully answered. Address

WM. NILES, Importer and Breeder, LOS ANGELES, CAL.

P. O. Box 250.



My yards contain choice strains of the leading varieties, including Langshans, Plymouth Rocks, Pekin Ducks, etc.

Eggs for Hatching Packed to go any Distance. PRICES ALWAYS REASONABLE.

Safe Arrival of Fowls and Eggs Guaranteed.

Importer and Breeder of the Improved Short Nose, Dish-Faced

BERKSHIRES.

Also, Magie Poland-China Pigs.

CHEAPER YET!

## Tension Sewing Machines!

A large number of nearly new genuine SINGER, WHEELER & WILSON, HOWE, WOOD, GROVER & BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

NO TENSION MACHINE.

Wilcox & Gibbs' S. M. Co.,

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.

## KEATING'S COUGH LOZENGES!

The Great British Remedy. There is unquestionably no other remedy so certain in its effects. ASTHMA, WINTER COUGH, BRONCHITIS and DISORDERS of the THROAT alike yield to its influence. The highest medical testimony states no better cure for these complaints exist (now proved by over a half a century's experience). They contain no opium, morphia, or any violent drug. KEATING'S COUGH LOZENGES prepared by THOMAS KEATING, London, Britain, are sold by all Druggists. Agents for the Pacific Coast, REDINGTON & CO. and CHAS. LANGLEY & CO., San Francisco.

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 120 Sutter St., S. F.



# PACIFIC RURAL PRESS

Volume XVIII.]

SAN FRANCISCO, SATURDAY, NOVEMBER 15, 1879.

Number 20.

## The Olive Industry.

Many honorable specialties of agriculture have been stimulated by the exhibits made at the recent fair of the Southern California Horticultural Society, at Los Angeles. The articles descriptive of the fair, which we have printed from week to week, have given outside readers an inkling of many of the lines in which production is advancing, but there is one which has signally stepped forward, and that is the olive industry. Already we have reports of increased planting of the trees in old localities and its introduction in new regions. There seems every reason to think well of the olive as a source of future revenue to our State. It is a production which will take time before money can be realized from it by those who have not already the tree in bearing condition, but as a prospective crop to which many can well devote a part of their areas, the olive must command attention.

The two main lines of olive production were well shown at the Los Angeles fair. The oil of Elwood Cooper, of Santa Barbara, and J. De Barth Shorb, of San Gabriel, and Mr. Del Valle won the highest praise from experts in the pure oil of the olive, and must command the market if the people but learn to distinguish between the genuine and the adulterated. The display of pickled olives was also notable, the competitors being the Kimball Bros., of National ranch, San Diego and Mr. Shorb and Mr. Del Valle named above. Olive products of high excellence have also been made in other parts of the State. Among others we might mention Rev. Father Keiser and H. G. Ellsworth, of Mission San Jose, who last year showed excellent samples from their respective establishments. We read that G. C. Swan, of San Diego, has just turned out fine pickled olives. We would name all producers if we knew them.

One of our representatives at the Los Angeles fair had a conversation with Mr. W. C. Kimball, of San Diego, and noted his process of making pickled olives. We have given the points of this process before, but the following may refresh some memories: Mr. Kimball picks the olives as soon as they begin to show a reddish cast and rinses them in clean water. Then he takes one ounce of concentrated lye (made by the American Concentrated Lye Co., of Pittsburgh), and dissolves it in water. One-third of this solution he puts in water enough to cover one gallon of olives. After a day or two he pours off this water and adds another lye of the same strength. This may be repeated once more, as five or six days are consumed in taking out the bitterness with the lye. The lye should be used until the fruit suits the taste. Then the olives are put in pure fresh water until the alkali is well removed. This can be ascertained by the color of the water and by the taste. In salting use the best Liverpool "coarse-fine" salt, the amount being about 10 pounds to the barrel of olives, water enough being used to cover the fruit. Barrel up tight and keep in a cool place. All the process should be conducted in the dark as the light is apt to injure the color.

We shall always be glad to hear from our readers who are developing the olive interest of the State concerning any point in their work, and we shall be ready to assist them in any way we may be able.

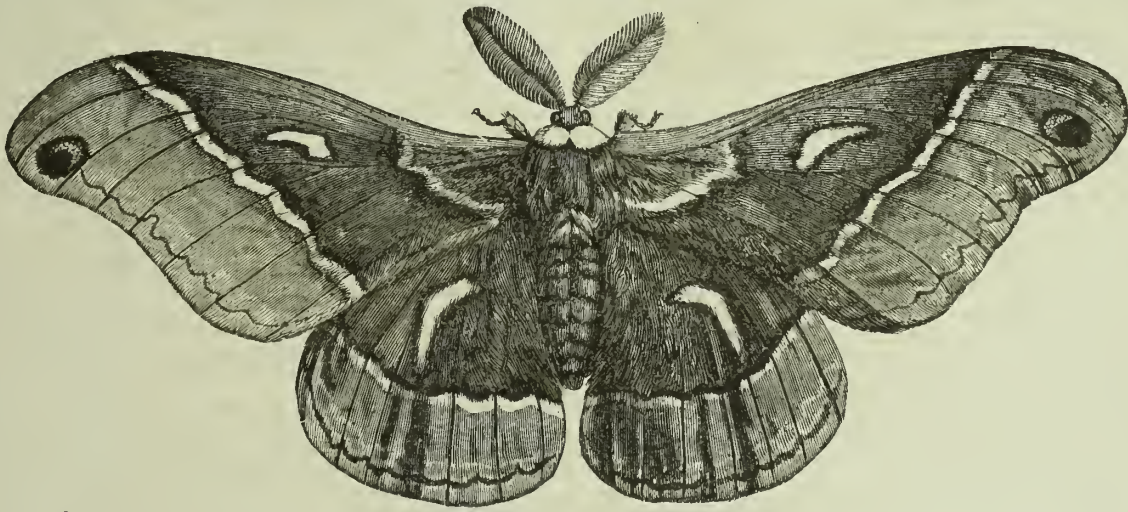
**PERSONAL.**—We notice that at the last meeting of the North American Beekeepers Society, held recently in Chicago, Mr. C. J. Fox, of San Diego was elected one of the Vice-Presidents. This is a fitting recognition of the position accorded Mr. Fox by his associates of the San Diego apiarian society.

The loss in the champagne district of France this year by the failure of the vintage is estimated at 30,000,000 francs.

## Anti-Scab Laws.

Washington Territory has taken the lead on the coast in the enactment of a law to protect owners of clean, healthy sheep from the ruin which is spread abroad by careless flock masters.

the points of the territorial enactment suggestive. According to the Walla Walla Union the new law provides for the election at each regular election in the Territory of a "Sheep Commissioner" in each of the counties named who shall each give bonds, etc., for the faithful performance of duty. The Sheep Commissioner



THE CALIFORNIA LILAC MOTH—*Saturnia Ceanothi*.

That there is need for some effective enactment in this State has long been urged. When the disease so protrudes upon public attention that some sheep sent to our fairs this fall were badly

is required to examine each band of sheep in his county during the months of November and April of each year. If the bands are found free from scab and other infectious diseases a certificate to that effect shall be given, which certificate will allow the sheep to be moved into any of the other counties named. Scabby or diseased sheep are to be kept at home and away from the highways, byways or ranges where other sheep are liable to range or be driven, under penalty of not less than \$250 nor more than \$2,000. The County Commissioners are required to appoint a "Sheep Commissioner" at their next session, to serve until the next elec-



THE COCOON.

scabbed, and were not cast out until other exhibitors forced the managers to do it, it is certainly time something were done to abate the threatening evil. Whether the provisions of the Washington Territory law would be best to adopt in this State, we are not ready to say, but those interested in this legislation may find



LARVÆ, GROWING AND MATURE.

tion. The "Sheep Commissioner" is to receive \$3 per day and 10 cents mileage, to be paid by the sheep owners.

The owners of the celebrated trotter St. Julien, who made a record of 2:12½, October 26th, have refused an offer of \$40,000 for him.

## A Beautiful California Moth.

**Editors Press:**—I send you a curious thing which I found on one of the trees on the college grounds. As I like to know all about the peculiar things I discover, I send you this for explanation.—WILLIAM BROWN, Washington College, Alameda county.

The curious thing which our young friend sends us is the cocoon of a large moth. If he is acquainted with the transformation of insects, he knows that the cocoon is made by the caterpillar just before it enters the pupa state, and that next spring, if the insect has not been injured, there will emerge from this cocoon a splendid, large moth, which will lay eggs from which caterpillars will hatch, and these caterpillars, when they have attained their full growth, will again spin cocoons and thus the succession will continue. As these large moths produce but one brood a year, the cocoon may be called the winter residence of the insect.

In order to show the transformations alluded to and at the same time to embellish our journal with engravings of one of our most magnificent California insects, we present on this page the illustrated life history of *Saturnia Ceanothi*. This moth is of the tribe of spinners (*Bombyces*), the name being derived from *bombyx*, the ancient name of the silk-worm. The genus *Saturnia* takes its name from the surname of Juno, daughter of Saturn, of ancient mythology. The specific name *Ceanothi* is borrowed from the shrub *Ceanothus*, upon which the larva feeds; it also feeds upon the *rhamnus* and rarely on the *hesperomeles*.

The *Saturnia ceanothi* is not found in the Eastern States. Its nearest relative there is *Saturnia cecropia* or *Attacus cecropia*, as it is also termed by entomologists. The *cecropia* is also used as a silk-producing moth, and is being acclimated in France for that purpose. A recent issue of *La Nature* contains accounts of rearing this moth by A. L. Clement. The cocoons were introduced in France at the beginning of 1878 by the Acclimatization Society. To give an idea of how the entomologist loves his pets, we quote from Mr. Clement's writing as follows: "I had reared my caterpillars in the open air of my work-room, and they were now about four inches long. One could hardly take a step without crushing them; they were everywhere—in the dining-room, kitchen, parlor, bed-room, closets and even in the beds." The silk from the *cecropia* is very strong, and is expected to produce goods possessing remarkably solid qualities.

The *Saturnia ceanothi* could also be made useful for the production of silk of a heavy, coarse quality. In talking with Dr. Behr, of this city, our foremost entomologist, he expressed a desire to experiment with the silk-producing qualities of our native insect. If any of our readers who may see the cocoons like that shown in the engraving will gather them and send them to us, we will give them to Dr. Behr for experiment, and in due time report the results of his investigations.

**FRUITFULNESS OF A GRAIN OF WHEAT.**—If, says a writer in a German contemporary, we reckon that a single grain of wheat produces 50 grains, and that these 50 will each produce 50 grains more, and so on, we find:

In the second year.....	2,500 grains
" third ".....	125 000 "
" sixth ".....	15,625 000,000 "
" twelfth ".....	244,140,625,000,000 "

The third year's crop would give 300 men one meal, leaving enough bran to feed eight pigs for one day. The produce of the single grain in the twelfth year would suffice to supply all the inhabitants of the earth with food during their lifetime.

The Central Pacific Railroad Company has commenced suit against the city of Oakland, to quiet title to about 500 acres of land lying along the water front of that city.





## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

## San Mateo County Notes.—No. 1

EDITORS PRESS:—From Redwood City we passed west through the romantic regions of Searsville and Woodside, ascended the Coast Range to the summit, followed the ridge to the north, till striking the San Mateo stage road, we turned again west, descending to the ocean coast at Spanishtown or Half Moon Bay. This extensive range is from 800 to 1,200 feet in height, all to the south covered by a heavy forest of trees, but to the north only the shady sides of the gorges are wooded. The trip is full of interest to one fond of wonderful scenery. To the east the whole valley of the bay lies spread out in all its richness and beauty. To the west, great gorges are seen, and beyond, the vast ocean, stretching away in calm, still grandeur, while immediately around are all the pleasing varieties of a broken, hilly region. Occasional dwelling houses of a farming population are found, where the higher levels and warmer southern side of the ridges offer open land for crops and pasture. The region is very healthy, the atmosphere sufficiently moist to ensure a harvest in driest seasons, and the soil is good. But everywhere on these high lands the farms had to us the appearance of decided decay. The fences were often out of order and patched up; the door-yards, evidently once neat, seemed neglected and unimproved; the buildings were old, unrepared, sometimes without inhabitants; the fields had the aspect of exhaustion from constant seeding and harvesting without manuring; and a general kind of shiftlessness marked the whole aspect of things. Some had mortgages and lost their land; this was one reason for what I saw. Others were renting and only sought a year's greatest return; this was another reason. Others said: "We want no book-farming. The head and experience are all we want, and reading is no use in raising a crop." And this was another reason. Surely there is no more difficult profession on earth—nor any more benefited by judicious hard study—than that of farming; and he who would be successful must take all the advantage of the experience of others, which he can well secure through agricultural papers and books.

Certain it is that these mountain farms ought to be among the finest in the world, but on the contrary they generally appeared to us not an average. There were two or three fair exceptions, but the general aspect was decidedly different.

The region of Half Moon Bay showed more of life and improvement; but here too complaint was that of very hard times. Their potatoes had been for two years badly blighted, and the rest too low in price to pay for digging and freighting to market. Their crop of oats was affected something like the potato, and was a failure. Their barley was nearly an average, but of low price and limited sale in market; while of wheat they had raised but little, because of its liability to rust. Yet this is an excellent farm region, and another year general success may be their experience. Their village is quite a pleasant one of some six hundred inhabitants, rather still, yet with some real enterprise.

The most marked institution of this character in the place seemed to be the plow manufactory of Mr. R. J. Knapp. The principal plow here turned out is the Sidelhill plow of Mr. Knapp, patented now for four years, and of which nearly a thousand have been made and sold. With it we were pleased to notice the improved machinery used in working iron. One machine is after the style of a pile driver, easily punching quarter-inch sheets of iron, or acting as shears to cut the same, with equal ease 12 and 16 inches in length by one drop. Another was a machine for rolling iron, so gauged it could easily vary the thickness as desired. Thus the upper part of the plowsbare could readily be made thin, leaving a thicker portion towards the point where all the the wearing comes, saving the quantity of iron and also weight in the plow. Another improvement was a tread-wheel horse power with a regular steam governor to regulate the movement, saving the horses the toil of all extra velocity or travel. Each of these three improvements seemed to us of very great advantage.

The region north and south along the ocean is generally from one to two miles wide, level, rich, agricultural land, then rising rapidly into hills and canyons, good for pasturing and grain. But about eight miles south the hills come down to the ocean itself, as the ocean comes to the hills, by the washing away of the lowland till they meet in high bold bluffs, and the road for travel is forced back over ridges and along the sides of canyons in right mountain style. Yet the hills are generally cultivated in excellent grain crops, of which wheat is found to be a good one, while flax is being quite largely and successfully grown. The common yield is from 800 to 1,200 pounds, selling at three dollars per cental. Fruits of hardy character, such as apples, grow well when sheltered from ocean winds. Pleasant dwellings are scattered among the hills, fair schoolhouses are found where needed, and on the whole the aspect of things is that of general prosperity, though complaint of hard times was common.

S. V. B.

## Coos Bay.

[Written for the RURAL PRESS by Mrs. F. F. VICTOR.]

Coos Bay is an inlet with a mouth like that of a river, and ramifies in many directions, forming narrow sloughs, or bayous, up which tide-water forces itself, making navigation very much dependent upon it. The bar is troublesome and dangerous in the stormy season, needing to be "improved" by the expenditure of money enough to build jetties that would confine the channel between fixed limits, compelling the water to keep the entrance clear. The resources of the country about the bay are sufficient to warrant the appropriation by Government of such a sum, and undoubtedly the day will soon arrive when this work will be commenced.

There is a marked similarity between Coos Bay and the general features of Puget sound, the difference being chiefly in the dimensions. As the Umpqua river is a smaller copy of the Columbia, so Coos Bay is a diminished Puget sound, the wooded shores, the numerous arms and the milling of lumber appearing to reproduce the same effects. So heavily timbered is the country adjacent to its waters that cultivation of the earth is but little carried on, even vegetables and fruits being scarce, while the climate and the soil are favorable enough for their production. This negligence on the part of the settlers sometimes conspires with rough weather on the bar to produce a stringency in the provision market. Last winter, for instance, there were 72 consecutive days when vessels could not come in or go out, and during this period many persons were forced to live on very simple rations, if not on short allowance. It is at such a time as this that railroad projects are discussed with greatest earnestness, and when the people desire something more than a political relation with Oregon.

Coming in from the sea, Empire City is the first town arrived at, and is about three miles inside the bar. It is built on a bench of land, with an incline towards the water's edge below it, and with timbered bluffs extending along the bay above and below it, or, as the bay lies, north and south of it. Opposite to it is a long line of sand hills, forming a barrier against the sea, which from the "lookout" on the bluff is plainly visible. Empire City was founded about the same time with Gardiner and Scottsburg; indeed, all the towns in this region appear to have been started about the same period, from 1850 to 1854. It is a port of entry; is the county seat of Coos; has a shipyard, a large steam lumbering mill, a considerable trade in general merchandise, a large court-house, a fine schoolhouse, one church building, and many pleasant and comfortable private dwellings, besides good hotels, at one of which—Mrs. Lockhart's—I tarried, very happily, for several days. Its population is not more than 300 or 400, and not increasing rapidly since the falling off in business that followed the depression of stocks, and the two years of drouth in California. But a very good class of steamers make regular and frequent trips between San Francisco and Coos Bay, carrying out the idea advanced before, that this is a province of California.

It would afford me pleasure to record here many of my personal adventures and encounters with agreeable people, were this the proper place to introduce personal incidents. Suffice it to say, that though the Coos country is isolated and hardly regrets its distance from and independence of the rest of Oregon, it is, socially, a very pleasant spot of earth to fall upon, and one to which we wish a happy and prosperous future.

From Empire, one of several small swift steamers conveys us up the bay to North Bend, a distance of two or three miles. This place is entirely a lumbering and shipbuilding point, and is owned by the Simpson brothers. It has a pretty site, is neatly built, has neither hotel nor saloon, but contains within itself all the essentials for the comfort of its people, employers and employed. The mill has a capacity of 28,000 feet per diem. At this shipyard was built the beautiful, full-rigged ship, *Western Shore*. The fine vessel, the *Tam O'Shanter*, was also built at this place. The elegant finishing of these vessels is due in part to the beauty of the cabinet woods of this region, especially of the myrtle, which for color and fineness of grain is not surpassed in beauty by any wood in the world. North Bend has rendered itself famous, and done Oregon good service in sending forth vessels of this class to advertise her resources to the world, as well as the talent and enterprise of her shipbuilders.

A short distance above North Bend, at the head of the bay proper, is Marshfield, the principal town on these waters. It reminds one of Astoria, being situated on a hillside, and having a considerable portion of its business houses built upon piling or "made ground." What its population is it would be difficult to guess—probably about 600. It has good hotels, several stores of general merchandise, and the usual supply of special shops, that make a considerable show of trade; extensive wharves and warehouses, and a general appearance of prosperity. Lumbering is the chief business carried on here, which together with shipbuilding employs in ordinary seasons a large number of men. The present season, however, is less active than any former one for a long time, though the mill of Dean, Wilcox & Merchant is

running on full time, its capacity being 40,000 feet per day.

The prodigality with which nature has adorned the hillsides at Marshfield with the elegant rhododendrons and other beautiful shrubs was a constant joy to me while I remained there. With so favorable a climate the wilderness in this region ought to be made blossom like the rose. There is the mildness and the moisture in the air that fosters floral beauty, and should I think be equally favorable to fruit. I learned that the experiment of drying fruit for market by the Alden process has been begun by Mr. A. B. Culliver, who shipped last year \$3,000 worth of fruit, mostly apples, to San Francisco. His apples brought 16 cents per pound. But with this exception I could not learn of a business of this kind being carried on.

All about Coos Bay on Coos river and the several sloughs are so-called towns; but really they are only small clusters of tenements erected at different points where some enterprise has been undertaken, generally where a coal bank has been discovered and prospected. Where these enterprises have been prosperous, the usual local improvements have been made, and there are schools and stores. But excepting at Newport and Eastport there is almost nothing being done at present in the coal interest. The mines at Henryville, where a large amount of money has been invested, have proven a failure, and the costly works are abandoned. Some coal is being taken out at the Isthmus coal mine, and vessels go to Utter City to load; but the business has so declined that Utter City is almost wholly deserted, and its cottages are empty, while its ample hotel is almost without a guest.

This condition of affairs at Coos Bay is greatly the result of the transient habit of the people on this coast, which affects business everywhere. If there is a rumor that something is doing or may be done at a certain point, everybody rushes to that point. Often they are disappointed and fly with just as little reason to some other point. The people do not adopt the country and determine to make the best of it, but endeavor to drain it as rapidly as possible and get away from it. Business, which has been depressed everywhere alike, will revive by and by, and all the sooner if people instead of floating about the country will stay where they are and do the best they can under the circumstances until the tide turns. At least that is the way it looks to a casual observer like myself.

Coquille City, though on the Coquille river, belongs to the Coos Bay country, and is a promising new town, in a pretty valley, with a navigable river of its own. The inhabitants with commendable enterprise are endeavoring to build jetties at the mouth of the river to keep open the channel and insure navigation. This is done by private subscription and with money raised by entertainments, including a grand Fourth of July celebration, and will I hope prove a permanent good to the country. Efforts of this kind that show the people have come to stay and "mean business," are the results that in time will win the recognition and success that will repay those investing in the work.

This is but a brief account of a rather superficial survey of what was to me an entirely new country. It was easy to see that its development had hardly begun, and that when it should be developed it would be a country of no ordinary resources. What it greatly needs is easy communication with the interior and a population of a settled character. From some notes I made I copy these few figures: Value of real and personal property in Coos county, \$1,315,562; indebtedness and exemptions, \$392,282; taxable property, \$921,280; number of persons subject to poll tax, 1,000. The number of horses given in was 22,552, and of cattle 96,310; while of sheep there were only 3,820, and of swine 3,572—which shows the country to be a stock country to a considerable extent, yet not pre-eminently so. In the future, when the forest has given way to the woodman's ax, stock and dairying will become the leading business after the mining interests.

MEATS COOKED BY COLD.—It seems unlikely at first thought, yet it is a fact that extreme cold produces in organic substances effects closely resembling those of heat. Thus, contact with frozen mercury gives the same sensation as contact with fire; and meat that has been exposed to very low temperature assumes a condition like that produced by heat. This action of intense cold has been turned to account for economical uses by Dr. Sawiczewosky, a Hungarian chemist, as we learn from *La Nature*. He subjects fresh meats to a temperature of minus 33° Fahrenheit, and having thus "cooked them by cold," seals them hermetically in tin cans. The results are represented as being entirely satisfactory. The meat, when taken out of the can a long time afterward, is found to be, as regards its appearance and its odor, in all respects as inviting as at first. A German government commission has made experiments with this process, and in consequence two naval vessels dispatched on a voyage of circumnavigation were provided with meat prepared in this way. Hungary has an establishment for preserving meats by this process.

THE following is an analysis of a piece of modern English calico: Cotton, 53; china clay, 26; starch, 12; fatty matter, 2.5; chloride of magnesium, 2; chloride of zinc, 1.5; chloride of calcium, 0.5; moisture, 2.5; 100.0.

## FLORICULTURE.

## Classification of California Lilies.

The November number of *Vick's Floral Magazine* contains an article which gives the latest botanical conclusions concerning California lilies, which we reproduce. Mr. Vick writes: There has been considerable confusion about the lilies of California, and sometimes it has been thought that this confusion was intentionally increased by interested parties, in order to put as many species and varieties into the market as possible; but without being uncharitable, there is no doubt much occasion for misunderstanding by the variability of the species from the incidents of locality, climate and soil where the native bulbs are found. We had supposed, as was also the opinion of some of the best botanists of California, that the species, *Washingtonianum*, *parvum*, *Humboldtii* and *pardalinum* would be found to comprise the whole of the Western lilies. A recent revision of the order *Liliceae* by the able curator of the Harvard herbarium, Mr. Sereno Watson, discovers eight distinct species. Without entering into minute specific descriptions, we can make the general subject clear to our readers by saying that, of the four species above named, *Washingtonianum* is distinct from the other three by its color, it being white and changing to a purplish tint as the flower becomes old, while each of the others is of some shade of reddish-orange, closely resembling the color of *L. canadense*. It has long been known that some plants of *Washingtonianum* produce flowers which, when they first open, although nearly white, still have a slight tinge of lilac, and as they become old change to a rosy purple, and in this stage are quite distinct from the more numerous ones that are merely purplish. It was supposed that this highly-colored kind was only a variety of *Washingtonianum*, but it appears to have other important distinctions enough to entitle it to be ranked as a distinct species, and, as such, is called *Lilium rubescens*. Another species, but which it has never been our good fortune to see, is *L. Parryi*, described as having its flowers of a clear, pale-yellow color. Thus, here are three species where before we only recognized one.

Coming now to those that have a reddish orange color, we find a new species, called *maritimum*, which has been separated from *L. parvum*. Another species is *L. Columbianum*, which had previously been thought to be a variety of *Humboldtii*. There are then five species with the reddish orange-colored flowers, all varying more or less in many particulars.

These *Canadense*-like lilies have strong points of resemblance, and on our eastern side is found one species, called *superbum*, that is quite difficult to distinguish from *Canadense*. *Superbum* has also a variety, at least so considered by Mr. Watson in his revision, but which is alluded to in the following note from him, and which will in future probably be considered a species. The note was in response to an inquiry as to the specific character of *L. Columbianum*:

"I send you my late revision of the North American *Liliceae*, which will show you my conclusions as to the lilies of the Pacific coast, and the nomenclature which will be followed in the second volume of the *Botany of California*, shortly to be issued.

"Most of the species are pretty clearly distinguished by their bulbs, but the differences are not easy to define clearly in few words. The bulb of *L. Humboldtii* should have been described as not only larger than that of *L. Columbianum*, but longer and somewhat rhizomatous—still, nothing like that of *L. pardalinum*."

The hope that we held a few years since of the value of Californian lilies for cultivation in this part of the country, after repeated and expensive trials, it now relinquished, and although any of them by the proper care and in suitable conditions may be reared, yet, for general cultivation we can recommend only *L. pardalinum*. This appears to be hardy and thrifty almost everywhere, and the other species almost invariably fail.

## Tuberoses for Perfume.

Down in the southern part of the State they are cultivating tuberoses very extensively. The flowers are sold to florists for bouquets and decorated purposes and to druggists for perfumery, and the bulbs find a ready sale in Eastern markets for gardens, being so much larger and finer than those grown in the East. Now there is no place in the world better adapted to the growth of tuberoses than Santa Clara valley. Here they are grown to perfection. And as they only require ordinary culture, and will multiply of themselves and produce an almost unlimited number of flowers if carefully tended, the crop would certainly be very profitable. Suppose some enterprising man should try the experiment of using them for commercial purposes and see what will come of it, just for the benefit of his neighbors, if not for his own.—*San Jose Mercury*.

[We should like to know if anyone is now manufacturing the perfume mentioned in this State. We have had inquiries from those who have the blossoms ready, but we have not yet heard of the manufacture as in operation yet. Will anyone who knows advise us on this point? —Eds. Press.]



## THE DAIRY.

## Trials of Forage Plants.

EDITORS PRESS:—I perceive that "Trials of Forage Plants" are in order now. I send you results reached by me. It's to our advantage in this section of the State, where we depend upon irrigation, to obtain a plant that will give us the largest possible returns with the least amount of water. With an eye in that direction, I have been experimenting, in a small way, for the past 8 or 9 years. I tried Egyptian corn (about an acre) five years ago. It did splendidly, but the birds would get the most of the grain. This last spring I sent to Prof. Sanders for one pound of pearl millet seed, thinking it might be what I was looking for. If I could raise from 20 to 100 tons of green feed per acre without irrigation, I should have a good thing. Prof. Sanders says on any ground wet enough to sprout the seed it will produce a good crop—better than anything else he knows of. I then bought some of the white Egyptian corn (I had the brown before, I guess). About the time I was ready to plant, I saw a little article in *Vick's Floral Magazine*, in which the writer said that he had tried most everything, and had not found anything that beat our common sweet corn—sowed thick for forage. I had about one-quarter acre of ground well manured and irrigated so that it plowed up deep and moist. I planted six rows of pearl millet, four rows of common yellow dent corn, eight rows of Egyptian corn, side by side, same kind of soil and the same day; the rows being two feet apart and all the same length.

In about a week both kinds of corn showed themselves. About two weeks the millet began to show itself. Whenever either showed signs of want of water they got it. The first time of irrigation, about four weeks after planting. Afterwards, once in two weeks. About the sixth week from planting the Indian corn was from three to five feet high, and began to show the tassel as stout as it could stand. Then I cut it, the next week wet the same ground again and sowed to the same kind of corn. Three weeks after, and when the second crop of corn was a foot high, the millet began to show the head, and stood from three to six feet high, thick and heavy for about two feet high, when cut. The Egyptian was cut between the two.

Results: Of the Indian corn I got at least one-half more feed than of millet or Egyptian corn (besides the start for second crop) to the row. As to the second crop, the corn was, at least, a month ahead of the millet, and amount the same as before. Egyptian corn and millet were about the same as to amount of feed.

I also tried another patch of millet and Egyptian corn without irrigating at all after planting. Both came up equally well. The rows were planted three feet apart, three rows between small orange trees, twenty feet apart; bringing the outside row of feed about six or seven feet from each tree row. Results: The middle row of millet grew about six inches high and died out, the most of it; the outside rows struggled along until some of the plants threw up heads, but amounted to very little feed. The Egyptian corn grew from three to four feet high, headed out, and was cut a fair crop, beating the pearl millet badly.

On the whole, I think James Vick's head is about level on forage plants.

Again, I find that stock eat the Indian corn the best; it is all tender, no hard, woody stalk as in the millet or other corn. I don't know how much corn would yield to the acre in a season, but I believe it can be made to beat any of them.

## Note on Growing Indian Corn.

Actual experience has taught me that in this climate with Indian corn planted after the ground gets thoroughly warm (say from the first of June until the first of September) on rich soil I can depend on a crop once in six weeks. I sow in drills from 20 to 40 kernels to the foot; drills two feet apart, for convenience of irrigation. I also find that with the ground thoroughly wet before planting that one good wetting, when it is from two to three feet high or about four weeks old, will make the crop. Have been raising it principally for cow feed. If I was to raise it for working horse feed, I should plant it only about from four to six kernels to the foot, so that the stalk would produce nubbins of corn and be larger. Then I cut in pieces about three-quarter inch long and put a little ground barley on it, and my horse will leave the best of hay for it, and keep in the best condition.

S. WHITMORE.

San Diego, Cal.  
[As we understand our correspondent he read Mr. Vick as commending sweet corn, and then he proceeded to sow "yellow dent," which is not a "sweet corn," as the words are generally used. His results are, however, none the less interesting, because of the change in the variety. "Sweet corn" is gaining precedence at the East, as dairy feed, over common "field corn," as may be seen by the article on page 242 of the Press of October 18th.—EDS. PRESS.]

## Borax for Salting Butter.

The Italian Minister of Agriculture has addressed a communication to the Chamber of Commerce of Milan relative to experiments in salting butter with borax which have been carried out at the agricultural station at Florence. From the account which appears in the *Giornale di Agricoltura*, borax would appear to have a most marvelous effect in insuring its absolute preservation. Samples of fresh butter made at the Florence station, and purposely not carefully freed of their buttermilk, were found, on the addition of about 8% of borax, to maintain their natural fine flavor, without the least change whatever, for upwards of three months. To attain this satisfactory result it is necessary that the borax should be perfectly dry and in very fine powder, and care must be taken to insure its thorough mixture with the whole mass of the butter operated on. Among the further advantages of this plan, it is noted that borax imparts no flavor of any kind to the butter, while it is entirely harmless in its nature, and also reasonably cheap. Still later experiments have shown that a very much smaller proportion of borax suffices to produce the desired effect, and also that simple solutions of the salt act quite as well as the dried powder.

It has been alleged that too much borax imparts a bitter flavor. The main point is that if borax should prove a useful preservative element for butter, meats, etc., the borax industries of Nevada might be very properly advanced.

## ARBORICULTURE.

## Plant Trees in the Mountains.

EDITORS PRESS:—A fellow said, "what is the use of planting trees when the world is going to be burned up next year?" Too many who do not believe in this theological dogma of idleness, act as if they did, and are cutting, selling and burning all the trees on our mountains, and thus causing the streams to dry up. Arizona has become a desolation from the tree-destroying vandalism of savages. Extensive remains of water works are seen where now there is no water. The same thing will be true in California, if the people continue to cut the timber from the mountains, as they have done for the last 30 years. During the summer months many creeks have less than one quarter the water they had 25 years ago. When all the timber on the mountains and in the gulches shall have been cut out, our beautiful trout streams will become dry. The water now taken from the atmosphere by trees, and deposited in the earth to feed the springs will pass over; evaporation will drink up what has been stored during the winter, and so the mountain streams will cease to flow early in the summer, and the reservoirs underlying our rich valleys will fail.

Every observing man who has lived in the country 25 years, has seen this gradual stream-drying calamity coming upon us. Shall we continue to permit the mountains to be squatted upon by men who wish to have "wood ranches?" Shall we kill the hen that lays golden eggs? Or shall we have laws to check the desolating process, and to encourage the planting of trees?

## Will It Pay to Plant Trees in Mountainous Districts?

Land is very cheap, except where grain can be grown. For the most part, its value has been estimated by the wood or lumber which could be taken from it. Poor men have squatted upon mountain land, and when they have cut off the timber have wished to sell their "claims." These poor people cannot plant timber; they need year by year all they can earn; but could not some of our wealthy men, who have skimmed the cream from the virgin mines and soil of our coast, plant forests on this cheap land, and thus hand down their names as benefactors of the country, and lay a sure foundation of a fortune for their children? Rich men do not need to realize profits at once. The owners of the country are enriched by that which enriches the whole people. It would be a source of pleasure to a man to visit this forest, and witness the growth of trees and the increase of the streams of water.

## What Trees Should Be Planted.

The "Iron Bark," a species of the eucalyptus family, is a tree which grows in the mountains near Sydney. From it is obtained most valuable timber for wagons and machines; it is superior to oak. It flourishes in rocky, rough mountains, and is well adapted to the Coast range in California. This tree is easily propagated from seed, and cannot be surpassed in its power to collect moisture from the atmosphere. The almond and English walnut also flourish in mountain regions. These trees would soon pay for the nuts, and ultimately for timber. They are easily propagated.

Centerville, Alameda Co.

A UNITED STATES patent has been granted to A. E. Mery, of Paris, for a composition for applying colors, specifying the following ingredients: Glue, 25 parts (by weights); glycerine, 534 parts; water, 208 parts; white wax, 208 parts; strong solution of ammonia, 12½ parts; and usin, 12½ parts, dissolved in ether. Any coloring matter may be mixed with this paste, thereby forming a plant.

## HORTICULTURE.

## The Orange Supply of New York.

This is a topic of prospective importance to many of our readers, and all its features are possessed of interest. We notice that S. B. Parsons, of Flushing, the well-known horticulturist, furnishes an article to the *New York Tribune* concerning shipments from Florida and from the Mediterranean region, from which we quote as follows:

I would express a doubt whether the Florida orange is the best in the world. I think that its superior excellence in our markets in January and February is owing to the fact that it is ripe when picked. If picked in November or even in December it is often as sour as any Sicily orange brought here. I have no doubt that many thousands of dollars are lost every year by the quick decay of the Florida fruit. This is doubtless owing to defective packing. My own experience in shipping from Florida, and I think that Mr. Charles S. Brown will say that his experience, also, leads to the conclusion, that oranges can be so picked and packed that the percentage of decay will be very small, and no greater if as great as that of the Sicily oranges. If they are cut from the stems and not pulled; if they are placed upon the drying shelves by hand and not poured from the basket; if they are properly dried in the skin before packing, and if in packing all creased or bruised oranges are carefully excluded, the waste from decay in reaching market will be merely nominal. For want of this care thousands of crates are sent annually to New York which do not bring enough to pay the freight, and I have seen piles of these in New York warehouses dripping with juice. In truth the average American is impatient of the time and care requisite for doing a thing well.

Once asked a Prussian surveyor which was the most correct—an American or German surveyor. He replied, "the thought of the German is, 'is this the best?' while the thought of the American is, 'will this do?'" This applies truly to orange packing. A century or more of experience has taught the Mediterranean orange packers the best modes, and thus it is that with a long transit they get their fruit to this market in comparatively good condition. The American, however, generally comes to the front in time; the shipment of oranges from Florida will one day be confined to large packing houses whose experience will soon teach them the best modes of packing and shipping. A more difficult thing will be to impress upon small growers the necessity of care in picking, but their own interest will in time teach this to all but those whose indolence is ingrained. I think that Sicily has not yet discovered how ripe the orange may be, and yet be safely sent to this country, by quick steamers. The appearance of the skin of their oranges in this market shows that they have not discovered how very long a dried parchment-like skin will keep an orange. As years go on I think we shall receive much riper oranges from Sicily, and, therefore, much sweeter. When that time comes and their rich volcanic soil is worked to its utmost capacity, there may be a production of which we do not now dream.

## THE FIELD.

## Success with Shallow Plowing.

EDITORS PRESS:—An editorial in the *RURAL*, October 18th, "A Plea for Scratching in Grain," gives me much relief. It is now about ten years since I have been practicing the "scratching" in process, not only in small grain, but corn also. Ten years ago, in Round valley, Mendocino county, I put in 110 acres of grain; wheat, oats and barley; about an equal amount of each, as near as I could guess. While my neighbors plowed deep, and poked fun at my laziness, as they chose to call it, they had nothing to say when I reaped a good harvest, while many of their fields had nothing. I fitted out an immigrant last year (February, 1878) for a corn crop as follows: One pony, \$5; another, \$9; harness, \$8; plow, \$1. This pair of ponies pulled the plow just deep enough to kill the weeds (as I directed), and on an average the plowing was two and a half inches only. Didn't the disciples of deep plowing poke fun at Miller's "clerk." "All is well that ends well," "Miller's clerk" beat his fun pokers badly on a crop.

This year, one crop of corn on the Russell place was put in with two little ponies, to a 13-inch plow. On three sides of this same work, on same kind of soil, corn was put in, and plowing done with three heavy mules; plow in beam deep, sweat streaming off of those marvels of strength. Result: The pony crop is 20% the better—same soil and treatment. Seven of my neighbors, after this last result, have openly confessed, "shallow plowing for me hereafter."

As a conclusion, let me quote from the *RURAL*—same article: "Let not this be an excuse for poor culture, or shiftless farming, but where the soil yields the best crops by a certain method, let that be the one practiced, irrespective of praise or blame."

In Solano county, I tried deep tillage on wheat with poor success. I know of some low alluvial soils in this county where deep tillage is best. Cereals never taproot. Textiles, invariably do. As a general thing, when we plant

our cereals, the soil is damp and cold, and the roots set shallow, then our drying winds on deep plowing penetrates below the roots, whereas, shallow plowing and a well pulverized soil, allows the roots to spread out on the bottom of the furrows, the moisture being arrested in the capillary evaporation within reach of the roots.

GEO. KAY MILLER.

Los Nietos, Los Angeles, Co., Cal.

## SHEEP AND WOOL.

## Standards of Excellence in American Merinos.

At the recent meeting of the Illinois Sheep Breeders' Association, which was attended by the foremost flock masters of the State, a committee on "Points of Excellence" submitted the following: Marks of excellence for American Merino sheep:

Blood.—Thoroughbred, i. e., purely bred, from one or more of the direct importations of Merino sheep from Spain, prior to the year 1812, without the admixture of any other blood.

Constitution.—Indicated by form of body; deep and large breast cavity, broad back, heavy quarters, with muscular development forming capacious abdomen. Skin thick, but soft, of fine texture and pink color; expansive nostril, brilliant eyes, healthful countenance and good size, age considered.

Size.—In fair condition, with fleece of 12-months' growth, full-grown rams should weigh not less than 165 pounds, and ewes not less than 120 pounds.

General Appearance.—Good carriage, bold style, elastic movement, showing in particular parts as well as general outline, symmetry of form.

Body.—Throughout, heavy bones, well-proportioned in length, smooth joints, ribs starting horizontally from backbone, and well rounded to the breast-bone, which should be wide, strong and prominent in front; strong backbone, straight and well-proportioned as to length. Heavy, muscular quarters, deep through and squarely formed behind and before, with shoulders well set on, neither projecting sharply above the backbone, nor standing so wide and flat as to incur liability to slip shoulders.

Folds and Wrinkles.—Folds on the ram should be larger than on the ewe. Large and pendulous folds from the chin or jaws succeeding each other down the neck to the brisket, ending with large fold or "apron," and extending up the sides of the neck, but lighter if at all extending over top of neck, two or three behind the fore-leg, or shoulder, one on front of hind leg, hanging well down across the flank, two or more on rear of hind legs, or quarters, extending upward toward the tail, with one or two on and around the tail, giving the animal a square appearance on the hind quarters, and straight down as may be from end of tail to hock joints and hind feet. In addition to folds, small wrinkles over the body and belly are desirable, as forming compactness of fleece, but not large enough to be apparent on the surface of grown fleece, or to cause a jar in its quality, thus leaving the body of the fleece even in quality and free from the jar of large folds over the body.

Head.—Wide between the ears, and between the eyes, and across the nose; short from top of head to tip of nose; face straight; eyes clear and prominent; ears thick, medium size, and, together with the face, nose and lips, white, covered with soft fur or downy wool. Ewes should give no appearance of horns; while upon rams the horns should be clear in color, symmetrically curved, without tendency to press upon the sides of the head or to extreme expansion.

Neck.—Medium length, good bone and muscular development, and, especially with the rams, heavier toward the shoulders, well set high up, and rising from that point to the back of the head.

Legs and Feet.—Legs medium or short in length, straight and well set apart forward and back, heavy bone, smooth joints, with large muscular development of the fore-arm; thick, heavy thighs, wide down to hock joints, and from knee joints downward covered with short wool, or the soft furry covering peculiar to the cars and face; hoofs, well-shaped and of clear color.

Covering.—Tendency to hair and gare upon any part of the sheep is to be avoided. Evenness of fleece in length, quality, density, luster, crimp, trueness, strength and elasticity, covering the entire body, belly and legs to the knees; head well covered forward, squarely to a line in front of the eyes; well filled between the eyes and ears or horns, and well upon the cheeks; muzzle clear, with small opening up to and around the eyes. Scrotum of rams covered with wool free from tendency to hair.

Quality.—Medium, but such as is known in our markets as fine delaine and fine clothing wool, distinctly better in quality, luster, crimp and elasticity, than the wools of same length grown upon the common grade sheep.

Density.—Shown by the compactness of the fleece, throughout which should open free but close, showing very little of the skin at any point, even at the extremities.

Length.—At one year's growth not less than two and one-half inches, and as near as may be uniform in length to the extremities of the fleece.

Oil.—Evenly distributed; soft and flowing freely from skin to surface; medium in quantity.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### Tribute to the Memory of Mrs. Colby.

STOCKTON GRANGE, No. 70, P. of H.  
 EDITORS PRESS:—It was voted unanimously at our meeting to-day, that the following tribute to the memory of Mrs. Colby be published in the PACIFIC RURAL PRESS, and also be included in the minutes of to-day's meeting.—Wm. G. PHELPS, Secretary Stockton Grange.

With the falling leaves of the trees that beautify the landscape, and that she so dearly loved, our Sister, Mrs. Carrie A. Colby, passed from a life of eminent usefulness and honor, in the full noon of its sweet hopes and joys. We had learned from her pen, always wielded to uphold right and progress, always inspired to portray the beautiful, the true, and the noble in nature and art, to love her as the efficient friend of all that is healthful and elevating in humanity. We, of Stockton Grange, feel that our Order has lost a courteous, self-sacrificing counselor and assistant in the work; that, as editress of the *Patron*, she helped largely to make it a just exponent of our views and necessities, and that society at large has lost one of its most useful members.

While we pay tribute to the memory of the respected dead, let us heed her touching appeal that we plant "memorial trees" over the graves of our Grange dead, and in planting them, keep green the memory of her whose words and works will live on.

May her stricken life-partner and the little ones to whom her loss is irreparable, feel that her bright, encouraging spirit is beckoning them to a better home—that "she is not dead, but gone before," with those whose actions "smell sweet and blossom in the dust."—[Mrs. W. D. Ashley, Mrs. W. B. West, Mrs. Mary Kuhl, Wm. G. Phelps, Committee.

### Grange Gatherings.

That the Grange is doing a good work, socially and educationally, is evidenced by the many picnics and gatherings now being held among farmers. One of the principal objections made by young people against farming as an occupation, is its natural isolation and consequent lack of opportunity for social gatherings and intellectual improvement. The Grange supplies this needed want; and affords opportunities never before enjoyed. Naturally we love society, and it is only through force of circumstances that the young, particularly, are prevented from enjoying this inherent principle of their nature. If society cannot be found at home, or in suitable places congenial to good taste and moral sensibility, it will be found elsewhere, and as is too frequently the case, where to be seen by friends would cause the blush of shame to rise upon a youth's cheek. Parents, you who live in the country, whose occupation is farming, have you ever considered the importance of furnishing your children with proper social amusements and good society. The Grange affords you the means to supply this in its frequent meetings and social gatherings; in this it affords a blessing, the importance of which can hardly be realized. If nothing more than this were accomplished, a desirable work is done, and the Grange might be considered a success. Keep up your Grange meetings then, and strive, each member, by regular attendance, to keep up the interest in them. You can't afford to let this drop, to let the interest flag. Duty to the young demands activity and zeal, and with a determination on the part of each and all to do their part, prosperity will follow.—*Canadian Farmer*.

### Grange Suggestions.

That was a handsome compliment, and deserved one, that a clergyman at a Grange meeting gave to the Order for its practical efficiency to break up the spirit of caste and party exclusiveness, and in their stead create neighborly intercourse and friendship. "For thirty years," he added, "I had witnessed with pain the want of social intercourse, and the growing disposition to be censorious. Since the organization of the Grange, I have noticed a very great change in these respects. Men of antagonistic views in politics and religion now meet in friendly intercourse, forgetful of their little differences, and the same spirit has spread from the Grange to the outside farming world."

Now is the time to make the Subordinate Grange interesting and profitable, but whether it shall be so, depends altogether on the members. Interest and profit will not come of themselves. Like every other thing of value, they can be secured only by work. It is plain, that Grange works best, that carries out all the purposes of the Order. Co-operation and confidence are the watchwords that lead to success. The want of these explains many a failure. Let the few who have a zeal to work join heartily in the spirit of progress and improvement, and by their zeal rouse up the lukewarm to the same activity. Persistence in a good cause becomes a virtue. "Cast thy bread on the waters and thou shalt find it after many days."

Has the farmer leisure for study? Has the tired housewife, wearied with the day's cares and labors, time to read the current news of the

day, passing by the special study? Have the boys and girls of the farm, whose "education" is limited to the country school, no opportunity to "read up" the current literature, and make themselves masters of the knowledge worth knowing? If not, then machinery of the farm has done less for the farmer and his household than mechanical contrivances have done for other classes. If not, then the greater reason why they should give their Subordinate Granges their constant presence, and help to build up a thirst for knowing, a taste for reading, a skill for talking, and a mental development, which hard work, without these helps and recreations is as sure to dwarf.—*Grange Bulletin*.

### Hard Times and High Rates of Interest.

EDITORS PRESS:—If Mr. C. H. Ivins will read my articles in the PRESS of Sept. 27th and Oct. 4th, in connection with that of Oct. 11th, he will find that I was not writing about the currency question, although the price of the "dog" illustrates one phase of that question, namely, the effect of the abundance and scarcity of money in depreciating and appreciating its own nominal value.

As a "debtor nation" it does us no good to have everything double priced, since it requires hard money or commodities at hard-money prices to pay such debts.

I am opposed to expansions and contractions of a paper currency, because they change all nominal values, and result unjustly as between the creditor and debtor classes. I take no sides as between creditor and debtor. High interest acts injuriously on all who depend on labor for support, whether they are creditors, debtors, or neither. High interest means high rent, high price for what you buy—for high interest must be calculated on everything for the average time between its production and consumption, and it all comes out of labor.

High interest means flush times for the rich, and comparatively hard times for the poor, who ought to share more equally in the benefits of society and of nature.

The hard times in Europe are not from excessive rates of interest, but from over-population, resulting in excessive competition among the lower classes, and great expenses in sending the fruits of their labors to distant markets to secure necessities of life. The cause of high interest in California and the resulting hard times for the laboring classes comes principally from Government policy in regard to public land, as has been previously shown. That this may appear more clearly, let us suppose that the city of San Francisco had adopted the policy of selling only each alternate lot for a full price to the actual settler, collecting ground rent for occupied city lots used for business purposes. Under that plan the enhanced value created by the whole people would have gone into a common fund for the benefit of the whole people. This fund would have been sufficient to have paid for the City Government and improvements of every kind up to the present time, without any taxation whatever. The gradual sale of the remaining lots now, would secure a fund which at a low rate of interest would support the City Government to the end of time. In that way the four leagues of land would have truly belonged to the inhabitants of San Francisco, past, present and prospective. Instead of that the snatch-grab-shot-gun policy prevailed—the few robbed the many under color of law and became millionaires and dead-weights on society; and because money invested in these lots yielded in enhancement and rent on an average of 3%, 2% or 1% a month, all capital in the State required from production and labor the same rate. In other words, created an abnormal demand for money to purchase lots and lands. This was the main cause of high interest from 1849 to 1860, when a demand for farming lands set in to help maintain the rates.

Last year the price of city lots was stationary, and the rate of interest never so low. In December, 1877, the *Bulletin* reported sale of 24 feet front of Friedlander's building on California street at \$90,000. The building on it only worth a third of the whole value! This at a time when 20,000 people were being fed by charity! There was no hard times for Government pets and their successors, who had acquired these immense values in the land for nothing, and had collected several times their present worth in rents from the people whose presence and labors had created these values.

In the *Weekly Call* of Nov. 6th, 1879, I read: "The property east side of Sansome street, 66 feet south of California, has been sold for \$32,000; lot, 23x71 feet 4 inches; building worth \$6,000 to \$8,000; rents, \$300." In this case the owner had created a value of about 2-9, while the people (society) had created a value of 7-9, all yielding (interest) rent at 11 1/2% a year for the benefit of the owner, except taxes and repairs.

The remedy for the errors and wrongs of the past, and the resulting high rate of interest, is not in revolution and the abolition of private ownership in land, but the application of taxation that will take enhanced value in land as it is created by the whole people, and pay Government expenses for the benefit of the whole people. What equality can there be in taxing property created by labor, yielding no income because it is an essential of life, at the same

rate as values which are all income, acquired without care, risk or labor?

Mill says (p. 411, vol. ii.) such a tax "would not properly be taking anything from anybody; it would merely be applying an accession of wealth created by circumstances, to the benefits of society, instead of allowing it to become an unearned appendage to the riches of a particular class." The progress of society tends to augment the income of landlords. They grow richer as it were in their sleep, without working, risking or economizing. What claim have they, on the general principle of social justice, to this accession of riches?"

D. A. LEARNED.

Stockton, Cal.

CONDITIONS OF SUCCESS.—Ignorance is our chief enemy. The opposition from merchants or those who antagonize us from various causes, would soon lose its force could we get our people to read, think, meet together, learn to appreciate each other, as well as claim their own rights, and not expect great reforms in one year that must require ten to accomplish. And above all, don't expect of that institution that is to preserve the very life of our country itself, to do so without some expense and labor on the part of those who inaugurate the movement.—*Worthy Master Williams, Arkansas State Grange*.

DEATH OF MR. BLANCHARD.—J. D. Blanchard, formerly President of the California Farmers' Mutual Insurance Company, died last week at Napa, from heart disease.

### In Memoriam.

HALL OF SUTTER MILL GRANGE, No. 179, P. of H., Colima, El Dorado Co., Cal., Nov. 7th, 1879.

WHEREAS, Death has again entered our Grange circle and we are called to mourn the loss of one of its most devoted members, our beloved Sister ELLA M. DELORY, who has passed from this Earthly Grange to that Great Grange above, whose circle remains forever unbroken; therefore be it

Resolved, That in the death of Sister Ella Delory, the stricken family whose home-light is dimmed, have lost an affectionate daughter and sister, society one of its brightest ornaments, and the Grange one of its most worthy and efficient members.

Resolved, That we tender our heartfelt sympathy to her family in their great sorrow, and we most humbly invoke the blessings of our Divine Master to comfort and cheer them, and to brighten their pathway through the gloom of their sad bereavement.

Resolved, That as a token of respect to the memory of our departed Sister, our Charter be draped in mourning for 30 days; that this expression of the Grange be inscribed on our records, a copy sent to the family of deceased, one to the *Rural Press*, one to the *California Patron* and one to the *Mountain Democrat* for publication.—[Mrs. W. H. Valentine, Mrs. M. J. Stearns and Mrs. Annie Markham, Committee.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### ALAMEDA.

APPLE FRAUDS.—*Oakland Times*, Nov. 10: The residents at Fruit Vale and vicinity usually allow persons who ask, to help themselves to the fruit that has fallen on the ground; but it appears that these persons have informed others, and now those uninvited come with baskets, sacks and boxes, and not only fail to ask permission, but even shake the fruit from the trees. The invasion has assumed such gigantic proportions that a movement is on foot to organize an army of defense among the land owners of that portion of the county.

#### COLUSA.

NEWVILLE.—EDITORS PRESS: Not seeing anything in your paper from this corner, I will drop you a line to let you know there is such a place in the world. The hard times for the last several years have affected the people here as they have all over the State; but times are improving slowly, and the people have learned something that they will not soon forget, namely, industry, economy and frugality; but, as Dr. Franklin said, some of us have paid too dear for the whistle. There was a light rain here on October 13th, just enough to spoil the old feed and not enough to start the new, so it was worse than no rain. There is a larger area of grain sown on dry ground this fall than there ever was before, and in better condition, so we can expect a good yield next fall. Can you, or any of your correspondents, tell me where we can get a few pounds of Chevalier barley? I would like to try it here, it is so highly spoken of.—M. L. CONKLIN, Newville, Colusa Co. [Perhaps some of our Chevalier-growing readers will write Mr. Conklin what they will supply him a small lot for, as an accommodation.—EDS. PRESS.]

#### FRESNO.

APPLES.—*Expositor*, Nov. 5: It has always been claimed that a good apple could not be raised on the plains, but this year a number of trees were planted, and the planters were rewarded with some fine apples. Capt. Rowe, of the Colony, planted a few trees of the Jonathan variety. A few days ago he left at this office a specimen of the apples produced. For beauty and flavor they could not be excelled.

#### HUMBOLDT.

STOCK INTEREST.—*Eureka Signal*: From Geo. W. Burges, who lives at Poison Camp, in the southern part of the county, we learn that shearing is finished, and that the season has been a most profitable one for wool-growers. The late rains have given grass a splendid start, and stock will commence the winter in excellent condition. Not only has the present year been a prosperous one for sheep raisers—much more so, in fact, than for grow-

ers of banded stock—but the outlook is good that all kinds of stock will commence the winter in more than usually good trim, with a prospect of getting through it in splendid condition, with proper care on the part of owners. Within a few days we have interviewed parties from nearly every section of the county, and all unite in the statement that the winter feed prospect was never better at the commencement of November. We have this testimony from Mr. C. F. Roberts, who has lately visited Kneeland's Prairie and Mad River. Chas. Becker, of Yager Creek; Geo. W. Burgess, from beyond Blocksburg; our young friends Guthrie and Osborn, of Garberville; John Myers, who lives near Camp Grant, and H. W. Hollister, of Bear River. As stock-raising is one of the important industries of the county, this intelligence can be appreciated.

POTATOES.—We have bad reports from Arcata in regard to the potato yield. Mr. C. H. Liscom tells us that many of the potatoes which he has already dug are rotting, and that the remaining 15 to 18 acres are not worth digging. Mr. J. S. Thomson, county clerk elect, tells us that on his brother's farm the condition of things is about the same—that he has 12 to 15 acres which it will not pay to dig.

#### KERN.

ITEMS.—*Courier*, Nov. 6: The residents near San Emedio report fine grass in the foothills. The bunch grass of the mountains will soon make good feed. The largest crop of wheat ever raised in Kern county has been raised this year. A larger area still will be planted this season, as it has proved the most profitable of all the crops, and has a good cash market right at home. Messrs. Haggin & Carr propose to put in 20,000 acres of the desert land on the north side of the river in grain this season, if the rains are favorable. The Caloway canal is capable of irrigating 100,000 acres if the supply of water is up to the usual quantity.

#### LAKE.

BIG CABBAGE.—*Lower Lake Bulletin*: H. R. Bolter brings us a huge cabbage, weighing, stripped of the outside leaves, thirty-three and a half pounds. This monster cabbage was raised on his farm, in Cold valley, in this county.

PROPOSED AGRICULTURAL SOCIETY.—*Bee*: A call for a meeting at Kelseyville on Thursday, November 20th, for the purpose of organizing an Agricultural Society for Lake county, is being circulated and signed by numbers of our most prominent citizens. We sincerely hope our people will take a deep interest in the matter and that steps will be taken to organize such a society at once, so that it may be prepared for a fair next fall.

#### LOS ANGELES.

ORANGE PRUNING.—*Cor. Santa Barbara Press*: Mr. Crow says, in regard to pruning, that "when the tree is three years old, if it has made a healthy growth with a three-foot stem, all suckers after that should be cut down, and very little pruning done until the tenth year, when the trees should be put in shape outside, and all small brush and cross branches removed inside. When the large trees are trimmed so high inside the small branches droop, umbrella-shape, to within four feet of the ground." On the diseased portions of the tree, where the unhealthy bark and wood have been cut away, Mr. Crow uses the Pacific Rubber paint, shade No. 2.

PIPING WITH BAMBOO CANE.—*Commercial*: Mr. E. W. Doss, of Cahuenga, was in town yesterday to obtain another large load of cane for the purpose of extending his system of piping water on his ranch, from a distant spring in a canyon of the Cahuenga mountains. These canes are about ten feet in length, cost but a cent apiece and are said to remain in good preservation for ten years. Mr. Doss has about 800 feet now in use and is now putting down 700 feet additional. This remarkably cheap method of carrying water must commend itself to all those who desire to carry water in a cheap and economical manner.

#### MENDOCINO.

FAIR RESULTS.—*Press*, Nov. 7: The statement of the results of our late fair equals the anticipations of its most sanguine friends. The official statement makes the cash receipts \$1,625; the expenses amounted to \$1,375, leaving a clear profit of \$250 in the treasury. The society's grounds, with the very substantial improvements, represent an outlay of \$4,450, and carry an indebtedness of only \$1,700. This is a splendid showing for our society, which inaugurated its struggle amid a great political excitement and the distress of hard times.

#### MERCED.

EDITORS PRESS:—Strong winds prevailed on Friday and Saturday up to Saturday night, when commenced a light rain lasting nearly all Sunday. It was heavier occasionally, and Sunday night at eight o'clock, there was a regular downpour. The ground in this vicinity is wet over seven inches, even the traveled roads are wet down four inches. All are jubilant so far.—M. J. O'BYRNE, Merced, Nov. 10th.

#### NAPA.

HOGS IN BERRYESSA.—*Register*, Nov. 8: A great number of hogs are raised by the large farmers of Berryessa, one man having 200 or 300 for sale. The mast has been plenty this year and hogs fattened easily. Only three cents a pound is offered for the animals by the drovers.

THE GRAPE INTEREST.—Vineyard men up the valley are picking the second crop of grapes, and will finish in a short time. The crop, so says an extensive grape grower and wine-maker



of St. Helena, will fall short of last year's yield about one-fourth, which is much less than was anticipated early in the season. The present year has been such a favorable one and future prospects are so bright that a great many acres of new vines will be planted. The profits of grape-growers have been large this year. One wine-maker, who will manufacture about 250,000 gallons, will realize, it is estimated, some \$25,000, clear. Large orders for brandy have been received from the East by several manufacturers in the vicinity of St. Helena, and distilleries are running night and day. About four gallons of wine are distilled into one of brandy. The exportation of such large quantities of brandy leaves the best brands of wine on hand, and this finds ready sale.

**VALUE OF GRAPE LAND.**—St. Helena *Star*: Last summer a certain 40-acre tract, 19 of which was in vines, was offered for \$4,500. Parties thought it too high. This fall the vineyard alone yielded \$2,500 worth of grapes. We referred lately to Owen Wade's purchase of 10 acres of John York's place. This fall the grapes brought him back more than half the purchase money, five acres yielding \$640 worth.

**GRAPH PUMICE FOR CHICKENS.**—A load is dumped into a hen-yard. The chickens pick out the seeds. Flies light on the pumice and make worms; the worms eat the pumice and the chickens eat the worms. Behold the beautiful compensation of nature!

#### SAN JOAQUIN.

**A FAIR BUILDING DESTROYED.**—*Herald*, Nov. 10: Saturday night the wind blew a regular hurricane from the southeast, causing considerable damage to insecure buildings. The building erected this season by the District Agricultural Society, at the track, for the display of machinery and agricultural implements, was utterly demolished. It was built on posts which sat in the ground to the depth of fourteen inches, and was open all around from the ground up to a height of ten or twelve feet. From that height it was covered and well made. Being without strong braces it was entirely at the mercy of the wind. The building was lifted so that the posts all came out of the ground, and then it was crushed and flattened out, falling toward the north. Some machinery and wagons were stored under the building and these are damaged more or less. The loss is a serious one to the Agricultural Society.

#### SAN DIEGO.

**FIELD AND FOREST FIRES.**—*News*, Nov. 7: Through our correspondents and otherwise we have given the late fires a pretty good ventilation, but some parts of the county, where we have no correspondents, or where they fail to address us has been overlooked. The section from Temecula toward town is one of them. There we learn the fires have run over the country for perhaps over 30 miles, and while no property may have been burnt, one life was lost by it, and the destruction to all the shrubs bearing bee feed has resulted. The manzanita, the sumac, and various other shrubs having blooms are badly burned, and one gentleman tells us it will take at least three years for them to recover from the damage. It is true, no doubt, of all the sections burned over.

#### SANTA BARBARA

**ITEMS.**—*Press*, Nov. 8: Fruit never was so abundant, and of such fine quality in Santa Barbara as it has been this season. The sheep men are jubilant over the high price of wool and beans. An offer of seven cents a pound for a lot of Lima beans was refused yesterday. The Lima bean crop of the Carpinteria is about all closed out to dealers at prices averaging 4½ cents, which will make the farmers of that section comfortable. A larger area will be planted next year.

#### SANTA CLARA.

**CHINESE AND HOPS.**—*Mercury*: An article is in circulation stating that the Chinese have gone so extensively into the industry of hop-raising that white competition is virtually ended. A prominent hop-grower of this city says it is all a mistake, that to his knowledge there has been but one attempt made by Chinamen to cultivate and cure the beer-producing herb. That one attempt satisfied them. A company of them rented the Hamilton place, near this city, and cultivated 50 acres of hops. The result of the venture was a loss of \$6,000—the entire crop being rendered unsalable by the manner in which it was cured.

**FRUIT SHIPMENTS.**—Porter Bros., of Chicago, have been visiting San Jose regularly each year for ten years, buying fruit upon the trees, packing and shipping it to Chicago. According to the *Town Talk*, freight on this fruit in this time has amounted to the very considerable sum of \$800,000. Each pear is wrapped carefully in paper, which requires considerable labor. During the present season the cost of tissue paper in which to wrap the fruit has been \$4,000. They have shipped this year 150 cars, 78 of which were pears. In each car there are 45 boxes. The cars are shipped through without change, the average time of transit being 12 days. Mr. W. Porter, who has been attending to the California business of this firm this year, has about completed his work and will soon return to Chicago.

#### SANTA CRUZ.

**EDITORS PRESS:**—We had a splendid rain yesterday, about two inches, which will revive the grass which had already started by the previous rains, and bring on the volunteer wheat, oats and barley, which were well under way. The skies are clear to-day, with mellow sunshine, and no frost, and our full crop of winter grass is

assured, and the plows will be kept bright now for a while, as the ground is in order for their use. My young peas and potatoes are up and doing nicely.—M. P. OWEN, Soquel, Nov. 10th. SHASTA.

**GROWTH.**—Reading *Independent*, Nov. 6: Since the splendid rains of the middle of last month the weather has been delightful, and farmers have very generally availed themselves of its advantages by plowing and sowing wheat, extensively, for next year's harvest. Although the weather during the day is warm and pleasant, the evenings are cool and frosty, covering the oak trees with the beautiful hues of autumn. Our valley is still being settled by persons seeking homes; and although some may say that all of the available land is taken up, there still seems to be plenty to be had that men are willing to risk raising good crops of grain on. In evidence of this fact, I will state that more claims have been taken in the last three weeks in this valley than ever before, in the same length of time. Now that the desert land entries of Pickett, Guinean & Hoyt have been cancelled, every foot of that land is being improved by actual settlers, and in some cases two or three parties are claiming the same tract.

#### SOLANO.

**GUM TREES FOR FUEL.**—Dixon *Tribune* Nov. 8: Many travelers have noticed a small tract of gums near the railroad station at Batavia. It was set about six years ago by E. A. Fargo, but has changed hands several times since, and we do not know who is the present owner. There is somewhere from three to five acres in this young forest, and the trees have attained a magnificent growth. Forty cords to the acre, worth \$6 a cord in the tree, would be a fair estimate of the product, which would make \$240 an acre, or \$40 for each acre during every year since the grove was planted. There has been no expense, save taxes and interest on capital, since the first year, when the trees were planted and cultivated for one season. It is said the eucalyptus grows well on the heaviest adobe lands, and if they could be made profitable by its cultivation, the decaying leaves and bark would ultimately much improve the soil, since what it wants is more vegetable matter.

**CALABASH TREES.**—Vallejo *Chronicle*, Nov. 8: Mr. Passalacqua has at his vegetable store a number of calabash trees that were raised in his garden on the Napa road. A year or two ago he concluded to see if this tropical plant could not be made to thrive in this country. His efforts proved successful, and about twenty-five different-shaped specimens of the fruit were raised. The shell, which will hold about a gallon or thereabouts of liquid, is very hard, and the pulp or kernel is slightly acid in its taste. The gourds will be used by Mr. Passalacqua for holding wine, etc. Cups and plates are often made by the natives of tropical countries from the fruit of the calabash tree.

#### SONOMA.

**INJURIOUS PLANTS.**—Flag, Nov. 6: "Broncho grass" has made its appearance on some of our sheep ranges, and its burry seeds have, in some cases, ruined a few fleeces of wool. How can it be exterminated. Henry Gird informs us that his partner reports the existence of an abundance of "poisonous milk weed" on their sheep range east of Geyserville, and yet without fatal results. But this does not break up the theory that the weed will kill sheep, for it will be remembered in the statement made by Mr. Cassidy, editor of the *Argus*, sheep that are raised where the weed grows never touch it. Murrell & Doan, east of Geyserville, changed a large band of sheep last week into a pasture well sprinkled with fresh shoots of poison oak, and in a few days discovered that the entire band had sore mouths and scabby and cracked lips. They immediately withdrew the sheep from the pasture and fed alfalfa hay, of which they have an abundance, and have the gratification of seeing their flocks on the road to recover. B. D. Myrick, a neighbor, reports having had a similar experience some time ago.

**NATIVE CALIFORNIA WALNUTS.**—Last week while visiting Wm. McElroy's small ranch near town our attention was called to a native California walnut tree, which had made a remarkable growth. In 1870 it was eight inches through, and now, by our own measurement, twenty-nine inches, or two feet and five inches, eighteen inches from the ground; it casts a shade forty feet in diameter, and is about fifty feet high. Beneath its branches the business of paring, coring and slicing the applebrop from the surrounding orchard was in progress. Its age is about twenty years, and it has been bearing seven years, generally about three barrels of nuts to the season.

**THE PHYLLOXERA.**—Index, Nov. 6: We have made a brief visit to a few of the vineyards in the easterly portion of the valley. We found everywhere the indications of that justly dreaded pest, the phylloxera. No weapon hitherto formed against it has prevailed and all the many devices of science have proven unavailing. The flooding process so confidently recommended by many of our prominent journals is declared a failure by some of the leading authorities in the valley who have tested its practicability. We will not attempt to discuss in so short a space a question of such great importance to this district. Our only salvation must lie, if anywhere, in our natural resources, viz: thorough culture of the soil, and if that were possible, the planting of phylloxera-resisting vines.

#### SUTTER.

**GRAIN HOUSED.**—Banner, Nov. 7: A very large portion of the wheat stored upon the banks

and in warehouses along the Sacramento, has been moved. We were at Kirksville on Sunday last, and all had gone from that point, and the steamers were going further up for a load each trip. An immense amount of grain was piled on the banks, far up on the river, and there is considerable work for the steamers to do.

#### TULARE.

**EGYPTIAN CORN.**—Delta, Nov. 7: We heard a farmer from near Grangeville make the remark a few days since, in a Visalia store, that he had raised three tons of Egyptian corn to the acre on his place, and as a feed for hogs he considered it far superior to barley. He plants the brown variety, as blackbirds have such a fondness for the white kind that they get away with it before it has time to fully ripen.

**TULE RANCHERS.**—We are informed by a gentleman from Woodville that the farmers on Tule river are displaying greater activity this season than ever before known in that section, and all feel confident of a good crop next year. The Tule river section of the country has suffered more from the late drouth than any other section of the county, and for their sakes alone we would like to see another good year.

**WHAT INDUSTRY WILL ACCOMPLISH.**—Five years ago two Germans located on a piece of ground on the dry plains in this valley, and immediately went to work to make a home. They raised a garden the first year and set out a number of fruit trees and vines. Their neighbors, most of whom were Americans, ridiculed them for attempting to raise fruit, and said they could buy it cheaper than they could raise it. The two men persevered notwithstanding the jeers of their neighbors, and during the summer months drew water from a well and carried it to their trees with buckets. When water was first brought to their section in ditches they were prepared to use it, and irrigated more extensively than before, while others contented themselves with growing a little grain. The two Germans realized from their orchard alone over \$1,500, and now have one of the best regulated farms in the valley. It matters not to them now whether the seasons are wet or dry; their farm is in good working condition, and when there is water they are prepared to utilize it to the best possible advantage. They have a good farm and the work of getting it in order is over with; they are certain of making a considerable net profit every year from their produce, and can now (if they wish), take life comparatively easy and reap the profits of their industry, while their neighbors are now just what they were five years ago—the possessors of dry and unimproved farms on the dry plains, and compelled to add to their German neighbors' wealth by purchasing fruit of them.

#### NEVADA.

**HAY AND BEEF.**—Reno *Journal*: In conversation with many of our farmers we learn that there is not much likelihood of a surplus of hay. In fact, right now, there is not over two-thirds as much hay on hand as there was last year at this time. Loose hay is selling for \$8 and \$9; first crop, baled, for \$14, while second crop is worth about \$12. The latter is being delivered in Virginia at \$18. These are better prices than ruled a year ago. The low price of beef is discouraging to cattle raisers, and many of them declare they will bring their cattle to Reno, and feed during the winter, rather than sell in Virginia for four cents.

#### WASHINGTON.

**HOP GROWING.**—Olympia *Cor. West Coast Signal*: A nice spell of weather allowed the hop growers to gather their crop, which is found to be a fair one, and the quality good. The advance price, though, is what pleases the growers most. Two thousand Indians did the work of gathering in Puyallup valley. Chinamen offered to work for less wages than the Indians, but the noble red man soon let the heathen know that such a thing could not be, and he taught the "Chinee" how "to go."

**A RAILROAD TO BODIE.**—From appearance we expect to be able in a short time to congratulate Bodie upon the possession of a railroad. The Virginia *Enterprise* of recent date says: Mr. D. O. Mills, who is at present in New York, has negotiated for the material necessary to extend the Virginia and Truckee railroad from the Mound House, via Mason valley, toward Bodie 60 miles, and the order has been, or will be in a day or two, given for the ties. So soon as the material can be landed here, active work on the construction will be commenced. We have often referred to the advantage which this railroad extension will work. It will awaken active life in five or six mining districts which are now well nigh dead; it will enable heavy machinery and building material to be carried to Aurora and Bodie at a reasonable cost, and it will also place 200,000 acres of first-class land in Mason valley convenient to market. This alone will furnish 1,000 families with comfortable homes on the best continuous body of land in this State. It will place Belleville, Candelaria, Marietta, New Boston, Columbus, Benton, and Indian districts within one day's drive of the railroad; it will bring Lake district, Belmont and Alida valley nearer Virginia City than Aurora now is. It ought, by the time it is finished, to give active work to 4,000 more miners than are now employed, and the mining population of the State ought to be increased by at least 800 families. With its completion the taxable property of Esmeralda and Lyon counties ought to double.

#### News in Brief.

BISMARCK'S illness continues serious. The Ameer's troops in Turkestan have mutinied.

PISAGUA, Peru, has been captured by the Chileans.

The Mint rate for silver has been advanced to \$1.15 per ounce.

PAUPERISM is greatly increasing in Ireland, especially in Ulster.

ALL the eastern provinces of Cuba are overrun by insurgents.

GERMANY and Russia are now engaged in an entente cordiale.

A RUSSIAN force is marching against the Tekke Turcomans.

It is reported that a revolution has broken out in Lima, Peru.

ABDUL KADER, the famous Algerian Chief, died at Damascus, aged 72.

A TERRIBLE tornado occurred in the interior of Missouri Saturday last.

EMPEROR WILLIAM sent £500 to the sufferers by the floods in Murcia, Spain.

WASHINGTON is making extensive preparations to receive General Grant.

SINCE the 1st of January 24,993 German immigrants have landed at New York.

The Republican National Committee will meet December 17th at Washington.

The French revenue so far this year exceeds the estimates by 123,000,000 francs.

A. H. STATHAM, of Fresno, has raised a remunerative crop of cotton this season.

THE Russian papers are growling at England and an uneasy feeling is generating.

It is declared that a financial and political catastrophe is imminent in Constantinople.

MARSHAL CANNROBERT, the Bonapartist elected to the French Senate, obtained 316 of the 499 votes.

DR. LOVICK PIERCE, the father of Methodism in Georgia, died at Sparta, in that State, last Tuesday.

The subject of building the St. Louis and San Francisco Railroad is being revived at the former place.

W. H. JESSUP has raised a large crop of excellent tobacco on his farm near Haywards, Alameda county.

PEARL millet is considered the best of the new forage plants by the farmers of Orange, Los Angeles county.

T. B. JAMES, Superintendent of Public Instruction, of Storey county, Nevada, died at Reno, the 11th inst.

The short time labor movement at Oldham, Eng., which has lasted eight weeks, shows signs of breaking up.

At Liverpool wheat is quoted at 10s 9d to 11s 6d for average California white, and 11s 6d to 11s 10d for club.

PARNELL'S departure for America has been postponed in consequence of the aspect of political affairs in England.

Two tribes in Morocco recently had a desperate conflict, in which 190 were killed on one side and 90 on the other.

THE whaling schooner *Florence* has been wrecked in Cumberland straits, to the east of Hudson bay.

THE Indians at Williams Lake, B. C., are said to be starving, and their chief has published a pathetic letter in their behalf.

THE Treasury Department the other day purchased 530,000 ounces of silver for the Philadelphia and San Francisco Mints.

THE attempt to raise the German ironclad *Grosser Kurfurst*, sunk in the British Channel, has been postponed until the 24th inst.

THE Arizona troops who recently pursued Victoria's Apaches in Mexico have returned, having driven the savages 60 miles from the border.

IN New York Government bonds are quoted at 102½ for 4s of 1907; 102½ for 5s of 1881; 106½ for 4½s; sterling, \$4.80½ @ 4.83; silver bars, 115½; silver coin, 90½ @ discount.

THE ceremonies of the renunciation of Archduchess Marie Christine, the future Queen of Spain, of her rights to the Austrian succession will take place at Vienna on the 18th inst.

SILVER in London 53½d; consols, 97 15-16; 5% United States bonds, 105½; 4s, 106; 4½s, 109½.

IN San Francisco half dollars are quoted at par; trade dollars, 95 buying, 96½ selling; Mexican dollars, 96 buying, 96½ selling.

NOTIFICATION has been received at the Post-office Department that the Republic of Venezuela has become a member of the Universal Postal Union, to date from the 1st of next January.

THERE is great agitation in Bosnia and Herzegovina, where Mussulmen and Christians make common cause. Fears of a rising in the spring prevent Austria from reducing the army of occupation.

THE steamship *Gallia* arrived in New York from Liverpool, and brought \$550,000 in British gold bars and American gold coin. The *Westphalia*, from Hamburg, brought \$1,300,000 gold coin in 20-franc pieces.

#### The Free Labor Exchange.

Established by voluntary donations, for the special object of providing work for the needy and destitute, free of charge to all, continues its benevolent designs and operations. Employers of all classes of help, male or female, are earnestly requested to patronize this institution, and send their orders to the Free Labor Exchange, 33 O'Farrell St., S. F.

G. W. SCHROEDER, Manager.





### The Brook.

(Written by Miss MARY NAUBER, of the Oakland High School.)

The brook, the everflowing brook,  
Comes from the mountains leaping down;  
From the quiet glen and shady nook,  
O'er moss-covered rocks aged and brown.

It plays all day where the wild bird sings,  
In the cool and verdant groves;  
It always joy and gladness brings  
To the fields through which it roves.

And on the banks the violets blue  
Look into the waters rippling by,  
Their tiny tentacles gilded with dew  
Reflecting the rays from the eastern sky.

It never stops, but onward flows;  
It hurries always, lingers never;  
But swifter, swifter yet it goes,  
And thus goes on forever.

It rushes into the sea's embrace,  
To mingle with its waters blue,  
To slumber in peace at the end of its race,  
To be lost forever to me and you.

Thus should the stream of life roll on,  
In freshness, love and beauty,  
Carrying joy to all around  
Till it rolls into eternity.

### Sleepless Nights.

Within the hollow silence of the night  
I lay awake and listened. I could hear  
Planet with punctual planet-chaining clear,  
And unto star, star cadencing aright.  
Nor these alone. Cloistered from deafening sight,  
All things that are made music to my ear:  
Hushed woods, dumb caves, and many a soundless mere,  
With Arctic maines in rigid sleep locked tight,  
But ever with this chaunt from shore and sea,  
From singing constellation, humming thought,  
And Life through Time's steps blowing variously,  
A melancholy undertone was wrought;  
And from its boundless prison-house I caught  
The awful moan of lone Eternity.

—Alfred Austin, in Cornhill Magazine.

### A Mother's Influence.

(Written for the RURAL PRESS by HOWLETT ELDRIDGE.)

What sacred memories cluster around the words, "a mother's influence!" What a world of love they contain; what a towering monument of patience they form; what a golden wreath of self-denial they suggest.

The whole life of one, and the destinies of many, are concentrated in those short but important words. For a moment contemplate the mighty scepter of power they hold. This divine power is omnipresent and almost omniscient. Who can conquer its pre-natal potency? Who can wrestle it down in the turbulent days of their innocent childhood? Who can put their will against its subtle strength in the prime of triumphant maturity? Who can flee from its urging presence? Who can journey to haunts where it encourages not? Go to the halls of State and the chambers of wisdom, and you find it enshrined there, like honor on the throne of justice. Go to the vulgar rattle on the muddy street, and it betrays itself there. Go to the statue of fame, or the den of vice, and you see its graceful traces of peace and joy on the one, and its cruel scars of hate and misery in the other.

These words are as vital as they are sacred. They form a chain that binds the cradle to the grave, adolescence to maturity, honor to degradation, virtue to vice, bright hope to dark despair. Each link is an individual experience, and bears the indelible marks of our external surroundings; and their strength for good or bad, weal or woe, depends on a mother's realizing or disregarding her infinite responsibility.

The exquisite flowers of happiness they strew along the pathway of motherhood would lighten the beauty of an Eden. Yet the thorus of pain they suggest would make a giant quail. The clouds of fear and doubt that darken the horizon of their boundless love would unnerve the bravest heart.

What sweet and affecting memories thrill our soul as we recall the happy days and innocent romps around our mother's knee! It was then we drank of her very existence, and, as we long had, continued to absorb her very nature. But the older we became, the less her gentle admonitions and anxious desires to bless us affected our callous feelings. A few years, and the rag of self-conceit and flag of rebellion both waved on the staff of fancied wrong to the breeze of desire for boundless freedom. In a moment of anger, fed by the faggots of supposed revenge, we abandoned the generous hearth and pleading heart and heroically launched out on the hilly ocean of uncertain enterprises, with our talents for sails, our conceit for a compass, and our ungoverned passions for a rudder. We complacently waited for the winds of plenty to impel us into a harbor of ease and park of pleasure, and congratulated ourselves that we

were at last beyond the reach of that jailor—a mother's influence. But instead of the zephyrs of success, the gales of adversity wreck our fragile craft on the reef of ignorance. Cast upon the ice-covered lap of humanity, we soon realize our fatal mistake. We withstand the power of temptation or we are engulfed by the quicksands of sin. In either case we then begin to see the genius of truth transform those magical words into the key of our fate. The tears of repentance and the anchor of vows to make the best of our condition are the only things that will help us to a higher sphere.

Every flower and shrub and rugged rock in the garden of life reverts the mind to some drooping rose of regret, some violet of gentle reproach, some willow of generous chastisement, some weed of bitter anguish, some lily of hallowed bliss. The degree of beauty and fragrance of each flower, is measured by the calm patience, firm government and proper expression of a mother's influence. The rocks of remorse are jagged, the thistles of disappointment are sharp, the thorns of defeat are penetrating, in proportion as this potent influence is misdirected.

It is when the harrow of experience keeps mellow the soil of contrition, that the tiny seeds of virtue and germs of integrity from a mother's heart take the deepest root. Yes, then, though apparently dead, they spring up and rear aloft the birch of justice, the oak of courage, the twining vine of friendship, the laurel of victory and the ever-blooming lilac of charity. This beautiful and varied vegetation of advancement will never lose its pleasant fragrance, nor its attractive verdure, so long as the crystal fountain of pure love gives moisture to its roots, and the dew of affection kisses its foliage.

All the repulsive evils that curse humanity will never be banished till the mothers of man themselves courageously raise the herald of reform. Till they perseveringly and intelligently carry the whole banner of improvement into the boundless field of pre-natal existence, all reformatory measures promise little hope of success. If they would see kindness overcome cruelty, happiness conquer misery, love vanquish hate, wisdom banish vice, and virtue supplant vice, they must begin at the beginning. These important but once obscure and disregarded facts, thanks to a few noble minds, are being made more and more prominent each day.

To all fond mothers I would say: as you value the health, as you prize the moral excellence of your dear sweet children, as you have their future welfare at heart, as you regard the happiness of unborn generations, do not enclose yourself in the castle of indifference, nor take refuge in the fortress of sophistry, but pay the utmost attention to these fundamental and vital truths. They underlie the whole superstructure of physical existence.

But all the mother's efforts are restricted, the vigor of determination modified and the glow of enthusiasm regulated by external conditions. The harmony or discord of these conditions depend upon the love or hate, intelligence or ignorance, and the meanness or goodness of husband and father. So all the blame can not be justly laid at the mother's door if her influence is not that kind most to be desired. Still it is with the mothers to raise the banner of permanent reform. Her influence is the lever that moves the world, and its potency for evil corresponds to her criminal ignorance.

As we wearily toil up the irregular stairway of progress, let "Know thy Self" be our fascinating motto, and by its cheerful and inspiring radiance we will begin to see and comprehend these words: A mother's influence.

Stony Point, Cal.

### Pumpkins and Enterprise.

Mr. Benjamin F. Taylor, in the subjoined paragraphs, which we take from his charming book of rural flavors called "January and June," shows what a poet can make of a commonplace incident on every farm, and suggests a test of skill which may likely enough baffle those industrious gentlemen, the evolutionists:

Last summer, I remember, a little vine—a pumpkin vine—came out of the ground in a cornfield "up the road," and there it was, in the midst of the corn, unseeing and unseen. So there was nothing for it but to make the best way out to the fence that bounded the road, some 18 or 20 feet distant, where there would be some prospect of its being appreciated, if it could. Could? But it *did*, for away it went, vine and leaf, baggage and all, through the corn, this way and that, out to the fence, and up the fence three rails, and through the fence. And what do you think it did then? Just unravelled a delicate yellow blossom, and held it there for everyone passing to see, saying all the time as well as it could—and it could as well as anybody—"It's me! See what I've done—this! Isn't it pretty?" Well, there it held it, and everybody saw it, and nobody thought anything about it.

Passing that way in the fall, lo, a pumpkin, rotund, golden, magnificent, held out at arm's length by the little vine; held in the air—held week after week, and never laid down, nights nor Sundays nor any time.

Now man your brakes—rig your levers, ye Archimedeses, and pump up from the earth, and along that vine, and from the surrounding air, the raw material for just such another article as that, and you shall have two summers to do it in. Bring on the alembic wherein shall be distilled from the falling rain the essence of pumpkin and the principle of pie, and we will let it go without pausing.

### "Ten Great Gals."

#### An Amusing Story from a Teacher.

At the age of 16, before we had discarded our "roundabouts," we had contracted to "keep school" in District Number Five, for \$12 per month and "boarding round." We knew very well the little red schoolhouse, standing at the exact center of the district, on the borders of a mighty swamp, the farm houses scattered about the hills, and we also knew the nuisance of that particular school, a squad of half a dozen rough fellows who had emerged into "tail coats," and would hardly relish the discipline of a boy pedagogue in a roundabout.

After the first flush of elation at our election, the reflection came back, like a return wave of ice water, that in all human probability, ere our 17th birthday should dawn, we should be seen vanishing head foremost out of the schoolhouse window into a big snow drift, propelled by class Number One of big boys. In our anxiety we applied to "Aunt Anna," the general oracle of the household. Aunt Anna was a stalwart maiden of 60 summers, gigantic in proportions, but every inch a lady in her dear old heart. She had nursed half the children in town through measles, mumps and chicken pox, and was the mainstay in all family emergencies. There were sly rumors that the occasional attacks of "fidgets," which overcame the good old lady at night, had some relation to a mysterious black bottle which she always carried in her work-box; but Aunt Anna, plus the fidgets, was worth a regiment of ordinary femiines for the home-made uses of country life.

"Well, now, you are really going to keep school in District Number Five," said Aunt Anna, smoothing down her big checked apron and raising her spectacles for a good long look at the incipient pedagogue seated at the opposite corner of the fireplace.

"Yes, Aunt Anna, I have promised to keep that school, hut, between you and me, I am dreadfully afraid to tackle that crowd of boys. You know what a rough set they are, and one of them has already 'given out' that there will be no board wanted in District Number Five after the first week."

"That's a serious matter. Now let's see if we can't think of something to help you. Now, you see, I don't know anything about book larnin'. No doubt you can cipher that hack seat of boys into the middle of next week. But they can fling you over the roof of the schoolhouse in a jiffy, if they have a mind to. I know every family in the district. I have nussed in every house, and taken the measure of every youngster that will come to that school. There's one thing in your favor, there'll be ten great gals in that school, and most of 'em are good gals, too. Now, some are a head taller than you, and two or three of them are right right handsome, too. They can twist that crowd of great, hashful boys round their little fingers, if they want to. Now mind what I tell you; do you go right to work and gain the affections of them ten great gals, and they'll manage the great boys while you keep school."

That sounded well; and armed with this panacea against rebellion, we opened school the Monday after Thanksgiving. It was a rough looking set up on the high seats—that row of villainous looking fellows, any one of them big enough to throw me over into the big swamp with one hand.

Happily our first boarding place was with two of the "great gals." Never did we "lay ourselves out" to gain the good graces of the lovely sex as during the first week of that boardin' round. We rode on the front of the sled with the tallest girl, played checkers with the second, got all snarled up in a "cat's cradle" with the pretty visiting cousin, and put in a word of explanation for the "hard sums" of all in the long evenings at home.

The first crisis came at the beginning of the second week, when a big lout "sauced" the new schoolmaster. Somehow it crushed us, and for a minute the school-room swam round, and the idea of seizing our fur cap and making for home flitted across our vision. Just then the patter of a light footstep was heard down the long slope of the narrow aisle leading up to the seat of the "ten great gals." The tallest glided down, ostensibly to ask the explanation of a hard sum; but as we leaned over the slate, with a dimness in the eyes, we heard a whisper in our ears:

"Don't he cast down! We girls will shame that seat of hoys into good manners before another week."

A light broke in; we were gaining the "affections of the ten great gals." So things drifted on for six weeks, when dawned the judgment day. We had gone to board with a good, motherly woman, who loved us as her own son. A big fire in the parlor greeted our arrival, and a supper fit for the parson himself. After tea our hostess appeared in her best black silk, in her hand a mighty black "ruler," and sat down before us with the air of a Minerva.

"Now matters have come to a point in your school; you have been trying to govern that crowd of rascally boys by love, but that has come to an end. To-morrow they'll try to put you out. Take this ruler, and don't come home to-morrow night unless you have used it up over the head and shoulders of somebody."

There was no appeal from that. A greater than the whole class of "great gals" had spoken, and we felt in our souls that fate was standing at the schoolhouse door.

Were we endowed with the epic rage of a Homer or a Pope, we might possibly depict the

scenes of the coming day. How the nighest loafer, in a frock coat, kicked in the door at recess; how, when the trembling young master asked, "Who did that?" the big boor lifted his thumb to his nose, and executed that significant gyration with the little finger which would make a savage of St. John, himself; how, fired with the courage of despair, and a vision of our farmhouse, Minerva, we seized the big oaken ruler, rushed up the inclined plane, upsetting several small children, on the insolent scoundrel, tore off the collar of his frock-coat, snaked him down the area before the fire-place, and beat him over the head and shoulders till he roared for mercy; how at intervals, he cast a glance at his accomplices and took in the situation; the "ten great gals" had spiked the guns of all but this wretch, who slunk and begged under our hand—how we wound up with an eloquent address, and gave the whipped ruffian his hat, with instructions to go home; how his sensible father took off what remained of his dilapidated frock-coat, and trounced him till he yelled again, and sent him to school the following day with a compliment to the plucky young master; all this might be sung in heroic verse.

But, if the truth were known, it was not we, but the "ten great gals" that did the business. They had so demoralized the attacking columns by the magic of their charms that only one had the heart to defy the little master, and he dared not lift his hand when the day of battle came. And from that day we crowned dear old Aunt Anna prophetess of love.

Gain the affections of "ten great gals" in your school-room, "and all things shall work together for good."—*Journal of Education.*

### Women in Western Europe.

One of the most interesting papers presented at the Woman's Congress, recently held in Chicago, was one by Mrs. Charlotte B. Wilhour, from which we take the following extracts:

In Germany, as you all know, great attention is given to the preparation of women for the work. Reports are received here yearly of the various societies, schools and institutes, established to prepare women for teachers, seamstresses, housekeepers, shopkeepers, bookkeepers, and all branches of mercantile business. I have seen with satisfaction the system and the results of these institutions in the cities of Berlin, Hamburg, Hanover, Darmstadt and other places. The working women have been greatly aided by the patronage of the Empress Augusta and the Crown Princess Victoria and the Princess Alice, of sweet memory, and not only the workingwomen have been encouraged to excellence, but the art students have had great help by the establishing of art schools and classes with competent teachers, and furnished with models and studies. German women have been taught by cruel experience not to depend upon father, husband, or brother for support. The army has literally eaten up the male provider, and gives no indication of satisfaction, and the women have wisely prepared themselves to conquer a livelihood.

The German mother makes a sacrifice to prepare her daughter to become the intelligent mistress of a home, aware of the expense of the ordinary household. I inquired of a cultivated German mother why she sent her daughter of 18 years to learn housekeeping of a stranger, and she replied that although the girl was honorable and dutiful, yet she knew that she would be more pains-taking and methodical in the stranger's house than in hers. Experience justified the mother in believing that we are correspondingly faithful to our duties when the demands are inflexible. The chief woman of the Berlin Institute, where honorable work for women is systematically taught, informed me that nearly all the pupils in the home department were girls under 20, and the daughters of the middle classes, and that they were sent to the institute to be taught frugality, punctuality and precision.

We all know how extensive is the knowledge of the German woman in all departments of needle-work, and how large a supply of linen is provided for home and personal use in every German household.

Woman's advancement is accomplished when she is trained for business or the professions, and need not depend for a livelihood, as most women do in America, upon being handy.

In Italy, literary work has no sex in competition or recognition. The woman who holds an able pen is at once the peer of any male writer, and can, if she desires it, fill an honorable place. Many women who teach in the public schools receive the same pay as male professors who are also employed by the state, and the majority of working-women receive the same wages as the men do who are employed in like occupations. I pause a moment in this connection, over the schools in this country. I have been over, carefully, the list of studies of the Normal school for girls at Florence, and I find it almost identical with that of our colleges, excepting the Greek language; and I was present when a class of 70 passed their examination for admission to the full course of instruction. The girls were nearly all under 20 years of age; they were subjected to a long and severe examination. I have visited many of the public and private schools, and chronicle my testimony to the ability and method of the female teacher of the public schools of Italy.

In Italy many of the best oil and wine farms are managed by women, who direct and control the labor of a large number of work-people and



superintend the manufacture of their wine and oil and direct the sale of farm products. The ordinary Italian woman is more industrious and capable than the ordinary man, though she does not fill as many important place as do the women of other countries. Intelligent Italian women account for this fact not by allowing that women cannot perform the required labor, but because the Italian man is jealous and suspicious of his wife and sister, and will not allow them the freedom that the industrious woman claims; yet he beats his wife and will not allow her even an intimate female friend, and since most of the Italian women marry, the majority of them are in subjection to husbands. Visiting the churches, I have often noticed two dames kneeling side by side, enjoying a friendly chat, under pretext of praying.

### Chaff.

LITERAL.—"Ullo, Brown, how are you?" "Very well, thanks." "How are you at home?" "My wife says I'm very grumpy."—*Punch*.

It is stated on excellent authority that a good preacher once paused after reading the Psalmist's declaration—"I said in my haste, all men are liars"—and remarked that if the Psalmist had lived in that parish he might have said it at his leisure.

"IN FOR IT."—Innocent tourist: "No fish to be caught in Loch Fine now? And how do you support yourself?" Native: "Whiles she carries parcels, and whiles she raws people in ta poat, and whiles a shentleman 'ull give her a saxpence or a shillin'!"

"How came these holes in your elbows?" said the widow Smith to the irrepressible small boy. "Oh, mother, I hid behind the sofa when little Jack Horner was sayin' to our Jule that he'd take her, even if you had to be thrown in; and he didn't know I was there, and so I held in and laughed in my sleeves till I bust 'em."—*Cleveland Voice*.

HOMAGE TO BEAUTY.—(At the Friendly Zulu Reception, St. James Hall).—Blushing Fair One—"What does he say?" Interpreter—"He is paying you the highest Zulu compliment." Blushing Fair One (flattered and delighted).—"Indeed!" Interpreter—"Yes. He says your beauty is such that, were you only of his color, you would be worth three cows!" (Blushing Fair One retires, hardly so flattered or delighted).

WHY HE BUYS MULES.—Sheriff Pressly has some ideas on horses and mules. For farm work he purchases the latter. The other day one of the hands, a likely young fellow, asked: "Why don't you buy horses? I'd a good deal rather drive them." "I've no doubt of it," responded the genial sheriff, "so had I when I was a boy. I'd plow a horse all day, and then spruce up at night and ride six or eight miles to see a girl. I noticed, though, that when a fellow rode a mule he was generally laughed out of a second visit. I guess I'll keep on buying mules. You boys won't be so tired when you go to bed."

CURIOSITY FOR PIANO PLAYERS.—At a late musical festival in Worcester, Mass., a spinet was exhibited bearing the inscription: "Jacobus Kirchmann, Fecit Londini, 1755." The year 1710 or 1711 witnessed the invention of the pianoforte, but its introduction to general use was very gradual. Haydn, Mozart, Beethoven and musicians of their day undoubtedly used the spinet or the larger instrument of the same family, the harpsichord. This instrument above mentioned, is in shape somewhat like a grand pianoforte; in dimensions 7½ feet on the straight side, 3 feet at the keyboard-end with a depth of case of 11½ inches. It rests upon a standard, which is detachable and easily folded together. It has no pedals, but knobs at the sides of the keyboard allow mechanism to give or take of extra volume of tone. The "action," so-called, consists of a "jack" at the end of the lever, a wooden upright, with projecting pieces of leather to twang the string as it passes upward, and a little cloth damper to stop the vibration when the jack is lowered. The strings were of copper, brass and steel, the lowest of about the same dimensions as the highest in modern pianofortes. The "eyes" at the further end of the strings were as regularly and evenly made as those of the present day, while the tuning ends were merely wound about the pins, without passing through holes in them. Five octaves of keys give tones from the fourth line below the base staff to the fourth space above the treble.

THE GREAT PEN-MAKER AND HIS WIFE.—Joseph Gillott, the first to employ machinery in the manufacture of steel pens, was originally a maker of buckles and other "steel toys," working alone in a garret in a Birmingham "slum." At this time he was engaged to a young woman in his own rank in life, whose two brothers were working, in about the same style as himself, on hand-made pens. Gillott thought he could better the processes employed, and worked secretly in his garret until he had made a press and other appliances, by which he could make 20 times as many pens in a day, and better pens, than was possible under the old methods. He found ready sale for them, and soon the demand outgrew his power of production. At this juncture his sweetheart agreed to his proposal that they should marry and work together, little dreaming of the ultimate issue of their enterprise. In after years Mr. Gillott used to tell how, on the very morning of his marriage, he began and finished a gross of pens, and sold them for £7 4s, before going to church.—*Scientific American*.



THE UPS AND DOWNS OF LIFE.

## Young Folks' Column.

### Will-o-the-Wisp.

One morning long ago, as old Mother Sun cuddled the little beams around her, they cried to think they must leave that warm breast to fly far, far away to the cold earth that lay under a damp cloud. Then Mother Sun told them of the little seeds waiting so patiently deep in the dark earth for the sunlight to kiss them; the buds that were bursting out of their old woolly coats, and wanted sunshine to help make new ones, and the dear children that longed for them to take away the dark night. So the mother smiled sweetly toward the earth, and the world looked to the little ones like a golden drop in the blue-bell sky, for mother's smile will make the hardest task pleasant.

So the little beams clothed themselves, each in her favorite dress, and stood before their mother to hear her wishes. "Be sure, dear children, never to leave my sight. Make everybody as happy as you can, and come back with as bright faces as you have now." So Rosy Red went first, then Shining Gold, while Violet, Blue, and all the rest came trooping after.

The old earth brightened and brightened, till it made one's eyes dazzle to look at her, so glad was she to greet the sunbeams. They crept under the leaves, and played hide-and-seek with the shadows. The dew-drops mirrored them in all their merry pranks, and made the grass shake with laughter. Even the fat sides of the old stones seemed ready to burst with their fun. But just as you see in the happiest group of children some who are ready to do wrong, so among the beams there were discontented little ones. They soon grew tired of making others happy, and said among themselves that it was too bad always to stay in sight of the mother. She was watching them all the time, and they could have no fun. By and by the little beams were tired, and nestled in the tree-tops to rest. Then their mother saw it was time for them to come home. Shining Gold flew first, for she had so many things to tell about the day's doings, and Rosy Red went next, for she had so many things to do; but those that had grumbled in the morning were the last to start when their mother called. Said one, "Don't go home until the stars come out; I want to see them once." Another said: "We must be ever so much prettier than they, and I should just like to make them envy me." Alas, little beams, you did not think that all your beauty came from mother, and that in yourselves you were nothing. So, after the good little beams had gone home, the others crept out of their hiding places, ready to make the stars pale before their beauty. But what are those dark, ugly looking shadows that steal along, crouching so low? These are the little beams. They can scarcely see each other; they come together and scatter quickly. At last one summons courage to speak. They found at last their own weakness, and with it comes a gleam of mother's love. Seeing their sorrow, she gives them back something of their former brightness; but instead of taking it with joy, and hastening to find their way home, they blame the love that made them, and wreak their spite on men. For, fleeing to the dark and dismal marshes, where their sisters never come, they mock the poor traveler who mistakes them for lights, leading him into their miry home. Even the stars are sorry for them, but never looking up to see the pitying ones above, they grovel in the dust, and say: "There are no sunbeams, nor stars, nor light. The earth is made of mud, and men are fools who wander in it."

Poor will-o-the-wisps, will you ever return to your bright home in the sky?

—E. E. Greenman, in *Work and Play*.

A LITTLE Cincinnati boy four years old, taken into the country for the first time, was astonished at everything, particularly at finding blackberries "tied onto sticks out-doors," as he expressed it. In a pasture he saw cows reclining in the shade, chewing their cuds. After observing them for a time he said he would like to be a cow, "and have nothing to do but lay around under the trees and chew gum!"

Two children were playing in the sand together. The small boy said to the little girl: "Do you wish to be my little wife?" The little girl after reflecting: "Yes—" The small boy: "Then take off my boots!"

## GOOD HEALTH.

### Water Infection in Diphtheria.

Dr. Benjamin Browning, the Health Officer of Rotherhithe, (London), has an interesting paper on this subject in the *Sanitary Record*. He gives a variety of cases, occurring in city and rural districts, which appear to prove beyond a doubt that diphtheria may be caused by polluted water. The disease has been found to prevail in families using the water, while their neighbors who did not use it, but who were otherwise exposed to the same chances of infection, were exempt. In one instance he met with seven cases of diphtheria in the family of a railway station-master. He says: "I could ascertain no previous contagion, but found the existence of the customary polluted shallow well, close to the public latrine, the whole premises being isolated, standing on a lofty chalky embankment. Two casual visitors to the station (not to the dwelling-house) who drank some water in the waiting-room also contracted the disease. There was no more of it before or afterwards in this parish while I knew it."

Dr. Browning seems to have been careful to satisfy himself that the disease could not have had any other origin than the bad water. On this point he says:

"In the country epidemics I have mentioned, at their commencement, no direct personal contagion could be made out, although it was anxiously sought for; aerial infection seemed everywhere contra-indicated, owing to the open and breezy situation of nearly all the implicated dwellings; in all of them the drinking water was organically impure, and received surface filth of every description; and in the town cases there was also clear evidence of water pollution by sewer-gas or fetid emanations, if not by actual deposit of dirt. And I venture to submit that I have therefore supplied some of that 'evidence,' which is by Dr. Parkes and others deemed 'still wanting' to prove the 'production of diphtheria by contaminated water.'"

Not satisfied, however, with this logical evidence, Dr. Browning determined to settle the question by direct experiment upon the lower animals; and he actually succeeded in infecting two kittens with the disease, by feeding one with milk mixed with water in which he had kept diphtheritic false membrane and sputum, and the other with milk adulterated with water taken from the cistern of a house where a fatal case of diphtheria had recently occurred. Microscopic specimens of the diphtheritic membranes from these animals were shown at a meeting of medical gentlemen, none of whom were committed to Dr. Browning's theory, and pronounced by them to be identical with specimens taken from human beings. If this testimony is not accepted as conclusive, it must at least be admitted that it is of sufficient importance to show that further experiments and investigations should be made in order to confirm or refute it.

A PLEASANT REMEDY FOR TOOTHACHE.—Dr. T. C. Osborn, in the *Medical Brief*, states that his cook came to him with a swollen cheek, asking for something to relieve the toothache with which she had been suffering all the night. He was on the point of sending her to a dentist, when it occurred to him that there was in the house a vial of compound tincture of benzoin. "After cleansing the decayed tooth," he says, "I saturated a pledget of cotton lint with the tincture, and packed it well into the cavity, hoping this would suffice for the time, and told her to come back in two or three hours if she was not relieved. I was turning away, when she said it might not be necessary, perhaps, as the pain was already gone. Supposing her faith had a large share in the relief, I would not allow myself to think that the medicine had anything to do with the cure any more than so much hot water would have had. But when I arrived at my office, two other patients were awaiting me with the same affliction, and I determined, by way of experiment, to use the same remedy. To my agreeable surprise both patients declared themselves immediately relieved, and begged a vial of the tincture for future use. During the winter a number of similar cases applied, and were instantly relieved by the same treatment, all expressing much satisfaction with the remedy. In December I told my druggist of the discovery, and recommended him to sell it to any person applying for 'toothache drops.' This, he reports, he has done, and that every one seems delighted with the medicine."

## DOMESTIC ECONOMY.

### Game Dishes.

As the game season is now in progress we collect from our exchanges the following notes on game dishes:

Rabbit Cutlets.—Prepare the rabbits as you would for a stew, cut the different limbs into the size of cutlets—such as the shoulders cut in half, also the legs, with the ends of the bones chopped off. Have ready some bread-crumbs and the yolk of an egg beaten up. Drop each cutlet into the egg, and then cover with bread-crumbs, as for veal cutlets. Fry them a nice brown, and when you dish them pour around them some rich, brown gravy, which may be flavored with tomato sauce if approved, and put round them rolls of fried bacon.

Stewed Pigeons.—Truss and season the pigeons with pepper and salt, and, having stuffed them with a mixture of their own livers, shred with beef suet, parsley, bread-crumbs, marjoram and two eggs, sew them up at both ends and put them into the jug breast down, with half pound butter; cover up the jug so that the steam cannot get out; then set them in a pot of water to stew. They will take two hours and more in doing, and they must boil all the time. When stewed enough to take them out of the gravy, skim off the fat, put in a spoonful of cream, a little lemon-peel, an anchovy shred, and a few mushrooms; add a little white wine to the gravy, and having thickened it with butter and flour, and dished up the pigeons, pour the sauce over them. Garnish with sliced lemon.

Wild Ducks.—Mallard, teal, and the common varieties should be washed after dressing, then place a small onion in each and pour boiling water over them. In ten minutes rinse in cold water and wipe them dry both inside and out. Fill, not too full, with a dressing of mashed potato, seasoned with sage, onion, pepper, salt and a beaten egg. Truss neatly, put a slice of salt pork with them in the pan, and place in a hot oven. Baste first with butter melted in hot water, with a little salt; afterwards with the drippings. Cook until they are brown and tender, which will be in from twenty minutes to three-quarters of an hour, according to their size and age. Ten minutes before serving dredge lightly with flour, and baste with melted butter; then watch that they do not burn. They should look frothy, brown and crisp outside, and be juicy and rare when cut. Garnish with curled parsley and sliced lemon, and serve with currant jelly.

ROAST TURKEY.—In case any reader does not know a better way the following will serve: Wash nicely in and out. Plunge into boiling water ten minutes. Have ready a dressing of bread crumbs, hard-boiled eggs chopped fine, one tablespoonful of butter, minced parsley, thyme and celery. After rubbing the cavity well with salt and pepper and putting in a slice of pork, fill with the above dressing. Do the same also to the crop, so as to make the turkey look plump. Rub the turkey well with butter, and sprinkle salt and pepper over it. Dredge with flour. Lay in the pan a slice of pork and a pint of boiling water. Lay the liver and gizzard in the pan with it. Put in a hot oven, basting and turning frequently till every part is a beautiful brown. When the meat is amber color, pin a buttered sheet of writing paper over it to keep it from becoming hard and dry. Cook three or four hours. Season the gravy with minced parsley and celery, and serve with cranberry sauce.

TREATMENT OF NEW WOODEN UTENSILS.—Wooden vessels for containing articles of food, wine, etc., also wooden vessels for culinary purposes, can be rendered fit for immediate use by the removal of the unpleasant extractive matters by treatment with a solution of washing soda, thus: An ordinary barrel should be filled half full of water, and a solution of about two pounds of soda in as much water as will dissolve it poured in, and the liquids thoroughly mixed by shaking the barrel, which should then be filled to the bung with water, and allowed to remain from 12 to 14 hours; then, after withdrawing the discolored liquid, it should be well rinsed and filled with pure water, and should remain a few hours more, when it will be fit for use. Other wooden utensils may be similarly treated.

GOOD PASTE.—Herr O. Heim, of Grimmen, gives a recipe for marking a durable paste. He takes 20 grammes of wheat starch, and makes it into a stiff paste with a little cold water; then he pours 100 c. c. of boiling water all at once—not gradually—into this paste, and stirs it rapidly. A little carbolic or salicylic acid is then stirred in, and a paste is obtained which will keep indefinitely (or at any rate until it dries up) in a cool place. Care must be taken to have the best starch, as good paste cannot be made with the inferior kinds.

EGO PLANT.—Peel and cut into thin slices; soak in salt and water 10 minutes; drain and steam five minutes. Make a batter of one pint of sweet milk, two beaten eggs, one-third cup of melted butter, one heaping teaspoonful of baking powder and flour, to make batter as for pancakes; dip the slice into this, and fry in butter until of light brown.





DEWEY &amp; CO., Publishers.

A. T. DEWEY. W. B. EWER.  
Office, 203 Sansome St., N. E. Corner Pine. St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line..... .25 .80 \$2.00 \$ 6.00  
Half inch (square)..... \$1.00 \$3.00 7.50 24.00  
One inch..... .2.00 6.00 14.00 40.00

Our latest forms go to press Wednesday evening.

Quack Advertising positively declined.

The Scientific Press Patent Agency.

DEWEY &amp; CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. G. H. STROGO

SAN FRANCISCO:

Saturday, November 15, 1879.

## TABLE OF CONTENTS.

EDITORIALS.—The Olive Industry; Anti-Seah Laws; A Beautiful California Moth, 305. The Week; The Census of 1880. State Horticultural Society Meeting, 312. Los Angeles County and its Resources; Flaming George, 313.

ILLUSTRATIONS.—The California Lilac Moth, 305. Bark Scraper for Fruit Trees, 312. Camp at Flaming George, Green River, Utah, 313.

QUERIES AND REPLIES.—Sugar Making with Dried Beets; Rivers' Strawberry Apple; Grapo Syrup—Preserving Grapes Fresh, 313.

ENTOMOLOGICAL.—The Coddling Moth War, 312.

CORRESPONDENCE.—San Mateo County Notes; Coos Bay, 306.

FLORICULTURE.—Classification of California Lilies; Tuberoses for Perfume, 306.

THE DAIRY.—Trials of Forage Plants; Borax for Salting Butter, 307.

ARBORICULTURE.—Plant Trees in the Mountains, 307.

HORTICULTURE.—The Orange Supply of New York, 307.

THE FIELD.—Success with Shallow Plowing, 307.

SHEEP AND WOOL.—Standards of Excellence in American Merinos, 307.

PATRONS OF HUSBANDRY.—Tribute to the Memory of Mrs. Colby; Grange Gatherings; Grange Suggestions; Hard Times and High Rates of Interest; Conditions of Success; In Memoriam, 308.

AGRICULTURAL NOTES from the various counties of California, Nevada and Washington, 308-309.

NEWS IN BRIEF on page 309 and other pages.

HOME CIRCLE.—The Brook; Sleepless Nights (poetry); A Mother's Influence; Pumpkins and Enterprise; "Ten Great Gals;" Women in Western Europe, 310. Cluff; Curiosity for Piano Players; The Great Pen-Maker and His Wife, 311.

YOUNG FOLKS' COLUMN.—Will-o-the-Wisp, 311.

GOOD HEALTH.—Water Infection in Diphtheria; A Pleasant Remedy for Toothache, 311.

DOMESTIC ECONOMY.—Game Dishes; Roast Turkey; Treatment of New Wooden Utensils; Good Paste; Egg Plant, 311.

PISCICULTURE.—Fish Farming in Nevada; Economy of Nature; Propagation of Codfish, 314.

MISCELLANEOUS.—Room for Inventions; The Rain Dance; Sun Dance Among the Sioux, 314.

## Business Announcements.

Seeds, Thomas A. Cox & Co., S. F.  
Berries and Small Fruits, John Rock, San Jose, Cal.  
Frick Drouth-Proof Barley, Salz & Co., Centerville, Cal.  
City Lots Free, Denver Land Co., Denver, Col.  
J. P. Sweeney & Co.'s Seed Warehouse, S. F.

## The Week.

Water has now come in nsable quantities in all parts of the State. The storm which is still in progress as we write on Wednesday, began on Saturday last with a blow from southerly quarters, which exhibited a vigor rather unusual even for generally powerful favors from that direction. Just before the storm the barometer at different points around the bay, dropped a fraction lower than any point in its California history. The wind made the bay a troubled sea and sent the ships to bumping noses and chafing their skins against the wharves. In the interior the rush of air rose to the character of a gale, and wrought injury to balloon-framed buildings. It destroyed a new building on the San Joaquin fair grounds. But the wind brought the rains; at times in light showers and at times in torrents. As the clouds are still in discharge of their mission we do not attempt to measure the dispensation, but another week will doubtless see the water well in the ground, and the skies cleared for the rush of plowing and seeding which will be no longer delayed. Next week we shall be prepared to reflect the facts and disposition which the rains bring to field and farmer.

The scenes in city streets recall those which months of dust have well nigh removed from memory. Everything is dripping and draining, and most trade, except for necessities, is set aside for fairer days. And there will be fairer days both for head and heart, for the present discomfort is the assurance of, we hope, the most fruitful year that California has ever known.

A STEAMER is aground in the Suez canal, causing a suspension of trade.

## The Census of 1880.

The officers to whom the compilation of the census of 1880 has been entrusted are now pushing preparation to make the enumeration of the people and the measurements of their industries for the year 1880. This will of course be another of the decennial series which has been long in progress in this country. It is hoped to make the present by far the most complete and accurate census that was ever taken, and the co-operation of all is invited toward that end.

It has often been claimed and with truth that the agricultural growth of the country has not been fitly shown by former censuses. For example, the dairy figures of the census of 1870, are acknowledged to be far short of the facts of that specialty at the time the census was taken. Other instances of short comings could doubtless be cited. It is the determination this year to remove such objections if possible. It is easy to see how a census could be short on agricultural interests, because so few farmers keep figures, and are apt to place estimates low for fear of getting them too large. Farmers are now invited by Gen. Walker, Superintendent of the Census, to gather together facts on all their crops that they may be ready to give the enumerator full returns. He urges the widest publicity of the fact that all cultivators will be expected to report accurately the number of acres in each crop and the production of each. No census can be approximately correct without the intelligent and willing co-operation of producers. As such degree of correctness is reasonably expected in this era of intelligence, and is especially important to the farmer himself, it is very desirable that all should make early notes of the areas, quantities and values to be reported of each crop, as they are garnered or sold, that the information may be given with promptness and accuracy.

By a Congressional act, it is provided that the tenth census shall be taken and completed during the month of June, 1880, hence all the crops which are gathered once a year will fall pretty clearly on one side or the other of this dividing line. For certain of the productions of agriculture, however, there is no harvest, in the usual sense of the word, the product being gathered daily, weekly or at other intervals, as in the case of milk, butter, cheese and meat.

To remove any doubts that may arise concerning the crops to be returned in the census, the following statement as given by the Superintendent of the Census, presents the several crops specifically mentioned in the agricultural schedule, arranged accordingly as they fall into the calendar year of 1879 or that of 1880, or are to be returned for the twelve months beginning June 1, 1879, and closing May 31, 1880. Crops of the calendar year 1879: Wheat, corn, rye, oats, barley, potatoes, buckwheat, number of acres and bushels; peas and beans, bushels of each; rice, tobacco, acres and pounds; cotton, acres, and bales; orchards, vineyards, small fruits, number of acres and value of products in dollars; hay, acres and tons; clover seed, grass seed, bushels; hops, acres and pounds; hemp, acres and tons; flax, acres and pounds; flaxseed, bushels; bees, number of hives, pounds of wax and honey; sugar cane, acres, hogheads of sugar and gallons of molasses; sorghum, acres, pounds of sugar and gallons of molasses. Yield of the twelve months, June 1, 1879 to May 31, 1880: Butter, cheese, pounds; milk sold gallons; value of animals slaughtered, dollars; market gardens, acres and value of products in dollars; value of forest products in dollars; value of home manufactures in dollars. The returns of wool will be of the clip of the spring of 1880, except as to Texas and California, where the fall clip of 1879 will be included.

It will be noticed by the list enumerated above by the Superintendent of the Census, that all of our field and orchard crops to be reported next June are those of the present harvest. These, considering the fact that the present year was an unfortunate one in many counties, will not place our State as high in the list as she would take in a good year. The San Joaquin valley and some of the southern counties will cut a very moderate figure in cereal crops. Our great honey interest will count almost nothing, and our grape products will also rate below the proper amounts. This cannot be helped. The best thing to do under the circumstances is to begin at once and compile full statements, so that we can get credit for all that was accomplished in 1879.

HONOR TO A CALIFORNIA TREE.—It is gratifying to our pride in our indigenous trees to see that Mr. George Elwanger, of Rochester, N. Y., the well known horticulturist in naming twelve deciduous trees as a select lot for places of small extent, places at the head of the list *Aesculus Californica*, our native "huckleberry." The tree is worthy of its fame. Growing where it has space to assume its natural habit, it is a model of symmetry, luxuriant freshness of foliage and in bloom it is majestic. Doubtless there are fine specimens in many parts of the region in which it flourishes, but there is a single tree in open field near the railway track between Niles and Decoto in Alameda county, which has been for a generation the idol of tree lovers, and we trust its life may be long and full of honors.

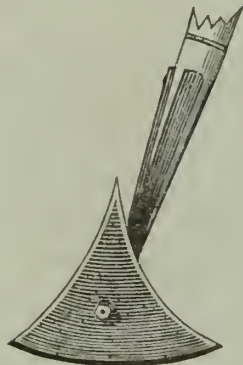
## ENTOMOLOGICAL.

## The Coddling Moth War.

The evil which overhangs all orchards in the State from the work of the coddling moths or "apple worm," (*Carpocapsa pomonella*) is beginning to excite the alarm which its character justifies. It is now more than two years since we first gave an engraving of the insect from one of the pioneer specimens which we found in an apple bought at a city fruit stand. Since that time the evil insect has spread over a wide belt of the State, from the foothills to the bay, and orchardists who have either overlooked or neglected the warnings given of the insects approach, have found their trees infested and their fruit partially ruined. Now there seems a disposition on the part of orchardists generally to fight the insect in earnest. At the meeting of the State Horticultural Society, which will be held in this city November 28th, as announced elsewhere, there will be a discussion of the spread and ravages of the insect and ways to fight it, which will, we trust, draw a large attendance to the meeting.

As we have stated in former articles on this subject, excellent work has been done in studying and experimenting upon the coddling moth by Cooke & Son, of Sacramento. Their interest as box makers lies of course in the largest possible production of good fruit, and they are serving their customers in a most intelligent way in attempting to aid them in subduing the common foe. Cooke & Son have now in press a pamphlet for gratuitous distribution, giving the results of their latest experiments and observation, and it should reach the hands of every fruit grower. From advance sheets of the pamphlet which have been sent us, we take such parts as have not been presented in our earlier articles on the insect and its work.

The moth deposits the egg generally in the blossom end of the fruit, but sometimes on any part (the latter especially late in the season).



Bark Scraper for Fruit Trees.

The eggs are attached to the fruit by a pasty substance. It is our opinion that at the time the egg is deposited, the skin of the fruit is punctured, making easy entrance for the larva. It is rare to find more than one egg on any apple, pear, or quince, or more than one larva. The larva is hatched in from nine to twelve days, and begins to eat eagerly and burrow towards the *carpellary ovary*, or hulls containing the seeds. The larva when hatched can scarcely be seen with the naked eye; at six days, measures nearly one quarter of an inch in length, about as thick as fine silk thread, and first signs of excrement appear at the burrow; at ten days the worm is three-eighths of an inch long, and about as thick as No. 20 wire. It has burrowed by this time about three-fourths of the distance to the seed cells of the fruit; at 20 days, it is nearly full natural size.

When the larva is ready to assume the pupa or chrysalis form, it leaves the fruit by gnawing a hole through the skin or pericarp. Nature has supplied it with a spinneret, the opening apparently in the lower lip, from which issues a viscid fluid in a fine stream, and hardens into silk on contact with the air. By this means it lowers itself to the ground or intervening branches. If it reaches the ground, it immediately crawls toward the tree. On reaching the tree, it searches for a nesting place under the loose bark in the crotches, or any cavity it can find. If it comes in contact with a branch when leaving fruit, it generally crawls toward the crotches, or until it reaches a hiding place. If under the loose bark it commences building an oval-shaped wall, about one-sixteenth of an inch high, composed of the viscid fluid from spinneret, and sometimes mixed with pieces gnawed off the bark; the cover is then put on the nest by using spinneret; the whole completed in 24 hours. If in a crevice of the bark, the nest is made in different shapes. It is noticeable in the winter nest, the tops and sides are washed with fluid from spinneret, making the nest waterproof to a great extent. The moth remains in the pupa or chrysalis forms from nine to twelve days, in our usual May weather. At the proper time the pupa case is burst open, and the perfect moth appears.

For fighting the insect, Cooke & Son still advocate the use of a concentrated wash consisting of whale oil soap, sulphur, etc., made by

Hutchings & Co. of this city, which was mentioned in the PRESS last winter. To prepare for treating the trees with this wash they advise as follows: Immediately after the fall of the leaves, provide some small ship scrapers and grind two of the edges in circles so that they will be near to the diameters of the trees. The cut on this page shows the implement. Scrapers having a length of side of four inches, will be large enough. Use handles to suit. Procure a cloth made of old sacks or any material convenient, spread on ground around the tree as far as the scrapings are likely to spread; then commence on the tree as far up as there is any rough loose bark, and scrape it carefully off. Also examine and scrape all crevices in the bark or those formed in the crotches of the tree. Continue scraping until you reach the ground. This done, gather the scrapings carefully off the cloth, so that they can be burned or destroyed, as on this point depends a great deal of your success. Take a common whitewash brush and give the tree a good coat of the whale oil soap and sulphur solution, commencing at the top as far up as there are any cracks or crevices in the bark, and wash down to the ground. Repeat the washing before the spring; this will destroy any larva or chrysalis left on the tree.

As an additional precaution the use of the bands, which have long been the reliance of Eastern orchardists, is advised. They may be made as follows: Take a piece of common straw wrapping paper, say twenty-four inches long and ten or twelve inches wide, double it lengthwise (this will be sufficiently long for a tree seven inches in diameter—larger trees will require longer bands, in one or more pieces). Put the band around the tree a few inches above the ground; fasten it with a piece of wire or narrow strip of tin—either of them is preferable to cord, as they can be pressed into the dents on the surface of the tree. The larva creeping up the tree, makes its nest in the paper. These papers should be examined every eighth day, the larva collected and destroyed. Paper or rags laid on the ground around the tree will answer the same purpose, but may not be so easily examined. We would also recommend that some papers or rags should be placed in the crotches of the tree so as to entrap any larva coming down the branches looking for a resting place. We have positive proof that the larva will not nest on any part of a tree that has been washed with the whale oil soap and sulphur solution. Where trees have been washed, the larva have ascended and nested around the stems of the fruit hanging on the tree; therefore the utility of providing traps for them.

To find the larva on the trees the following method is proposed: Open the large blade of pocket knife and take off carefully the pieces of loose bark; examine inside part, and if the larva is there, you will find nest. On removing cover off nest, it will either contain larva or chrysalis. All crevices and dents in the bark, and crotches, should be examined carefully. Some persons throw the bark away before examining it, thinking the nest is on the tree. This is a mistake; it may cling to the piece of bark.

Fruit growers should examine all boxes returned to their orchards. The pest has been spread over the country in return boxes from market, where they have been in contact with boxes containing wormy fruit. Mr. Cooke states that he has taken six larvæ from one bundle of empty boxes at S. V. R. R. depot, being sent back to the mountain orchards of El Dorado county. All returned boxes should be examined before being taken into the orchard.

## State Horticultural Society Meeting.

It is the purpose of the newly organized society to hold a meeting each month, and the day fixed upon was the last Thursday. This day in the present month is not available, as the following will show:

E. J. WICKSON, SECRETARY, ETC.:—As the day for the next regular meeting of the State Horticultural Society falls on a legal holiday, viz: November 27th, appointed as Thanksgiving Day by the President; said meeting will, according to custom, go over to the next day—Friday, 28th inst. Inasmuch as the special order for this meeting is the report of the committee appointed for the revision of the constitution, a full attendance is of especial importance. Please, therefore, notify members of the change of the day of meeting as soon as possible.—E. J. W. HIGGARD, Pres't. Cal. Hort. Society, Berkeley, Nov. 28th.

The next regular meeting of the society will be held Friday, November 28th, at the Y. M. C. A. Hall, 232 Sutter street (between Kearny and Dupont streets) in this city. The hour for the meeting is 1 P. M. In addition to the report on the revision of the constitution, to which President Higgard alludes, there will be a discussion on "insects injurious to fruit trees" opened by Dr. Behr, of this city, and the subject being of vital importance, the discussion will doubtless elicit the views and experiences of many fruit growers. At the meeting of Nov. 28th it will be proper to propose members, and we trust many will signify their desire to join to the Secretary. All interested in horticulture are cordially invited to attend the meeting.

IMMIGRATION.—The Commissioners of Emigration, notwithstanding that two months yet remain, have by careful computation placed the total immigration for the year 1879 at 159,000 persons. The figures show a very large increase over late years. The highest figures were reached in 1863, when 294,581 immigrants were landed at Castle Garden, which is the port of arrival of 75% of the immigrants to America.



## QUERIES AND REPLIES.

### Sugar Making with Dried Beets.

EDITORS PRESS:—Now that the growing and drying of the sugar beet here in this county, is a good idea, is beyond a doubt, but why ship our dried beets out of the county, and then pay some one else to bestow labor on them, and then ship the sugar back again? If dried sugar beets are worth \$18 per ton plus the freight, in San Francisco, they are worth that at a sugar here in Nietos valley. Water power is running idle. Our own hills have an abundance of coal and asphaltum, so that we can evaporate as cheaply, and I will add, more cheaply, than San Francisco can. If we tax our powers of logic I think we can work it out, that by going slow and reasoning all sides of the question, we will conclude that while we want to grow and dry the sugar beet, we want to patronize some one who will put up said works here at home.—Geo. KAT MILLER, Nietos, Los Angeles Co., Cal.

It is almost fifty years since Mr. Childs, of Northampton, Mass., made the first sugar from beets grown in the United States, and twenty years since Gennert Brothers had beets raised on Staten Island, near New York, preparatory for the erection of the first regular beet-sugar factory in Chatsworth, Ill., by them. Since then the beet-sugar industry has assumed in nearly every country in Europe gigantic proportions; in Germany, France and Austria, it has become the most important industry of those nations, but in the United States its progress has been exceedingly slow.

For the first time we find in the United States four beet-sugar factories in operation, and what is more important than that mere fact, is they are in successful operation and are paying establishments. The sugar works at Soquel, have run this year, their sixth season since their removal from Alvarado, and we are glad to hear that they are making money.

The Maine Beet Sugar Company at Portland, Me., works this year on the largest scale. Since October 20th they have worked regularly per day, one hundred tons of beets into sugar, which will be run up to one hundred and fifty tons daily before the expiration of the first month, and the company hopes before the close of this season to bring it up to two hundred tons daily; this would make it the equal of any European sugar factory in extent and also in quality of their product.

We find it stated everywhere that the establishment of a beet-sugar factory requires large sums of money; sums which have to be counted by the hundred thousands of dollars! Why this should be so we cannot understand, and base this opinion on facts.

The Maine Beet Sugar Company was organized by Ernest Th. Gennert, in May, 1878, with a nominal capital of twenty thousand dollars, of which ten thousand dollars were only available. Of this ten thousand dollars, one-half was expended in a drying establishment at Presque Isle, Aroostook county, Me., leaving only five thousand dollars for machinery and working capital, besides covering general expenses for traveling agents to make contracts with farmers, etc. This certainly does not look like very enormous sums of money. The Maine Beet Sugar Company began work last year on the 20th day of October, and converted in 10½ days, five hundred tons of beets into sugar, making within a fraction of 95,000 pounds of sugar of all grades. In February this year, the company worked four hundred and fifty tons of beets which had previously been dried, and produced therefrom over 90,000 pounds of sugar in 4½ days. The reason they did not make more sugar was that they had no more beets. These figures can be accepted as correct because they are taken from a sworn statement furnished by the officers of the company to the Secretary of State, who exercised his right also to have their books examined by a commission.

In the spring of the present year the company trebled their stock capital, and as Mr. Gennert could not participate in the increase of capital he withdrew from the company.

The quantity of beets raised this year amounts to twenty-five thousand tons, and as the improved and increased machinery supplied with the increased capital is in unison with the large supply of raw material, the company may be considered on a sound footing.

If this result has been brought about with so trifling a capital in Maine, under the most unfavorable circumstances, why can it not be repeated in California where the circumstances are so extremely favorable? This we consider a very pertinent question and we should be glad if some one who is competent to answer it would do so.

A few weeks before Mr. Gennert started for this State, he delivered by invitation an address to the Legislature of the State of Delaware, the Senate and House being jointly assembled, the result was the Legislature made an appropriation to foster this industry, and the money was turned over to the Delaware Beet Sugar Company. This company was organized with a capital stock of \$20,000, and as Mr. Gennert was largely instrumental in calling this company into life he must have been of the opinion that it could be made a success. What has changed his opinion since? Certainly not the great facilities and advantages California offers!

No investment is required in California to dry beets; the California sun does this to perfection on the very fields which have produced the beets so abundantly. If it was so easy a matter to manufacture nearly 200,000 pounds of sugar from dried beets in Maine, in a few days, with an actual investment of \$5,000 (not counting in the drier), why can not the same thing be done here? And, if Mr. Emery,

editor of the *Prairie Farmer* was correct when he said "it is easier to make a harrel of sugar from beets than to boil a pot of mush," why not go to work and do it in California, where soil, climate, sun and price have combined to make the work easy of success? If the beet-sugar industry can be introduced in California in small concerns and without creating any more large stock companies, and make the whole sugar industry an agricultural business such as it is in every European country, we say let us do so, never mind how small the beginning.

#### Rivers' Strawberry Apple.

EDITORS PRESS:—The red-fleshed apples which you describe at length in your valuable paper of October 19th were sent by me. The variety is known as the "Rivers Strawberry" apple. It is a seedling, and a native of Missouri. I can give you other facts about the fruit if you desire.—C. RIVERS, Kirksville, Missouri.

So it appears that the apples sent us with no name attached, and which we supposed were from Nevada county, in this State, were in reality from beyond the mountains, and we are forced to retract what we said about the Nevada county apple, because it appears that we have never seen it. Therefore, in our article in the PRESS of October 19th, "Missouri" must be substituted for "California;" and at the small end of the paragraph California must be read for "Missouri" in the allusion to what is rumored, etc. We haste to give credit where credit is due. Our friends will see what sorry plights they put us in by sending articles with no name attached. Please send us nothing, not even 20-dollar pieces, without writing your name on the package.

#### Grape Syrup—Preserving Grapes Fresh.

EDITORS PRESS:—Will you tell me how to make grape

### Los Angeles County and its Resources.

People generally of northern and central California have but a very inadequate conception of the extent to which general agricultural produce can be economically raised in Los Angeles county. In fact, it is only quite recently that the farmers, even here, have become aware of the general productive character of their soil and climate. We have already alluded to the unexpected results obtained in the way of apples and other fruits usually considered peculiar to more northern latitudes. It has recently been shown that the Irish potato, and vegetables of every description, do fully as well here as in any part of the State. Corn has long been a successful crop here—where roasting ears may be had every month in the year; and within two or three years it has also been shown that wheat, as a crop for southern California, is equally as sure and profitable as in the San Joaquin or Sacramento valleys. The exhibits at the recent fair at Los Angeles, and the practical results shown on a large scale on the San Fernando ranch, have quite effectually settled this question. This last development is chiefly due to the efforts of Lankersheim & Co., who, from small beginnings, last year ventured on some 14,000 acres, which produced, notwithstanding the small rainfall of only 11.35 inches, an average of 12 bushels to the acre. The general rainfall average exceeds 18 inches. In addition to the acreage seeded by Lankersheim

eties failed to mature at all, the Odessa, under similar conditions, yielded a fair average. This variety is grown extensively in Minnesota, Wisconsin and Michigan, for the reason of its rust-resisting quality. In grinding, the Odessa is said to require peculiar handling, but when properly manipulated it produces the very best of flour.

It was at first thought that the growth of this wheat would be chiefly confined to the southern counties; but it is now said to be greatly sought for in the Sacramento valley and other parts of the central portions of the State. Two carloads were recently shipped from Anaheim to Sacramento, every pound of which was sold for seed at a fancy price, and orders are still coming in for more. We have learned, within a few days, that parties here, unable to obtain the desired supply for seed, have sent East for the same. It is stated that harley sown by the side of Odessa wheat, and on similar soil, has failed to mature, while the wheat has returned a profitable crop. We have gathered the above facts chiefly from an article in the *Southern California Horticulturist*, for October, written by Mr. Richard Melrose, of Anaheim.

The development of Los Angeles county has no doubt been greatly retarded by the very general belief which has obtained, that it is a dry county—one of the driest in the State; but the record of the rain-fall for five consecutive years reprinted from the *Horticulturist*, on page 232 of the PRESS, of November 1st, seems to place Los Angeles ahead in this respect of a very large area of the central and best known agricultural portion of the State. The figures in our issue of November 1st, are worth studying.

In addition to the natural rainfall here, we have no hesitation in saying that Los Angeles county is far ahead of every other county in the State, in facilities for artificial irrigation; which facilities are being extended more and more every year, and will eventually reach nearly the entire area over which it will be needed. With these facilities added, these facts with regard to the water supply for artificial irrigation and general productiveness of soil and climate, should be made more generally known by those who are interested in the development of this portion of the State. We confess, ourselves, to an almost unpardonable degree of ignorance in this matter, until our present and first visit to this section has made them apparent by personal inspection.

In this connection the publishers of the *RURAL PRESS* would tender their hearty thanks for the warm welcome with which they have been received here, and for the ample facilities which have been extended them in their efforts to gain personal knowledge of the resources and advantages of this section of the State. Among others we would remember Mr. Milton Thomas, of Los Angeles, through whose attentions we were enabled to visit various portions of the city and its suburbs. One of the most interesting features of our ride on that occasion was the visit to Mr. Thomas' nursery and orchard, located about three miles westerly from the city. Mr. Thomas has about 60 acres devoted exclusively to nursery, which we found thoroughly cultivated and kept in most excellent order. His orchard of standard trees covers some 30 acres more, and consists of oranges, lemons, limes, apples, peach, apricot, etc., all of the most choice varieties. We have already noticed the fine exhibit which he made at the fair. Our thanks are also due to Messrs. Hamilton & Grove, of sub-irrigation fame, for similar favors.

One of the most pleasant and interesting features connected with drives about Los Angeles is the fact that nearly all the vineyards, orange orchards, and even the ornamental grounds about the many elegant residences of that city, are kept continually open and free to all, whether residents or strangers, who are expected to make themselves perfectly free to enter the open gates unbidden, and drive at will along the avenues and drive ways, which traverse the lawns, or skirt along the side of orange and lemon groves and clusters of banana trees, etc. An approach even to the very doors and windows of the dwellings, when an avenue or roadway leads thither, is considered no intrusion. Among those visited, and which most particularly engaged our attention, was the famous Wolfskill vineyard, and the residences of Mr. Childs and Mr. Longstreet.

### Flaming Gorge.

A Government party several years ago explored the canyons of the Colorado of the West. They first proceeded down the Green river, which enters the Uintah range by a flaring, brilliant-red gorge, visible from the north at a distance of 20 miles. The great mass of mountain ridge through which the gorge is cut is composed of bright vermillion rocks; but they are surmounted by broad bands of mottled buff and gray, which come down with a gentle curve to the water's edge on the nearer slope of the mountain. This is the head of the first canyon of a series made by the river through this range. The cliffs are about 1,200 feet high. Major Powell named it Flaming Gorge. Our engraving illustrates the picturesqueness of the scenery in that neighborhood.

It is said Bismarck is not only suffering from his old neuralgia complaints, but symptoms of a constitutional malady have appeared, causing some apprehension.



CAMP AT FLAMING GORGE, GREEN RIVER, UTAH.

symp, also how to keep grapes fresh?—No NAME, Contra Costa Co.

The manufacture of grape syrup is fully described in our issue of October 28th, 1876. We have had during the last few years a number of recipes for keeping grapes in a fresh state. One was by packing them carefully in dry sawdust, which was measurably successful, and the fruit sold in this market in the spring. Another method is by packing in clean, dry rye straw cut into inch pieces in a feed "cutting box." The method by which Australian grapes were packed to be sent to the late Paris exposition, was described in detail in our issue of May 23th, 1878. It seems a very excellent process and easily practiced. Our inquirer should have sent her full name and postoffice address, for then we should have answered her questions on a postal card. All correspondents should remember to send full address, not necessarily for publication, but as a surety of honest intent and to enable us to answer by mail when the matters asked have lately been printed.

DAIRY FARMING.—Part 4 of Prof. Sheldon's "Dairy Farming," published by Cassell, Petter & Galpin, of New York city, is embellished with an excellent colored plate which shows the first group of leguminous plants used as a dairy feed in England. These include four clovers and sainfoin, black medick, blue lupin and the vetch. The text concludes the chapter on dairy feeding, and gives Chapters V. VI., the former relating to milking, calving and calf rearing, the latter to parturition and diseases incident to dairy stock. The text is very well written, and shows commendable labor and discrimination in collecting the most pertinent and practical suggestions concerning these important topics. Prof. Sheldon's work is exhibiting the excellent points which we anticipated in it.

& Co., at least 10,000 acres were put in by other small ranches in various portions of the county, and everywhere with equally good returns. It is said that the yield of wheat for the past year in southern California is amply sufficient for the home supply and that of Arizona. The yield for 1877-78, when the rainfall reached 21.26 inches, averaged about 30 bushels to the acre. It is thought that the area of land seeded to wheat for the coming season will be fully double that of the last; and it is estimated that there are from four to five hundred acres of land in the county which cannot be well irrigated or applied to the cultivation of fruit or vegetables, but which may be profitably employed for wheat raising. From these facts there is a good reason to believe that Los Angeles will ere long be classed among the great wheat-producing counties of the State.

One of the results of the attention paid to wheat growing in this country has been the introduction to the Pacific coast of a new and valuable variety, and one which appears to be eminently adapted to resist the attack of rust, which is so destructive in certain seasons and at certain localities on this coast. We allude to the "Odessa wheat," three pounds of which were received in 1875, by Miles Bros., of Anaheim, from a friend in Minnesota, and planted in 1876. That product was planted in 1877, from which 50 sacks were received. These 50 sacks were sown in 1878, with good results considering the season, which was a very trying one on wheat, by reason of the late rains; but while other varieties in that locality were nearly ruined by rust, the Odessa was not injured in the least. During the past season some 800 acres were sown, and as the season has been a very dry one the test has shown that the Odessa is quite as able to resist the evil effects of a dry, as of a wet season; for while other vari-



## PISCICULTURE.

## Fish Farming in Nevada.

The average citizen of eastern Nevada, says the *Eureka Leader*, has but little conception of the mammoth proportions that the fish industry and culture is assuming under his very nose. We say culture, from the fact that fine fish are not a native of Nevada, and like other imported articles, whether of the finny tribe, or what not, have to be brought from abroad, tended and raised with much care. All of this is a preface to what the *Leader* has to say in regard to the aquarium of H. C. Fenstermaker. Mr. Fenstermaker owns a tract of 600 acres of land, 20 miles directly south of Eureka, at the head of Fish creek. In other words, Fish creek rises on his premises from numerous springs, which center and make the stream some 80 rods before leaving his property, in an easterly course, thence finding its way towards Mr. Page's ranch and Pancake valley. His dominions are surrounded on either side by tall mountains, partly wooded, and it would seem that the valley had at one time been an immense lake, which, by natural changes, had become overgrown by vegetation, large and small springs alone being left as an outlet to the immense body of water that finds its way through the valley by subterranean passages, breaking out here and there as above described. There are some 12 large flowing springs, with about 15 lesser ones, making a chain of lakes that would float a small clipper ship. About two years ago, Mr. F. conceived the idea of raising fish, and, with this object in view, procured from United States Fish Commissioner Myron Greene, Shasta county, California, on May 1st, 1878, some 500 eggs, known as the McCloud River trout. These he put into one of the small springs, and a few days thereafter was delighted to find that they had hatched, and the water was filled with an innumerable number of little trout. These he carefully watched, but for the following six weeks they derived nourishment from the yolk, or egg, that yet remained immediately under their throats. After this they were carefully fed on the yolks of eggs, grated liver, etc., until they had gained a little age and strength, when they were removed to a larger spring and allowed to care for themselves, subsisting on little chubs, shrimps, etc., which are natives of the springs. The trout being of the voracious nature of the shark, rapidly grew, and to-day they will weigh from two to four pounds. It is estimated that they grow about one inch every month.

Mr. F., being encouraged with his experiment, and also learning much from observation and reading, again sent and received 10,000 eggs from the same place, and was gratified to see them nearly all hatch, and about a month ago transferred the little fellows from the hatcher to the large lakes. The hatcher somewhat resembles a sluice box for placer mining. It is a trough about one foot square, with cleats at intervals on the bottom, over which a small current of water is allowed to run. Last March he secured 37 small carp from a fish grower in Sonoma county, Cal., paying \$75 for the same. This species of the finny tribe, hatches so soon that they alone are transported when young. Those placed in these springs have since spawned, and are doing nicely. Last April he sent and got 22 little catfish (frys), which he placed in his springs, and to-day the largest will weigh over four pounds. At the same time 12 small gold fish were secured as an experiment. They are also doing well, but their future is yet to be learned.

In these lakes Mr. F. has upward of 11,000 fish, a large majority being of sufficient size to be marketed. Arrangements have been made for 45,000 Lake Michigan whitefish spawn, which will be here about the last of November, and also for a lot of soft-shell turtle and different species of the bass. Mrs. F., who is a great enthusiast on the fish question, takes much pleasure in tending her different finny bevys, many of the larger fish being regular pets. It is well worth one's time to make a visit to this ranch of lakes and fish, and the industry promises to be a most remunerative one. The fish can be raised with little trouble, and when a few weeks old find plenty of food in the rich mud grass, chubs and shrimps that surround and inhabit the lakes. The springs look beautiful, and even at this late day of the season there floats on the water's surface a green, viney vegetation resembling lettuce, which the fish eat and gambol about, often springing several feet out of the water. One can have no conception of the attraction here afforded the curious, unless by personal observation, and our readers have but little idea of the magnitude of the enterprise.

**ECONOMY OF NATURE.**—The deep-sea dredging carried on by the American Fish Commission, under the charge of Prof. A. E. Verrill, of Yale, between Saybrook and the Bay of Fundy, has discovered more than 50 kinds of fish previously unknown, at least in American waters, and many of which are quite palatable. The habits and histories of the different fish and animals are obtained, together with the localities where each species most abounds, what they feed upon, when they breed, and under what circumstances, and their migration. The fishes are opened and the contents of the stomach examined to see what they eat. This is a very important branch of the investigation, and the most that is known in that line has been obtained through the commission's re-

searches. Before that, not even the fishermen knew what was the food supply of the most common fish. That point known, the reason of the absence or presence in a locality of any particular fish could readily be ascertained. Where herring has been found in large quantities one season, would not know them the next, and the reason would be the absence of their favorite food. Their diet is shrimps. The latter feed on almost invisible crustacea, and these again on microscopic creations. The presence of the latter would bring the crustacea, to be followed by the shrimps, the herrings, and the whales and sharks, in the order named. So it is seen what an important part even the most minute things may play in the economy of nature. The knowledge obtained in this branch of the inquiry, will teach the fishermen not to destroy the food supply of their prospective prey.

**PROPAGATION OF CODFISH.**—The labors of the United States Fish Commission at Gloucester, Mass., is devoted to the hatching of cod. This is the most difficult of all, for the eggs have to float upon the surface until the hatching is completed. Something over 5,000,000 were successfully propagated last year. The fishermen there were very skeptical at first, and scoffed at the idea of men coming from Washington to teach them, who had been in the business all their lives and knew all about it. And they were very much pleased when the scientific men, battling against many odds, made a failure of the first attempt. Success, however, attended a second effort, and the fishermen were called in to see the result. Even then they could hardly believe it, and said that what was shown them was only a lot of pollywogs, which the commission had procured somewhere to fool them. They were, indeed, like pollywogs at first, but they flourished and soon took upon themselves the appearance of cod. The harbor is now full of the little three-inch-long cod, and last summer the fishermen were delighted to take visitors down to the dock and point out the little wigglers. The commissioners hope that these young cod, when they take to the sea, will, like salmon and shad, return to the place of their propagation to spawn, and the result of the experiment is awaited with much interest.

## Room for Inventions.

The demands made upon scientific knowledge far exceed the supply. Although we may be said to have arrived at an advanced stage of learning, we undoubtedly possess but a limited amount when comparison is made with the necessities which as yet know no law. There are so many theories broached upon important subjects that fully the major portion of the requirements of manufacturers and miners are the victims of experiment. We want improvements in processes—not experimental improvements, but practical working and satisfactory processes, capable of substantial accomplishment of the theories claimed for them. Employers of steam engines demand more power from the enormous quantity of fuel consumed, waste products are waiting to be utilized, streams and atmospheres are crying out for relief from the pollution that is being thrown into them.

It is true inventors are endeavoring to provide means of supplying these demands, but frequently fail to satisfy the demand for the adaptation of new principles because the knowledge of the latter are incomplete. Discovery is usually the basis of invention, and the greatest utilities have been thence obtained, rather than by the exercise of invention upon old knowledge acquired. A machine for completely converting heat into mechanical force is required, but so far our scientific knowledge of the properties of heat has not led us up to the point of discovery upon which to base an invention of that kind. One invention leads to an innumerable chain of inventions, all of them more or less improvements, but still inventions. The field is immense, with abundance of room for inventors.—*Mining and Scientific Press.*

**THE RAIN TREE.**—Some travelers in Colombia, South America, in traversing an arid and desolate tract of country, were struck with a strange contrast. On one side there was a barren desert; on the other a rich and luxuriant vegetation. The French Consul at Loreto, Mexico, says that this remarkable contrast is due to the presence of the "Tamai caspi," or the rain tree. This tree grows to the height of 60 feet, with a diameter of three feet at its base, possesses the power of strongly attracting, absorbing and condensing the humidity of the atmosphere. Water is always to be seen dripping from its trunk in such quantity as to convert the surrounding soil into a veritable marsh. It is in summer especially, when the rivers are nearly dried up, that the tree is most active. If this admirable quality of the rain tree was utilized in the arid regions near the equator, the people there, living in misery on account of the unproductive soil, would derive great advantages from its introduction, as well as the people of more favored countries where the climate is dry and drouths are frequent.

**BICHLORIDE** of mercury, known commonly by the name of corrosive sublimate, will remove the stains of nitrate of silver.

FRANCE annually makes 750,000 tons of excellent fuel from the dust of her coal mines.

## Sun Dance Among the Sioux.

In our last issue we published a few remarks about Indian peculiarities, particularly with reference to dancing. In the same connection, the following graphic description of the annual "sun dance" of the Sioux nation, which took place near the Poplar river, in Montana Territory, about three weeks ago, will prove interesting. The account is taken from a letter received at the Interior Department, from Dr. T. Woodbridge, agency physician for the Fort Peck agency. The Doctor says:

I have just witnessed the great Indian festival of the "sun dance," or worship of the sun. Great preparations had been made for it, and everything was on the grandest scale. The city of lodges was moved, and the Indians encamped on a beautiful plain inclosing a hollow square large enough for the movements of thousands of horsemen. In the center the great pavilion or medicine lodge was erected, 150 feet in diameter, the outside formed of small posts of green poplar and willow, thickly interwoven with green branches. Resting on this and on a rude framework within, all around for about 20 feet the space was covered with buffalo skins, forming the "dress circle," with places assigned to the musicians and actors or dancers. In the center was the great medicine pole, 50 feet high. The diameter of the central space, about 100 feet, was open to the broad sunlight.

Only the men occupied the deep circle, where they were feasted during the performance of 28 continuous hours, during which time about 40 dogs were immolated and eaten, besides large quantities of buffalo meat, wild-turkey heads, and hot caldrons of other eatables that are nameless. The audience was composed of about 5,000 Indians, but as only the men occupied the circle within, the common people, women and boys, had to be satisfied by viewing the performance through the wide entrance or through the enterstices in the leafy barriers. All had on their holiday attire. The dresses of some of the chiefs, and those acting as directors or priests, were gorgeous.

When all was prepared, amid the waving of banners, music, and the loud shouting of the assembled throng, over 50 braves entered—each an Apollo—painted and naked to the waist, except a profusion of ornaments, with headdresses of beautiful feathers, their black, glossy hair reaching down to their lower garments, which were most beautifully and artistically arranged. Each carried in his hand an ornamented whistle, made from the bone of an eagle's wing, which was blown shrilly during the dancing. Each also carried a bouquet, composed mostly of the wild sage. Their appearance and reception were grand and imposing.

The first afternoon's performance would have been called wonderful for display of heroism and power to endure and suffer. Many had from 50 to 200 pieces cut out of the living flesh from their arms and back. The dance was kept up all night with unabated fervor, every performance having something new and startling. But in the morning torture reigned supreme, men dancing with two, three and four buffalo heads suspended from holes cut in their flesh. One Indian dragged on the ground eight buffalo heads fastened to the flesh of his back, and in the stooping posture he was forced to assume they had lacerated or torn the cuts in his back to the extent of three inches. Others were held by four different cords, two in the breast and two in the back, fastened to four stakes; and still others were fastened to the center pole with ropes, which were fastened to the breast and back. Some, in addition to being fastened by the flesh of their breasts, had buffalo heads suspended from the back, and they would be seized by the hanging heads and jerked until one would think their life would be forfeited; others made frantic efforts to break loose, and I often noticed the integument to be stretched three or four inches from the body. Some fell faint and exhausted, and with wild shouts, the din of music and weird songs, made of it a perfect pandemonium.

The dancers neither took food, sleep nor water during the festival. Their dancing, their invocations and their prayers were fervent. They laid their faces on the buffalo heads while praying for success in hunting, and the priest wept and asked the Great Spirit to give them success in the chase and let them have food for their wives and children; also, to give them plenty of horses, to prosper them and help them to subdue their enemies. The sod was carefully removed in a spot four feet square, and within a white cross was made. Their liberality was unbounded. Over 200 horses were given away, besides great quantities of other articles.

**SUBTERRANEAN FOSSIL FOREST.**—In the neighborhood of Rotenburg, on the Fulda, Germany, the geologist, Dr. Moesta, has discovered a subterranean oak forest at a depth of eight feet under the ground. The number of well preserved trunks is enormous. The wood is as black as Irish bog oak, in consequence of the influence of water for centuries, but it is hard and sound, and forms an excellent material for wood carving and mosaic. The size of the trunks is astonishing. One of them, about 57 feet in length and 5 feet in breadth, has been preserved for exhibition in the Royal Museum at Berlin. The forest evidently belongs to a very remote period in the formation of our globe.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

PETER Saxe & Son, 520 Bush St., S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

## SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

## POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magpie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Doves, etc. Eggs for hatching. Send for price list.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Poland-China Swine and Black Cochins Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

## BEES.

JOS. C. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## Grangers' Bank of California, SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000, In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$400,000.

## OFFICERS:

G. W. COLBY, President  
JOHN LEWELLING, Vice-President  
ALBERT MONTELLIER, Cashier and Manager  
FRANK McMULLEN, Secretary

## DIRECTORS:

G. W. COLBY, President, Butte Co.  
JOHN LEWELLING, Vice-President, Napa Co.  
J. V. WEBSTER, Alameda Co.  
URIAH WOOD, San Benito Co.  
J. C. MERYFIELD, Solano Co.  
THOMAS MCCONNELL, Sacramento Co.  
I. C. STEEL, San Mateo Co.  
SOLOMON JEWETT, Kern Co.  
C. J. CRESSEY, Stanislaus Co.  
SENECA EWER, Napa Co.  
A. D. LOGAN, Colusa Co.

The Bank was opened on the first of August, 1874, for the transaction of general banking business.

CURRENT ACCOUNTS are opened and conducted in the usual way.

GOLD and SILVER deposits received.

CERTIFICATES of DEPOSIT issued for Gold and Silver.

TERM DEPOSITS are received and interest allowed as follows: 6% per annum if left for 3 months; 7% per annum if left for 6 months; 8% per annum if left for 12 months.

EXCHANGE on the Atlantic States bought and sold.

ALBERT MONTELLIER,

Cashier and Manager.

San Francisco, Oct. 15th, 1879.

## PIANOS

## LARGEST MUSIC HOUSE

On the Pacific Coast.

WHOLESALE AND RETAIL.

Lowest Prices and Best Goods.

Write for information concerning any Musical Instrument, and terms of sale. It will be given with pleasure.

ESTABLISHED IN 1850.

## KOHLER &amp; CHASE,

137 and 139 Post Street, San Francisco.

San Lorenzo, December 6th, 1877.

Messrs. DEWEY & Co.—Gentlemen: I received the Letters Patent for my invention on the 6th inst., and beg to thank you for the gentlemanly and business-like manner in which you have dealt with me from the beginning of my application. I shall always feel it a pleasure to recommend you to all I come in contact with who need Letters Patent. Respectfully, WM. DALL.



## Lands for Sale and to Let.

## FARMS FOR SALE.

IN THE FERTILE AND HEALTHFUL

## San Pasqual Valley,

San Diego County, Cal.

TITLES PERFECT.

The owner (an architect) having recovered his health by a residence of four years in this Valley, is desirous of returning to the city, and so offers the following farms for sale

## At a Great Sacrifice:

The Home Farm of 200 acres is well fenced and subdivided. There is beside 600 yards of movable panels,

## 50 Acres in Alfalfa,

Yielding five and six crops a year. There is an abundance of water on the place for stock, besides running water for garden, orchard, etc., and a one-sixth interest in the S. P. V. Ditch Co. House 28x36, enclosed in a lot 200x180, barn and stable, 54x35, two sheds 24x14 and 18x14, smoke-house, 20x14, with an adobe cellar under it, and every convenience as regards large tanks, etc., for making bacon. The implements are of the best, nearly all new, and in good order. They consist of two farm wagons, 10-foot header, header beds, hay rack, mower, gang plow, single do, harrow, 10-foot seeder and cultivator, small do, sulky rake, two sets of strong harness, together with a lot of other tools, hay, grain seed, etc.

Price for the whole, \$4,000; one-half cash, balance on time at 1 per cent.

## For Sale Also,

A farm under cultivation of 116 acres, adjoining the above, suitable for grain, corn or alfalfa, with a one-sixth interest in the Ditch Co., and about one and one-quarter miles of fencing, no other improvements. Price, \$1,200; one-third cash, balance on easy terms.

## For Sale Also,

A farm of 120 acres, one-quarter mile from the above ranches, mostly damp land, suitable for a nursery, alfalfa, corn, etc. There is a small house, etc., and a ditch running along its upper side. Price, \$900; one-third cash balance on easy terms.

The neighborhood is exceedingly healthful and growing. Two schools are in the valley, one within one-quarter mile, and the postoffice within one mile, neighbors with families are all round.

My stock consists of superior brood mares, colts, hogs, etc., and they may be taken at a valuation if wanted.

For particulars apply to **W. B. STEWART,**  
San Pasqual Valley, San Diego Co., Cal.

## FARMING LAND

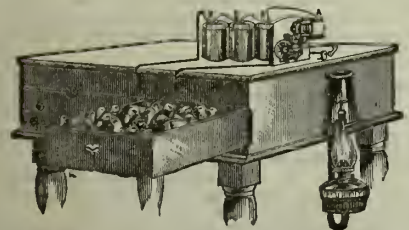
For Sale in large or small tracts, on easy terms, in the best parts of the State.

## McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

**LAND** Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to **EDWARD FRISBIE,** Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

## MONEY in CHICKENS



## If You Want to Make Money

By raising any number of Chickens at any season of the year without setting hens, procure an

## ECLIPSE INCUBATOR

(E. A. SAMUEL'S Patent).

In both public and private trials on this coast as elsewhere, the "ECLIPSE" has proved itself a perfect and successful Egg Hatcher. It may be examined and its merits proven to customers before they make purchases. Write for particulars and circulars to

**G. G. WICKSON, 319 Market Street, S. F.**  
Agent for the Pacific Coast.



## LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price, \$2 per gallon. For directions and testimonials, apply to **FALKNER, BELL & CO.,**  
Sole Agents, 430 California Street, S. F.

## The New Beekeepers' Text Book.

By N. H. and H. A. KINO. The latest work on the Apian, embodying accounts of all the newest methods and appliances. Fully illustrated. Sent by mail, post-paid, for \$1. **DEWEY & CO.,** 202 Sansome Street, S. F.



Opera House, Denver, Col.

## CITY LOTS

25x125 FEET

SITUATED IN NORTH DENVER,

FREE!

EVERY OTHER LOT ABSOLUTE-  
LY FREE!

WARRANTEE  
DEED WITHOUT  
RESERVE.

Denver now has a population of 40,000. Great cities are the outgrowth of great countries. Twenty years ago Denver was a small trading post on the frontier, now it is a large city, with numerous Churches, Hotels, Theaters, Street-railroads, Gas-works, Water-works, Gold and Silver Smelting and Refining Works, with a United States Mint, and is the great Railroad Center of the West. There are seven First-class Railroads now running and connecting with all the Principal and Branch Railroads from Maine to California. It is the Capital of Colorado, naturally the richest State in the Union, and located in about the geographical center of the United States. The climate is charming, with the best water and purest air in the world, and the scenery is unexcelled for beauty and grandeur. It is surrounded by the richest Gold, Silver, Copper, Iron, Lead, and Coal Mines and Agricultural Lands in America. It is now the headquarters for Colorado, Kansas, Nebraska, New Mexico, Wyoming, Nevada, Arizona, and Northern Texas. The rich mineral and agricultural resources of this vast country will make Denver the largest and wealthiest city in the West.

## WHY LOTS ARE GIVEN AWAY.

As the tide of immigration is now in this direction, it is the Company's interest to have people locate in Denver and on their property. To encourage emigration here, the Company will give to any one sending their name and address a warrantee deed, in fee simple, for one or more lots in North Denver, situated in Weld County, State of Colorado, in immediate view of this beautiful city, the only charge being one dollar to pay the Notary Public fees for acknowledging deed and conveyance. The Company does not give every lot away, but each alternate one, and does not expect that every person who gets a lot in North Denver will come here, but a great many will, and they will induce their friends to follow. The increased population will soon make this property very valuable, and this Company retain each alternate lot, which they hold at prices varying from \$25 to \$500, according to location. For this reason the above proposition is made. The deeds are unconditional, not requiring any one to settle or improve, but with full power to transfer and deed to others. The limit to any one person taking advantage of this offer is five lots. This property is not hill-side, mountain, or swamp, but is level, fertile, and has advantages for building upon too numerous to mention. Full and satisfactory information, with indorsements from our best citizens, will be furnished.

## CERTIFICATE OF TITLE.

I, W. C. SANDERS, County Clerk and Recorder within and for said County and State, do hereby certify to the above and foregoing to be true, and title complete to the land therein described according to the records in my office. I further certify there are no abstracts or transcripts of judgments, taxes or other liens standing against said land. In testimony whereof I have hereunto set my hand and affixed my official seal this 21 day of August, A. D. 1879.

(Seal) State of Colorado, ss.  
County of Weld.

## INSTRUCTIONS.

This Company will send by return mail, to any one sending within sixty days from the date of this paper their names, P. O. address, County and State, plainly written in full, a clear warrantee deed to a lot 25 feet front by 125 feet deep in North Denver, Colorado, clear of all taxes. Applications for city lots must be accompanied with one dollar for each lot to pay cost of making and acknowledging deed, postage, etc. The lots then can be sold and transferred at your pleasure. Let all improve this opportunity to secure a home in the richest State in the world. Deeds sent to any part of the U. S. and Canada. Address all letters to  
**DENVER LAND COMPANY,**  
449 LAWRENCE ST., DENVER, COL.



High School, Denver, Col.



One of the many Churches.

## Secure Patents and TRADEMARKS.



Through Dewey & Co.'s Scientific Press Patent Agency.

OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library containing official American and foreign reports, files of scientific and mechanical publications, etc. All worthy inventions patented through our Agency will have the benefit of an illustration or a description in the MINING AND SCIENTIFIC PRESS. We transact every branch of Patent business, and obtain Patents in all countries which grant protection to inventors. The large majority of U. S. and Foreign Patents issued to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most reliable advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free. **DEWEY & CO.,** PATENT AGENTS.  
A. T. DEWEY. W. B. EWER. GEO. H. STRONG

In consequence of spurious imitations of

## LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosbie and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of **CROSS & CO.,** San Francisco.

**F. A. ROBBINS.**  
MANUFACTURER OF  
Canners and Soap Makers' Presses and Dies  
**JEWELERS' TOOLS.**  
**ELECTRICAL and MODEL MACHINERY.**  
No. 7 First St., San Francisco.

## ROOMS TO RENT.

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

Engraving done at this office,

## HEALD'S

**BUSINESS COLLEGE,**  
24 Post Street  
Near Kearny,  
San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instructions given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

**LADIES' DEPARTMENT.**—Ladies will be admitted for instruction in all the Departments of the College.

**TELEGRAPHIC DEPARTMENT.**—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, **E. P. HEALD,** President Business College, San Francisco, Cal.

60 Chromo, perfumed, Snowflake & Lace cards, name on all 10c. Game Authors, 15c. Lyman & Co., Cliftonville, Ct

## Seedsman.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

## B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street. - San Francisco.

## EXOTIC GARDENS.

F. A. MILLER & CO., Mission St., opposite Woodward's Gardens. Send for Catalogue and Price List.

## Nurserymen.

1,000,000

Strawberry, Raspberry, Blackberry and Cranberry Plants.

**STRAWBERRY PLANTS.**—The Essex Beauty, Crescent, Cinderella, Forest Rose, Gleadow, Jucunda, Monarch of West, Langforth Prolific, Triomphe d' Gand, Wilson Albany.

**RASPBERRY PLANTS.**—Cuthbert Early, Early Prolific, Reliance, Pride of the Hudson, Brandywine, Hersting, Philadelphia Red, Clark, Henrietta, Hornet, Belle de Fontenay, Delaware Bristol.

**BLACKBERRY PLANTS.**—Deering Seedling. Early and the most productive of all. I will give satisfactory proof that these Berries have realized \$750 per acre. It paid more than twice as much as the old varieties; also the Early Cluster, the Vina Seedling, Kittatiny, the Mammoth Cluster, Missouri Mammoth, Dorchester and Lawton.

**CRANBERRY PLANTS.**—The Cherry Cranberry Vines at \$10 per 1,000, by mail 64 cents more.

I will sell to responsible parties on time, part cash, 10-acre field of Cranberry vines under cultivation. Can be seen at the place. Send for Catalogue.

## H. NYLAND,

Boulden Island, San Joaquin River.



The most complete assortment in the West. A particularly fine lot of Standard Pear Trees. Also a superb lot of healthy Peach Trees as were ever grown. Full stock of Apple, Plum, Pear, Peach, Cherry, Quince, etc. A select lot of Grapes, Raspberries, Gooseberries, Currants, Strawberries, etc. An immense stock of Greenhouse Plants. Trade-List and Greenhouse and Bulb Catalogues free. Correspondence solicited. 26th Year. 400 Acres. 15 Greenhouses.

**STORRS, HARRISON & CO.**  
PAINESVILLE, LAKE CO., OHIO.

## Phylloxera-Resisting Vines.

Vineyard proprietors desiring to plant American Grape Vines, which resist the attacks of the Phylloxera, either as Grafting Stock, or for direct production, which proves to be the only salvation and means of reconstructing the destroyed Vineyards of France, will do well to address **BUSH & SON & MEISSNER,**  
Bushberg, Jefferson Co., Mo.

## PEPPER'S NURSERIES.

(Established 1858.)

For sale at reduced prices, a general assortment of Fruit Trees and Small Fruits; also choice Ornamental Shrubs, Roses, etc. A limited supply of Cook's Seedling Apple, one and two years old. Catalogue and list of prices furnished on application. Address

**W. H. PEPPER,**  
Petaluma, Sonoma Co., Cal.

## THOROUGHbred POULTRY.

**SAFE** **UNLIMITED**  
**ARRIVAL** **RANGE**  
**OF**  
**FOWLS** **Healthy Stock**  
**AND** **116 ACRES**  
**EGGS** **Devoted to the**  
**Guaranteed.** **Business.**



**LANGSHANS.** I now breed this justly celebrated Fowl. Send 3c. stamp for price list and circular describing the different breeds I keep. Incubators.

M. EYRE, Napa, Cal.

Pamphlet on Breeding, Hatching, Diseases, etc., adapted especially to Pacific Coast, sent for 15c.

## ST. DAVID'S.

A FIRST-CLASS LODGING HOUSE.  
CONTAINS 113 ROOMS.

715 Howard St., near Third, San Francisco.

This House is especially designed as a comfortable home for gentlemen and ladies visiting the city from the interior. No dark rooms. Gas and running water in each room. The floors are covered with body Brussels carpet, and all of the furniture is made of solid black walnut. Each bed has a spring mattress, with an additional hair top mattress, making them the most luxurious and healthy beds in the world. Ladies wishing to cook for themselves or families, are allowed the free use of a large public kitchen and dining room, with dishes. Servants wash the dishes and keep up a constant fire from 6 A. M. to 7 P. M. Hot and cold baths, a large parlor and reading room, containing a Grand Piano—all free to guests. Price single rooms per night, 50 cts.; per week, from \$2.50 upwards.

R. HUGHES, Proprietor.

At Market Street Ferry, take Omnibus line of street cars to corner Third and Howard.



## PATENTS AND INVENTIONS.

### List of U. S. Patents Issued to Pacific Coast Inventors.

[From Official Reports for the "Mining and Scientific Press," Dewey & Co., Publishers and U. S. and Foreign Patent Agents.]

FOR THE WEEK ENDING OCTOBER 23RD, 1879.

221,011.—STEAM GENERATOR.—D. Abell, Carson, Nev.  
220,965.—HINGE FOR DOUBLE DOORS.—J. Decombe, S. F.  
220,978.—AMALGAMATOR.—A. F. Ladd, S. F.  
220,923.—CAR TRUCK.—E. J. Marsters, Stockton, Cal.  
221,045.—FIRE ESCAPE.—P. Gallagher, Eureka, Nev.  
221,081.—WINDMILL.—R. Lorenzo, Loyalton, Cal.  
220,940.—VENTILATING MINES.—W. B. Norman and R. H. Leonard, S. F.  
2,104.—Title, "STRASSMAN'S BLOOD RENOVATOR. The best alternative and depurative ever discovered"—Label—Max Strassman, S. F.  
2,105.—Title, "STRASSMAN'S RADICAL RESTORATIVE"—Label—Max Strassman, S. F.  
2,106.—Title, "STRASSMAN'S REPARATIVE BALM"—Label—Max Strassman, S. F.

The following foreign patents have been issued to residents of this Coast:

#### English Patents

Which have passed the great seal:

757.—IMPROVEMENTS IN MOTORS.—E. J. Molera and J. C. Cebrían, S. F. Feb. 25, 1879.  
1,057.—PUMPO MACHINERY.—E. J. Molera and J. C. Cebrían, S. F. Mar. 18, 1879.  
1,102.—CANILE-STICK.—A. J. Smith and E. W. King, Ukiah, Cal. Mar. 19, 1879.  
2,250.—SEWING MACHINES FOR SEWING CARPETS, ETC.—J. Hesse, S. F. June 6, 1879.  
2,727.—MACHINERY FOR GRINDING OR TURNING HARDENED METAL SURFACES.—J. H. Gowan and C. Daniel, Carson, Nev., July 4, 1879.  
2,839.—WRENCH.—A. Jackson and J. J. Dunn, S. F. July 16, 1879.  
2,965.—BREECH-LOADING FIRE-ARMS.—A. Swingle, S. F. July 22, 1879.  
3,255.—HOOKS.—F. Kortick, S. F. Aug. 13, 1879.

#### Canadian.

10,307.—SYSTEM OF LIGHTING.—E. J. Molera and J. C. Cebrían, S. F. July 29, 1879.  
10,363.—VAPOR ENGINE.—W. P. and W. T. Wood, Washington, Cal. Aug. 14, 1879.

#### Victoria.

2,660.—MACHINE FOR PULVERIZING ORES AND AMALGAMATING METALS.—A. B. Paul and J. T. Davis, S. F. June 21, 1879.

#### German.

7,304.—ROCK DRILLING ENGINE.—W. W. Dunn, S. F. Sept. 4, 1878.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

### Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

COMBINED STEAM HARVESTER AND THRESHER. Wm. H. Foye, S. F. No. 220,366. Dated Oct. 7th, 1879. This invention relates to an improved apparatus for harvesting grain, and it consists in a novel combination of a mechanism for cutting and heading the standing grain, suitable carrying and elevating belts, and a threshing and cleaning machine, all mounted upon a frame-work having bearing wheels, together with a novel steering device and devices for raising and lowering the front and rear and the ends of the reaper. In combination with these devices, an engine is employed to drive the sickle and thresher, so that, while the machine is drawn over the field by horses, the reaper and thresher are driven by this engine at any speed required, and independently of the movement of the machine over the ground, thus cutting thick or thin grain with equal facility and relieving the team, as the traction force necessary to drive the machine is avoided.

STEAM FARMING APPARATUS.—Wm. H. Foye, S. F. No. 220,365. Dated Oct. 7th, 1879. This invention relates to certain improvements in engines and apparatus for farm work, the apparatus being interchangeable, so that portions of it may be employed with the engine during the plowing season, while other portions may be employed with the same engine during the harvesting season, by simply removing the plowing apparatus and substituting therefor that necessary for harvesting, so that the whole will form a comparatively cheap and economical "plant" for all the principal work of a farm.

DOUBLE-ACTING REVERSIBLE GANG PLOW.—Wm. H. Foye, S. F. No. 220,367. Dated Oct. 7th, 1879. This invention relates to certain improvements in gang plows of that class which are hauled across the field to be plowed by means of engines placed at one or both sides of the field with suitable anchors and connecting and operating ropes; and it consists in mounting two gang plows upon a frame in lines which cross each other diagonally within the frame, one gang standing so as to plow in one direction while the other gang is mounted so that it will plow in the opposite direction. These two oppositely acting gangs of plows are provided with mechanism by which one or both of them may be raised from the ground, and the frame is mounted upon a series of adjustable bearing wheels, three of which travel all the time upon solid ground.

WATER WHEEL.—David H. Anderson, S. F. No. 220,212. Dated Oct. 7th, 1879. This invention relates to an improvement in that class of water wheels known as "hurdy-gurdy"

wheels, which are driven by the momentum of the water, and in which the water is received into the buckets from the outside and discharged in the same manner. It consists in so mounting the buckets or floats on the flanges or rim of the wheel that a continuous span is left between the inner edges of the buckets and periphery of the wheel, so that the momentum of the water is not lost on the first bucket, but is distributed over a number, until its moving force is entirely lost, when it leaves the wheel.

IMPROVEMENT IN APPARATUS FOR MAKING AND LAYING CONTINUOUS CONCRETE PIPE.—Ezra M. Hamilton and Charles N. Earl, Los Angeles, Cal. Patent No. 220,757, dated Oct. 21st, 1879. This invention relates to an improved method and apparatus for the manufacture of concrete or cement pipe, and it consists of a cylinder or case, which is laid horizontally in the trench prepared for the pipe, said cylinder being provided with a piston or plunger, which is operated by hand, and which forms the pipe from the mortar or cement, which is fed to the cylinder from a feed tube or hopper on top. A flexible core is attached to the end of the piston, which forms the orifice through the pipe, the pipe being thus made in a continuous piece, without joints of any kind, so that any leakage is avoided.

WRENCH.—Andrew Jackson, 143 Fremont street, San Francisco. No. 220,076, dated Sept. 30th, 1879. This device relates to an improved universal wrench, and it consists of a novel combination, with other devices, of a stationary and a movable jaw, the moving ends of which are separated or closed in a line diagonal to the handle by means of a screw which actuates a movable nut. The movable jaw is hinged to this nut so as to open or close at will, and is kept closed by a spring. The invention also consists in certain details of construction, whereby any form of nut or pipe may be seized and turned. The tool is simple, easily and rapidly fitted to any nut, bolt or pipe, and has few parts to become broken or get out of order.

### Arizona's Railroad Prospects.

Considerable that is flattering to Arizona was uttered by Judge Underhill of the S. P. R. R. in an interview with Major Hall, published lately in the *Washington Republican*. Judge Underhill says, however, he does not think it equal to Nevada or Colorado in either its mining wealth or agricultural resources. As far as mining developments have been made, it would seem the richer portions of the Territory are adjacent to the line of the Southern Pacific railroad, as built and proposed; also that section lying between the railroad and Prescott, to which latter point it is designed to construct a branch road at an early day. It has an excellent climate, however, and is a fine stock-grazing country. Many of the lands designated as "desert" will bear the best of crops with water on them, and many of them can be irrigated by the rivers, and a large portion probably by the sinking of artesian wells.

The Judge's private opinion is that a railroad will not very soon be built with Guaymas or any port on the Gulf of California as a terminus. Upon this subject he says: I have heard it suggested that the China and East India business would seek a port on the Gulf of California, and thence take its way East by rail, but any one that understands the winds, currents and distances of the Pacific will know that can never be done, as all sailors from those countries come down on the trade winds, and would pass near San Francisco, which is about 1,600 miles from Guaymas, and the last half of the distance in light, variable winds which sailors so dread—and steamers certainly would never think of going there when they could stop at the port of San Pedro, on the Southern Pacific railroad, nearly 1,000 miles less steaming than to go to Guaymas, and then he very little, if any, nearer the junction of the two roads.

WHEAT PRICES FOR THE CENTURY.—John Shaw & Sons, seed merchants, 37 Mark Lane, London, England, issue a circular giving the annual average price of wheat per quarter (480 lbs) for the undermentioned years:

Years.	s. d.	Years.	s. d.	Years.	s. d.
1801.....	119	61827.....	58	61853.....	53 3
1803.....	65	101829.....	60	31855.....	74 8
1805.....	89	91831.....	60	41857.....	60 4
1807.....	75	41833.....	62	11859.....	43 9
1809.....	97	41835.....	39	41861.....	55 4
1811.....	95	31837.....	65	101863.....	44 9
1813.....	109	91839.....	70	81865.....	41 0
1815.....	65	71841.....	64	41867.....	64 5
1817.....	90	111843.....	50	11869.....	48 2
1819.....	74	61845.....	50	101871.....	56 8
1821.....	56	11847.....	09	91873.....	58 8
1823.....	53	41849.....	44	31875.....	45 1
1825.....	68	61851.....	38	61877.....	56 9

AN "AGRICULTURAL NUMBER" of "SCRIBNER'S MONTHLY."—In addition to the usual variety in the contents of *Scribner's*, the November issue contains a half-dozen papers of the highest interest to farmers, and others interested in rural life: "The Agricultural Distress in Great Britain," by P. T. Quinn; "Farming in Kansas," by Henry King; "Success with Small Fruits," by E. P. Roe; "Rare Lawn Trees," by Samuel Parsons, Jr.; "The Mississippi Jetties," and their effect on the prices of agricultural products, and "How Animals Get Home," by Ernest Ingersoll.

THE ALPINE FLORA.—Mr. John Ball, an English botanist of much repute, has had a passion from his youth upward for the scenery and flora of lofty mountains, and has passed many a day botanizing in the Alps, the Carpathians, the Pyrenees and the ranges in Spain. A memoir just published by him points out the curious fact that a close affinity exists between the Alpine flora and those of the mountains in Northern Asia, and this notwithstanding the vast interval of space that divides them and the wide differences in their climatical conditions. In the Altai range, forming the southern boundary of Siberia, fully one-fourth of the Alpine species are present. This is the more remarkable, because in the Caucasus, which is only one-third the distance of the Altai range from the Alps, and has moreover a more favorable climate, a smaller proportion is found. Mr. Ball relates that some twenty years ago he started from the Eggisch-horn in the Alps with an ill-defined intention of reaching the uppermost end of the great glacier of Aletsch, the vastest field of snow in Europe, and of looking down on the pastures of the Wengern Alp from what is now called the Jungfrau Joch. The sun that day was hot, and the snow into which he sank at every step was soft and pasty. The great ice river is many leagues long, and has a channel two or three miles wide. Just at the point where the two great tributary streams join the main current, there was a steep slope clear of snow, and by following the track of some chamois, Mr. Ball found his way to the base of it, and made the ascent to a range of projecting rocks, which were about 10,700 feet above the sea. Along this slope, at a height of nearly 2,000 feet above the so-called jardin, near Chamouli, he gathered over forty species of plants in flower. This incident shows how extensive is the glacial flora, and how much labor is necessary before a complete enumeration of it can be made.

TO ESTIMATE THE CONSTITUENTS OF CEREALS. Messrs. Hayes, of Roxbury, and Jackson, of Boston, Mass., have discovered a way of measuring approximately the valuable constituents of grains. If a kernel of corn be split longitudinally, and immersed in an aqueous solution of sulphate of copper, the germ, or "chit," only becomes colored green, thereby beautifully defining the limits of the phosphates by the formation of phosphate of copper. If a kernel of corn be split open and thrown into a solution of sulph-hydrate of ammonia, the "chit" will soon be changed to a dark olive color, which is due to a change of the salts of iron in the seed to a sulphuret of that metal; a dark-colored matter forming with the ammonia turns the vegetable coloring matter yellow, and the two colors combined produce an olive. Again, by taking split specimens of corn, or other grains, and soaking them in a tincture of iodine, the limits of the starch and dextrine will be distinctly defined—the iodine striking an intense blue with the starch, and a deep port wine red with the dextrine; so that, from this test, a rich violet (heing the combination of the blue and red colors) will indicate the presence of both the starch and dextrine in the grain. If the oil be extracted from the transparent horny part of the corn by means of alcohol or ether, the tincture of iodine will show the presence of starch in that part of the grain associated with the gluten. By these means we may easily cause any of our cereal grains to represent to us the extent and precise limits of its phosphates, iron, dextrine, starch and oil; and thus, by the eye alone, we may form an approximate estimate of the relative proportions of these ingredients.—*American Miller*.

THE LOTUS IN NEW YORK.—At the recent exhibition of the New York Horticultural Society, Mr. E. D. Sturtevant, of Bordentown, N. J., exhibited three water lilies, which promise to have great practical value for decorating grounds where there are small lakes. One of the plants was a true Nilotic Lotus, with circular leaves standing above the water, similar in appearance to those of our native *Nelumbium luteum*, and showing large nodding flowers. There were also some cut flowers of the *Nymphaea dentata*, a large flower of purest white—an enlarged copy of our own white water lily, *N. odorata*. Another was a blue variety, and most striking of all was a hybrid from two Indian varieties. The large heart-shaped leaves of this plant floated on the surface of the water, while the flowers were of a delicate pink shade. Mr. Sturtevant declared that these flowers, as well as those of the *N. dentata*, were fully 12 inches in diameter during the warm summer weather. These plants were all grown in the open air.

PUT YOUR TRADE-MARKS OVER YOUR GOODS, you have them; and you who have them not design and procure one as soon as possible. A good trade-mark, once recognized and well known, is a fortune in itself. People get accustomed to buying goods of that special brand, and will take no other. Display your trade-marks with your wares. It's like meeting a friend to see a familiar trade-mark. Dewey & Co.'s SCIENTIFIC PRESS Agency, San Francisco, is the place to apply for United States patent trade-marks and other patents, caveats, etc.

THE Texas Pacific Railroad Company announces its intention of completing the road without asking for Government aid.

## A Los Angeles Nursery.

We are sure that a ride through Mr. Milton Thomas' nursery and orchard grounds, in the western suburbs of Los Angeles, would be both pleasant and surprising to many of our readers. We have never before seen fifty acres and more in one body so well set to nursery stock. His soil seems well adapted to the business. The trees are generally well formed and of uncommonly uniform size. The soil seems of medium strength, so that his stock will be fit to transplant into any kind of soil, either strong or light, without suffering from the change. It is a pleasure to say that Mr. Thomas employs first-class help, and his place shows kind and consistent management.

Some 250 varieties of fruit trees are raised. While his nursery appears new, stocked with the latest well-known varieties, Mr. Thomas assures us that he offers only such varieties as have been well tested on this coast, as he prefers to forego the temporary benefit of being first with every new comer, in order that he may be more sure of recommending only ultimately desirable stock. New varieties of seedlings and varieties from the Southern States and Europe are thoroughly tested before offered for sale. Buds are taken from bearing trees, so that varieties are true to label. He has found several varieties of plums and prunes that bear well in southern California. He has 30,000 apricot trees, and makes a specialty of Wood's Early, which ripens 30 days earlier than any other. It is especially recommended for its earliness and for being a good shipping apricot. The trees in this nursery appear particularly thrifty and healthy and free from any disease. They are fortunately free from the woolly Aphis. His stock of orange trees comprises choice varieties in good condition.

Mr. Thomas has been a long time in the business in which he takes a worthy interest, and in which he intends to continue permanently. His reputation is good in the community as a citizen and a fair dealer, disposed to meet customers in the right spirit and give full satisfaction to every reasonable patron.

All kinds of semi-tropic and deciduous fruit trees and plants can be had of Mr. Thomas in good quality and variety, too numerous to mention, and we recommend persons interested to send for his catalogue. Address Milton Thomas, Los Angeles, Los Angeles Co., Cal.

### OUR AGENTS.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. L. THARP—San Francisco.  
B. W. CROWELL—California.  
A. C. KNOX—Pacific Coast.  
S. V. BLAKESLEE—California.  
G. W. McGREW—Santa Clara county.  
MILTON KENNEDY—Kern and Inyo counties.  
J. B. BACHELDER—Shasta County, Cal.  
H. H. MESSNER—Arizona.  
THOS. H. MANNING—Nevada, Idaho and Montana Ter.  
CAPT. W. H. SEAMENS—Arizona.  
M. P. OWEN—Santa Cruz County.  
H. E. HALLETT—Los Angeles County.

LITERARY NOTES.—Pacific Rural Handbook, by Chas. H. Shinn. This little book upon horticulture and gardening in California, covers a ground never before attempted. Writers upon these subjects have probably been deterred by the difficulty of adapting a single volume, of reasonable size, to the great number of special conditions in the different localities in the State. There are, however, many points of general interest, and of wide application. These, chiefly, our author has taken for the material of his work. There is much in it which will be read with profit by the professional gardener or nurseryman; but for the non-professional farmer, fruit-grower or florist, and even for everyone who has a half-rod of ground upon which to plant a tree or a flower, it is full of valuable suggestions. We especially commend the chapters upon "Improving the Soil" and "Irrigation" to our farmers. Of course our praise is given with the understanding that the work professes to be only what its name indicates, a hand-book, not an elaborate treatise. But to say that it is full of reliable information is only half the truth. Its chief value to many readers lies in a different direction. It is a collection of essays so admirably written, with such wealth and beauty of language, and such an evident love for, and conception of the spiritual meaning of all beautiful things in nature, that we think it will be welcome to every home. To the seeker for knowledge for love's sake, it will speak a familiar tongue, while to the unappreciative, to whom nature has hitherto been a book in an unknown language, it will be a new revelation.—*Washington Corners Reporter*.

The "PACIFIC RURAL HANDBOOK," written by Chas. H. Shinn for the publishers of the PACIFIC RURAL PRESS, will be sent, post-paid, in substantial cloth binding for \$1; in full leather, \$1.50; in cloth, interleaved with fine ruled paper for memoranda, \$1.50. Address DEWEY & CO., PUBLISHERS, No. 202 Sansome Street, San Francisco.

THE RIVERSIDE HOUSE is pleasantly located in the center of the town in Riverside Colony, San Bernardino Co. It is a new two-story brick building, containing some 40 rooms. Health-seekers and other visitors to this most favored climate will find good boarding accommodations at favorable rates. For further information address the proprietors, CUNNINGHAM & MOORE, Riverside, San Bernardino Co., Cal.

HOW TO STOP THIS PAPER.—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

SAMPLE COPIES.—Occasionally we send copies of the paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate the copy sent.

EXTRA COPIES can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.

THOMAS DUNSON will oblige us by sending his P. O. address to this office.



## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, November 12th, 1879.

Trade has been rather slow. Our list of Produce receipts for the week, given below, shows that less of everything has been received than for two weeks back. The heavy storms which have occurred since Saturday have probably interfered somewhat with shipments, and the lack has had the effect of advancing the rates on some Vegetables and Fruits. Grain has generally been at a standstill.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday....	10s	9d@11s	9d	11s	7d@12s	—	—	—
Friday.....	10s	9d@11s	9d	11s	6d@11s	—	—	—
Saturday....	10s	9d@11s	9d	11s	6d@11s	—	—	—
Sunday.....	10s	9d@11s	9d	11s	6d@11s	—	—	—
Tuesday....	10s	8d@11s	9d	11s	5d@11s	—	—	—
Wednesday..	10s	8d@11s	9d	11s	5d@11s	—	—	—

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1877.....	12s	8d@12s	10d	12s	10d@13s	3d	—	—
1878.....	9s	8d@9s	11d	9s	10d@10s	2d	—	—
1879.....	10s	8d@11s	9d	11s	5d@11s	10	—	—

## The Foreign Review.

LONDON, November 11.—The *Mark Lane Express* says: A decided improvement in the weather the past week facilitated Wheat sowing, which is fairly forward in the southern and some of the midland counties. In the higher districts of Scotland the commencement of snow and night frosts have necessitated the reaping of much Grain in an imperfectly ripened condition. The root crop is only expected to be half an average yield. It is stated the prospect is the most serious ever encountered by the present generation of Scotch farmers. Irish reports are less unfavorable, the weather having been very fine. At *Mark Lane* English Wheat was rather more freely offered, but the supply is undoubtedly small for this time of the year. The condition is somewhat improved, owing to more favorable weather for threshing. At a majority of provincial markets business has been quite impracticable, as a large proportion of Grain offered has been useless to millers. The few fine dry lots to be met with changed hands on former terms, while inferior parcels were quite neglected. The imports of foreign Wheat in London have been fair, but not excessive. There was a slight revival in business on Monday, but since then some reaction has taken place. Speculators hold aloof, and confidence is somewhat shaken by the increase in the visible supply in America. Holders, however, have been upheld by the rise in prices in New York, and there has been no disposition to force sales. On the whole, there has been only a retail consumptive demand, which was satisfied at previous prices. Sales of English malting Barley was checked by liberal imports of French and German Barley. Maize was neglected and prices were slightly easier, despite the comparative absence of arrivals. Arrivals at ports of call have been large. Wheat is in a state of suspension, buyers holding off, pending further arrivals, and prices are fully 1s per quarter lower on the week. Maize is in fair demand, at about 3d per quarter decline. Business in Wheat for shipment is very limited, at about 2s per quarter declines. Maize and Barley are easier. Sales of English Wheat the last week—36,552 quarters, at 50s 5d per quarter, against 52,897 quarters, at 39s 8d per quarter, for the same week last year. The imports into the United Kingdom, for the week ending November 1st, were 1,085,766 cwt of Wheat, and 279,696 cwt of Flour.

## Freights and Charters.

Engagements reported this week were all made prior to arrival. They are as follows: Ship *James Bailey*, 1,531 tons, Wheat to Cork, United Kingdom, £2 15s; British ship *White Statesman*, 1,314 tons, Wheat to Cork, £3 7s 6d; British ship *City of Corinth*, 1,276 tons, reported for Wheat to Cork, United Kingdom; British bark *Iron Crag*, 870 tons, Wheat to Cork, United Kingdom, £2 12s; British bark *Alneburgh*, 855 tons, Wheat to Cork, United Kingdom, £3.

## Eastern Grain and Provision Markets.

NEW YORK, November 11.—Flour is dull, 15c@25c lower. Wheat is dull, weak, 1 1/2c@2c lower, in the absence of export demand and of any speculation. Barley is lower, and very unsettled; Six-rowed State, 32c; Two-rowed, 72c; Canada do, 80c@85c. Pork and Lard are dull, steady. The Grain trade received almost unanimously to-day to instruct the committee not to carry into effect the central system on the 1st of January next, relative to Grain.

CHICAGO, November 8.—The Grain market the past week have called for less attention and created less excitement in the outside world than for two months before; but still there has been a considerable amount of business done, restricted partly by election week and partly by high freight rates and a scarcity of cars for transportation. Wheat opened pretty strong, but prices ruled weak and lower until toward the close of the week, when there was a partial recovery. Sales for December were: Wheat, \$1 12 1/2@1 17 1/2; closing at \$1 14 1/2. Corn, 38c@41c; closing at 30 1/2@30 3/4. Oats, 31c@32 1/2; closing at 32 1/2. Rye sold for 34c from 74c down to 71c; closing weak. Barley sold for 84c to 80c; closing at the latter figure. Provisions strengthened up under packing troubles, which for a time threatened to restrict production in the near future. The receipts of Hogs fell off wonderfully, and prices for Hogs declined smartly, while Provisions "boomed." Sales of January Pork, \$10.20@10.60; closing about the outside prices. Lard, 86 1/2@87 1/2; closing at the outside prices. Closing cash prices were: Wheat, \$1 13 1/2@1 13 3/4; Corn, 42c@42 1/2; Oats, 32c; Pork, 89 1/2@90; Lard, 86 1/2. Receipts for the week: Wheat, 1,004,000 bush; Corn, 896,000; Oats, 371,000.

## Eastern Wool Markets.

NEW YORK, November 11.—Wool, although not buoyant, is fairly active; California Wool is firm.

PHILADELPHIA, November 11.—The Wool market is firm and buoyant; supply light. Oregon is firmer, 25c@35c; medium, 35c@37c; coarse, 33c@35c; California fine, 25c@36c; medium, 33c@37c; coarse, 30c@37c; New Mexican and Colorado fine, 27c@30c; medium, 28c@32c; coarse Carpet Wool, 23c@25c; pulled extra Merino, 46c; Super, 46c@48c; Lamb's Super, 45c@48c.

Boston, November 8.—The Wool market during the past week has been excited, and prices again advanced 2c@3c per lb on washed fleeces, with a corresponding advance on nearly all other grades. Total sales, 3,712,000 lbs domestic and 613,500 lbs foreign. The advance in prices appears to put no check whatever on manufacturers, who continue to purchase freely. Fine fleeces took another decided start up value. In California Wool transactions were large; choice Northern Spring sold at 40c, the highest price for years. This price has been refused for a large lot on the way by water. Fall Wools have been

largely placed, to arrive. Combing and Delaine fleeces were not sold to any extent this week, more from the want of stock than from the lack of buyers. In unwashed and unmerchantable fleeces sales were not so large as previously noticed, but prices advanced about 3c on desirable grades. There was a fair business in foreign Wool at full prices. Oregon is quoted at 22c@25c; Territory, 22c@35c. In California there have been sales of 192,000 lbs Spring at 24c@40c, and 1,007,000 lbs Fall at 18c@32c. Choice lots of Fall sold at 32c@33c. But a small percentage of Fall Wool sold has yet been received.

## New York Dried Fruit Markets.

NEW YORK, November 11.—Raisins of all kinds are strong at quotations with the demand good and advices from abroad favorable. Turkish Prunes are less active but very firmly held; Figs are in good demand; Currants are very firm and active at 5 1/2@5 3/4; Dried Apples are firm, holders making no special effort to realize.

## Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Oct. 22.	WEEK. Oct. 29.	WEEK. Nov. 5.	WEEK. Nov. 12.
Flour, quartersacks..	49,576	88,908	59,237	42,149
Wheat, centals.....	483,130	353,222	465,381	280,122
Barley, centals.....	66,311	62,933	46,699	27,889
Beans, centals.....	9,925	17,167	18,510	14,239
Corn, centals.....	2,793	3,619	4,305	1,156
Oats, centals.....	12,134	6,502	22,819	3,754
Potatoes, sacks.....	26,237	27,200	18,021	12,378
Onions, sacks.....	3,606	2,574	1,551	1,795
Wool, bales.....	6,252	6,739	4,075	2,438
Hops, bales.....	927	562	868	500
Hay, bales.....	1,542	1,732	1,263	759

BAGS—There is no change in rates. The Wheat Bag combination has been extended to July 1st, 1880, in consequence of the improved outlook. The Jute crop is reported 25% short of last year, and freights this way have advanced 100%. The combination is said to be very well satisfied with the prospect.

BARLEY—There is little doing at present, and rates unchanged; 200 cts Coast Feed sold at 75c per cwt.

BEANS—Another advance amounting to 5c@10c per cwt on different kinds is noted; 100 sks Bayos sold at \$1.40; and 100 sks Pink at \$1.15 per cwt.

CORN—Good Large Yellow and White have both reached \$1 per cwt; Small Round is up to \$1.05 per cwt. Sales are few.

DAIRY PRODUCE—Butter is altogether unchanged, except that 35c is now the top mark for fancy. Cheese shows a little weakness, because of larger supplies.

EGGS—Eggs are 5c per dozen lower than at our last week's report, but they are doing better than they did a day or two ago. There are fewer in sight and the market is gaining strength.

FEED—There is no change in Ground Feeds. Hay has advanced \$1 per ton for the choicest Wheat.

FRESH MEAT—There is no change.

FRUIT—Grapes, Raspberries and Strawberries are considerably higher. Limes, Lemons and Oranges have dropped, because of larger supplies by importation.

HOPS—There is no change here this week. Emmet Wells, in reporting the New York market for the week ending October 31st, says:

Although the exports to London show a considerable falling off from last week, the market has ruled strong all through the week, with a good demand from brewers, and the price is 2c per lb better on all descriptions of new Hops, the range now being from 32 to 45c. We hear of one sale to a brewer of about 100 bales as high as 45c, on 60 days' time. Old Hops have not changed in value, and seem quite neglected. Quotations: New Yorks, new crop, choicest, 42c@45c; do, do, medium, 37c@40c; do, do, low fair, 32c@35c; Eastern, do, 32c@42c; Wisconsin, do, 32c@42c; Yearlings, 7c@18c; Olds, all growths, 4c@10c; Pacific Coast Hops, new, 37c@42c; do, old, 9c@14c.

LIVE STOCK.—We note sales: 1,879 Sheep at \$2.17 1/2 each; 207 Lambs, \$1.50, delivered in S. F. corals, shorn; 1,200 Hogs, 3 1/2c; 520 Hogs, 3 1/2c; 217 Stock Hogs, 3c; 103 Stock Hogs, 3 1/2c; 352 Cattle, fat, \$31 each; 1,365 fair Lambs, Wool on, \$1.85, delivered at Butchertown; 240 Calves, large and fat, \$12.50 per head; 420 Stock Sheep in country at \$1.50 per head, all Wethers.

ONIONS—There is no change.

POTATOES—All new lots of good quality are higher, as shown in our list. There is still some old stock on the wharves which moves slowly at two or three bits a sack.

POULTRY AND GAME—Unchanged, except a little admonition of Thanksgiving in the price of Turkey.

PROVISIONS—There is no change in this line of goods.

VEGETABLES—String Beans, Cantaloupes, Cucumbers, Green Peas, Marrowfat and Summer Squash, and Tomatoes have all stepped forward this week.

WHEAT—There is little life in the trade, as buyers and holders are wide apart in their views. Our quotations seem to represent the current trade, but these prices are but seldom accepted by holders, consequently the small trade.

WOOL—Last week's prices still prevail, and the market is strong for good lots, because of the active demand at the East.

## LUMBER.

WEDNESDAY M., November 12, 1879.

CARGO PRICES OF REDWOOD.	RETAIL PRICE.
Rough, M.....	12.00
Rustic.....	18.00
do, No. 2.....	14.00
Flooring.....	20.00
do, No. 2.....	13.00
Beaded Flooring.....	25.00
Refuse.....	13.00
Half-inch Siding.....	16.00
Refuse.....	14.00
Half-inch Surfaced.....	20.00
Refuse.....	14.00
Half-inch Battens.....	18.00
Pickets, Rough.....	11.00
Rough, Pointed.....	12.50
Fancy, Pointed.....	18.00
Shingles.....	1.75

## RETAIL GROCERIES, ETC.

WEDNESDAY M., November 12, 1879.	
Butter, California	25 @ 45
Choice, lb.....	18 @ 25
Cheese.....	18 @ 25
Eastern.....	25 @ 30
Lard, Cal.....	18 @ 25
Eastern.....	25 @ 30
Flour, ex. fam, bbls	60 @ 65
Corn Meal, lb.....	24 @ 30
Sugar, wh. crshd	12 @ 13 1/2
Light Brown.....	8 @ 9 1/2
Coffee, Green.....	23 @ 35
Tea, Fine Black.....	50 @ 60
Finest Japan.....	55 @ 60
Candles, Adm'te.....	15 @ 25
Soap, Cal.....	7 @ 10
Rice.....	8 @ 12
Yeast Pwdr, doz.....	1.50 @ 2.00
Can'd Oysters, doz.....	60 @ 65
Syrup, S. F. Gold'n.....	75 @ 102
Dried Apples, lb.....	10 @ 14
Ger. Prunes.....	12 @ 10
Figs, Cal.....	11 @ 10
Oils, Kerosene.....	50 @ 60
Wines, Old Port.....	30 @ 60
French Claret.....	10 @ 25
Cal doz bot.....	3.00 @ 5.00
Whisky, O. K. gal.....	3.50 @ 6.00
French Brandy.....	4.00 @ 6.00

## DOMESTIC PRODUCE.

(WHOLESALE.) WEDNESDAY M., November 12, 1879.

WEDNESDAY M., November 12, 1879.			
BEANS & PEAS.			
Mayo, cti.....	1.40 @ 1.50	Peanuts..... 6 @ 8	
Butter.....	1.70 @ 1.75	Filberts..... 17 @ 18	
Castor.....	3.00 @ 3.50	ONIONS.	
Pea.....	1.70 @ 1.80	Alviso.....	@
Red.....	1.15 @ 1.20	Union City, cti.....	@
Pink.....	1.15 @ 1.25	San Leandro.....	@
Small White.....	1.65 @ 1.75	Stockton.....	@
Lima.....	5.00 @ 6.00	Sacramento River.....	@
Field Peas, yellow.....	37 @ 50	Salt Lake.....	@
do.....	.95 @ 1.00	Oregon.....	@
BROOM CORN.			
Southern.....	2 @ 2 1/2	Red.....	@
Northern.....	3 @ 4	New Orleans.....	@
CHICKEN, ETC.			
California.....	4 @ 4 1/2	White, sk.....	50 @ 75
German.....	6 1/2 @ 7	PEACHES.	
DAIRY PRODUCE, ETC.		Petalums, cti.....	50 @ 75
Cal. Fresh Roll, lb	25 @ 32 1/2	Humboldt.....	— @ —
Pickle Roll.....	21 @ 25	Cuffey Cove.....	55 @ 90
Firkin.....	18 @ 22 1/2	Early Rose, sk.....	30 @ 60
Western.....	12 1/2 @ 15	Half M'n Bay, nsw.....	35 @ 40
New York.....	— @ —	Alvarado, red.....	50 @ 75
HIDES.			
Hides, dry.....	19 @ 20	Sweet.....	— @ —
Wet salted.....	8 @ 9 1/2	POULTRY & GAME.	
HONEY, ETC.			
Beeswax, lb.....	20 @ 25	Hens, doz.....	5.50 @ 6.50
Honey in comb.....	12 1/2 @ 18	Roosters.....	4.50 @ 6.00
do, No. 2.....	12 @ 18	Broilers.....	2.50 @ 3.50
Dark.....	8 @ 10	Ducks, tams, doz.....	4.00 @ 6.00
Extracted.....	10 @ 12 1/2	Mallard.....	2.00 @ 3.00
HOPS.			
Oregon.....	26 @ 31	Spring.....	— @ —
California, new.....	32 1/2 @ 37 1/2	FRUIT.	
Wash. Ter.....	32 1/2 @ 35	Apples, sliced, lb	5 @ 6
Old Hops.....	— @ —	do, quartered.....	3 @ 4
NUTS.			
Walnuts, Cal.....	10 @ 11	PEANUTS.	
do, Chile.....	8 @ 9	Almonds.....	— @ —
Almonds, hd sh lb	6 @ 7	Union City, cti.....	@
Soft sh lb.....	12 1/2 @ 16	San Leandro.....	@
Brazil.....	13 @ 14	Stockton.....	@
Chestnuts, Italian.....	— @ 37 1/2	Sacramento River.....	@
Pecans.....	16 @ 17	Salt Lake.....	@
ONIONS.			
California.....	12 1/2 @ 15	Oregon.....	@
Blackberries.....	— @ 10	Red.....	@
Citron.....	23 @ 24	New Orleans.....	@
Bananas, bunch.....	3.00 @ 5.00	White, sk.....	50 @ 75
Blackberries.....	9 @ 10	PEACHES.	
Cherries, ch't.....	— @ —	Petalums, cti.....	50 @ 75
Citrons, Cal, 100.....	— @ —	Humboldt.....	— @ —
Cocoanuts, 100.....	4.00 @ 5.00	Cuffey Cove.....	55 @ 90
Crab Apples.....	— @ —	Early Rose, sk.....	30 @ 60
Cranberries, bbl.....	10 @ 11 1/2	Half M'n Bay, nsw.....	35 @ 40
Currants, chest.....	50 @ 75	Alvarado, red.....	50 @ 75
Figs, box.....	— @ 75	Sweet.....	— @ —
Peaches, bsk.....	— @ —	POULTRY & GAME.	
do, Mountain.....	— @ —	Hens, doz.....	5.50 @ 6.50
Pineapples, doz.....	8.00 @ 9.00	Roosters.....	4.50 @ 6.00
Plums, box.....	3 @ 4	Broilers.....	2.50 @ 3.50
Pomegranates lb.....	3 @ 4	Ducks, tams, doz.....	4.00 @ 6.00
Prunes, bsk.....	— @ —	Mallard.....	2.00 @ 3.00
Quinces, box.....	35 @ 65	Spring.....	— @ —
Raspberries, ch't.....	13 @ 15	FRUIT.	
Strawberries, ch't.....	13 @ 15	Apples, sliced, lb	5 @ 6
DRIED FRUIT.		do, quartered.....	3 @ 4
Apples, sliced, lb	5 @ 6	PEANUTS.	
do, quartered.....	3 @ 4	Almonds.....	— @ —
PEANUTS.		Union City, cti.....	@
Almonds.....	— @ —	San Leandro.....	@
Union City, cti.....	@	Stockton.....	@
San Leandro.....	@	Sacramento River.....	@
Stockton.....	@	Salt Lake.....	@
Sacramento River.....	@	Oregon.....	@
Salt Lake.....	@	Red.....	@
Oregon.....	@	New Orleans.....	@
Red.....	@	White, sk.....	50 @ 75
New Orleans.....	@	PEACHES.	
White, sk.....	50 @ 75	Petalums, cti.....	50 @ 75
PEACHES.			
Petalums, cti.....	50 @ 75	Humboldt.....	— @ —
Humboldt.....	— @ —	Cuffey Cove.....	55 @ 90
Cuffey Cove.....	55 @ 90	Early Rose, sk.....	30 @ 60
Early Rose, sk.....	30 @ 60	Half M'n Bay, nsw.....	35 @ 40
Half M'n Bay, nsw.....	35 @ 40	Alvarado, red.....	50 @ 75
Alvarado, red.....	50 @ 75	Sweet.....	— @ —
Sweet.....	— @ —	POULTRY & GAME.	
POULTRY & GAME.			
Hens, doz.....	5.50 @ 6.50	Hens, doz.....	5.50 @ 6.50
Roosters.....	4.50 @ 6.00	Roosters.....	4.50 @ 6.00
Broilers.....	2.50 @ 3.50	Broilers.....	2.50 @ 3.50
Ducks, tams, doz.....	4.00 @ 6.00	Ducks, tams, doz.....	4.00 @ 6.00
Mallard.....	2.00 @ 3.00	Mallard.....	2.00 @ 3.00
Spring.....	— @ —	Spring.....	— @ —



## Agricultural Articles.

## The Famous "Enterprise."

PERKINS' PATENT  
Self Regulating

## WINDMILLS,

Pumps &amp; Fixtures.

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought-iron crankshaft with double bearings for the crank to work in, all turned and run in babbitted boxes.

Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs.

All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

HORTON &amp; KENNEDY,

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale,

San Francisco Agency, LINFORTH, RICE &amp; CO., 401 Market Street.

MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,  
STOCKTON, CAL.

\$50.

The New  
Worthington

Windmill

Manufactured  
by

W. D. PARSON,

1364 San Pablo Avenue, Oakland, Cal.  
Also, maker of the "Colorado Wind Engine," Wind, Grist Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern of Deep Well and Artesian Lift Pump Cylinders. Circulars free.

## Windmills!

## HORSE POWERS!

## TANKS AND PUMPS

Built and Repaired at

No. 51 Beale street, S. F.

Send for Circulars.

F. W. KROGH &amp; CO



## The Boss Pruner.

Patented Jan. 8, 1873.

## ENTIRELY NEW!

Works on a cog principle. Smallest size cuts one inch, and largest size two inches in diameter. Has been thoroughly tested, and given perfect satisfaction. Sold by

GEORGE LARKIN,

Newcastle, Placer County, Cal.

SEND FOR THE

\$1.50

## Homœopathic Medicine Case.

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address

BOERICKE &amp; TAFEL,

Homœopathic Pharmacy, San Francisco.

JOHN ROGERS &amp; SONS,

GENERAL STOCK AND SALE YARD,

Corner Market and 9th Sts., San Francisco,

HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN.  
Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

50 Pertumed, Snowflake, Chromo, Motto Cards, name in gold and jet 10c. G. A. SPRING, E. Wallingford, Ct.

## Nathaniel Curry &amp; Bro.,

113 Sansome Street, San Francisco,



Sole Agents for the

## Sharps Rifle Co., of Bridgeport, Conn.

FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO.

Also Agents for W. W. GREENER'S Celebrated Wedgefast, Chokebore, Breech-loading DOUBLE GUNS; and all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America. AMMUNITION of all kinds in quantities to suit.

## Trall Hygienic, Medical and Surgical Sanitarium.

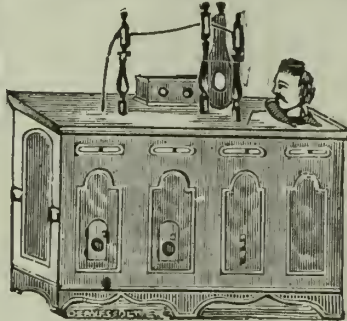
No. 8 Ellis Street, San Francisco, Cal.

Treatment by a Purely Scientific and Rational Method Without Drugs of any Kind.

THE TREATMENT DEPARTMENT EMBRACES ALL APPROVED REMEDIAL AGENTS, AS OXYGEN INHALATIONS, VACUUM TREATMENT, THERMO-ELECTRIC, TURCO-AMERICAN, ELECTRO-MAGNETIC, GALVANO-CHEMICAL, STEAM, VAPOR, WARM AIR, AND ALL FORMS OF WATER BATHS;

Swedish Movements, The Health Lift, Spirometer or Lung Strengtheners, Steam Atomizers, all Electric, Galvanic and Surgical Appliances, Sun Baths, and Solar Ray Surgery, new and perfect Trust for the Radical Cure of Hermia, lately discovered Chemical Compound for the speedy, safe, painless and permanent removal of Cancers, Scientific and successful method for the Cure of Piles, etc., etc.

Aims to keep Abreast with, if not in Advance of the Progressive Age.



It has been the mission of this System to mold public sentiment and this Institution will hope to be no disgrace to the immortal name it has assumed. The time has come when Physicians of this School can afford financially to keep a conscience; in fact it is disastrous financially as well as morally to compromise the truth one iota; hence patients can rest assured that they will be treated by the Physicians after the most approved and scientific methods, out of pure and enlightened selfishness, recognizing the truth and beauty of this great principle:

"The Universe is so ordered and arranged that the real and permanent good of every creature is best subserved in promoting the real and permanent good of every other being."

## THE BOARDING DEPARTMENT.

The table will be supplied with the best the excelsior market of the world affords, embracing fruits, grains, vegetables, meats, fish, fowl, eggs, cream, etc. Regular and transient boarders will be accommodated as well as patients. Business and professional men and women who are tired of restaurant fare, may appreciate eating to live a more healthful and enjoyable life. Pure food means pure blood. Pure blood means good health.

The vegetarian school has demonstrated beyond the possibility of a doubt that farinaceous dishes, sweet milk and fruit, are sufficient to maintain a hard working man in perfect health. Such a diet might certainly be substituted by sedentary people for their greasy steaks and ragouts. — Popular Science Monthly, December, 1873.

The Rooms are pleasant, warm, well ventilated and sunny; convenient to treatment rooms, so as to afford the best advantage of nursing and professional attendance.

## GENERAL PRACTICE.

Fever, and in fact all cases may be treated at home successfully. Parturition confinement cases are taken in the Institution or attended at home in any part of the city or country. Preparatory treatment in these cases is most important.

Testimonials of extraordinary cases and cures can be seen on application. The most desperate cases, and especially those that have been given up as incurable by the old methods, are invited. Puerperal and typhoid fever and diphtheria cases, after all other methods have failed, may be said to be a specialty. Send for the TRALL HEALTH JOURNAL.

DRS. D. C. &amp; MRS. E. D. MOORE,

Trall Hygienic Sanitarium, 8 Ellis St. S. F.

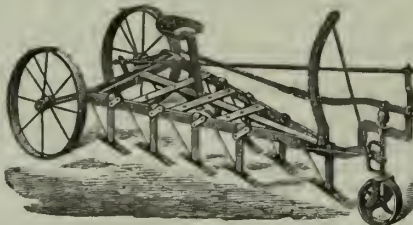
## HOLLY &amp; MAGOON'S CULTIVATOR.

Manufactured by HOLLY & MAGOON, Stony Point, Sonoma County, and E. J. HOLLY Lakeville, Sonoma County, Cal.

Jones' Patent, May 29th, 1877, and Holly &amp; Jones, Apr. 8, 1879.

This Cultivator is made by practical men, after years of experience, and better meets the wants of California farmers than anything before offered.

Made of the best material (with wood or iron frame) and warranted in every respect.

Prices  
REASONABLE.

For further information address the Manufacturers, or

## M. C. HAWLEY &amp; CO., Agents,

San Francisco and Sacramento, Cal.

## MISSION ROCK DOCK AND GRAIN WAREHOUSES.

SAN FRANCISCO, CAL.

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

GRAIN consigned to us by water insured in open policy at Special Rates. Wheat shipped by railroads via Stockton, care of the CALIFORNIA STEAM NAVIGATION CO. will be received by them at Stockton and delivered at Mission Rock Warehouse at same rate of freight as to Oakland Wharf. Freight paid, Fire Insurance and Loans effected and proceeds forwarded free of commission. Money advanced at bottom rates, interest payable at end of loan. Fire Insurance 1% per annum. Short Rates of Storage—First month, 30 cents per ton, or 40 cents per ton if delivered. Each month thereafter 20 cents per ton. Weighing in, free. Weighing out, 10 cents per ton.

CHAS. H. SINCLAIR, Superintendent,

Or to the California Dry Dock Co., Office, No. 318 California Street, San Francisco.

WELLS, RICHARDSON & CO'S  
PERFECTED

Gives Butter the gilt-edge color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.

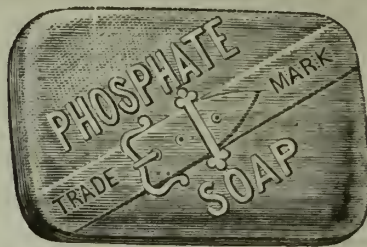
50 Perumed, gilt edge & chromo Cards, elegant case, name in gold, 10c. ATLANTIC CARD CO., E. Wallingford, Ct.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

## Engraving.

Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the MINING AND SCIENTIFIC PRESS, San Francisco, at favorable rates. Send stamp for our circular and samples.

## PHOSPHATE SOAP



THE BEST soap for toilet use ever manufactured. BEST because it contains all the excellencies of the most expensive foreign or American soaps without their defects. BEST because it combines strength with delicacy in such a way that its strong detergent qualities do not injure the skin. BEST because it is the result of years of study and experiment in the soap manufacturing business, assisted by modern chemical discoveries. BEST because it contains ingredients beneficial to the skin, which unite chemically with the soap in such a manner as to increase its saponaceous qualities. Every chemist familiar with soap manufacture knows that some ingredients which are in themselves beneficial to the skin cannot be saponified; some are partially neutralized, while others injure the quality of the soap. There are soaps in the market which are to some extent beneficial to the skin, but they are inferior articles for toilet use. PHOSPHATE SOAP is the ONLY article offered to the public which combines all the best elements of toilet soap with medical ingredients beneficial to the skin.

If your wife is in the habit of using cosmetics of any kind, advise her to give up the pernicious practice, as the most harmless face powders obstruct the pores of the skin and sooner or later injure the complexion, while PHOSPHATE SOAP removes all impurities and assists nature in developing a natural, healthy and beautiful skin.

It is an old proverb that an ounce of preventive is better than a pound of cure. Twenty-five cents invested in a cake of PHOSPHATE SOAP will save hundreds of dollars in doctors' bills. It acts as a constant disinfectant, preventing Salt Rheum and other skin diseases.

If your wife will persist in the use of cosmetics, buy her a cake of PHOSPHATE SOAP and tell her to use it every night before retiring. In that way much of the harm will be avoided, as the skin will thereby be able to retain much of its natural vigor and beauty.

No salve or ointment can heal a wound or sore of any kind. Every educated physician will tell you that nature alone can do this. PHOSPHATE SOAP, by its cleansing, soothing and purifying qualities, gives nature a chance to act freely.

Natural beauty surpasses anything which can be imparted by artificial means. PHOSPHATE SOAP gives health to the skin simply by removing impurities and eradicating the poisons which give rise to skin diseases.

Not only for daily use on the face and hands, but for bathing the entire body, there is nothing equal to PHOSPHATE SOAP. It is a thorough disinfectant and removes offensive odors of every kind.

Ladies who have injured the skin by the constant use of cosmetics may do much to restore their faces to that beauty which nature alone can give by constantly using PHOSPHATE SOAP.

For all diseases of the skin use PHOSPHATE SOAP. There is nothing like it for removing impurities and giving the skin a healthy and natural vigor.

Cheap toilet soaps manufactured from rancid and refuse grease injure the skin and are really more expensive than PHOSPHATE SOAP, which retails for 25 cents per cake.

Thousands of articles are palmed off on the public which have no genuine merit, but PHOSPHATE SOAP is the result of modern discoveries of celebrated chemists.

PHOSPHATE SOAP costs no more than other good toilet soaps, while its medicinal qualities make it worth ten times its price to every man, woman and child.

If you want a nice article of Toilet Soap and something that is beneficial to the skin, buy PHOSPHATE SOAP.



NEW OPERAS!

**Carmen.** Opera by Bizet.....\$2.00  
Carmen is an Opera that has gradually and surely won its way to a great popularity. Although the book is large, in fact what one might call a "four dollar book," it is got up in elegant style with music and all the words, English and foreign, for \$2.00.

**Fatinitza.** Opera by Suppe.....\$2.00  
Splendid new Opera that is a decided success. A large, fine book, with English and foreign words, and the opera in every way complete, for a low price.

**Doctor of Alcantara.** By Eichberg.....\$1.50  
A famous opera, now brought, by the popular price, within the reach of all. Orchestral parts, \$15.

**Bells of Corneville.** By Planquette (nearly ready).....\$1.50  
A great success. This, with the "Doctor" and the "Sorcerer" (\$1.50) are well worth adopting by Companies who have finished Pinafore (still selling well for 50 cts.), and who are looking out for new and easy Operas.

Remember our first-class Singing School and Choir Books, VOICE OF WORSHIP and THE TEMPLE, each \$9 per dozen, or \$4 each. Send for copies. Also always remember the MUSICAL RECORD, published weekly. It keeps you well posted as to musical matters, gives six or seven pages of music per week and costs but \$2 per year.

OLIVER DITSON & CO., BOSTON.

O. H. Ditson & Co., 843 Broadway, N. Y.

**MONEY FOOD**  
For Farmers. For Hogs.  
**CHEAP PORK.**  
The Brazilian Artichoke,

Is the cheapest and best food for Hogs, being ahead of anything in existence for that purpose. 600 to 1,000 hushels to the acre. Little trouble. No harvesting. No feeding. The Hogs will help themselves if allowed to do so.

I have eight acres of Artichokes this year, and will furnish seed for half the price of last year, when my seed cost me 25 cents a pound.

PRICE—I will send by Express or common freight, 50 to 300 lbs. at 3 cents a pound. Over 300 lbs., 3 cts.; 1,000 lbs. and over, 2 1/2 cts.; 3 lbs. by mail for \$1. I will send a circular with each package giving all information. Send all money in draft on San Francisco or P. O. Order on Hollister Post-office.

150 lbs. plants an acre.  
For further information send for circular. Address  
J. H. F. GOFF,  
San Felipe, Santa Clara County, Cal.

**E. T. ANTHONY & CO.,**  
DEALERS IN ALL KINDS OF  
**TOBACCO**  
— FOR —

**SHEEP WASH PURPOSES.**  
THE NEW SHEEP DIP.

We invite our Wool Growers to call on us and examine the NEW OMAHA SHEEP DIP, the best preparation yet offered—one gallon dip makes 150 gallons wash.

407 and 409 Commercial St.,  
Near Battery Street, - - SAN FRANCISCO.

P. JONES. J. THOMPSON.  
**JONES & THOMPSON.**

Wholesale and Retail Dealers in  
**Hay, Grain and Feed.**  
Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,  
1535 Mission St., San Francisco.

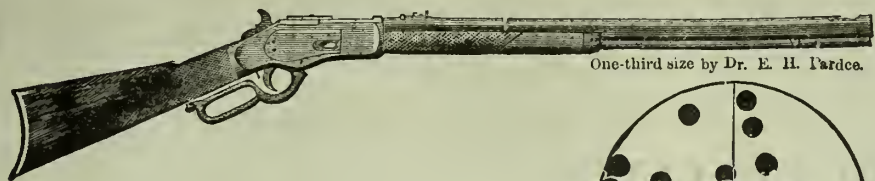
M. COOKE. R. J. COOKE  
**PIONEER BOX FACTORY,**  
Corner of Front and M Streets, Sacramento.  
ALL KINDS OF  
Fruit and Packing Boxes Made to Order,  
AND IN SHOOKS.  
Communications Promptly Attended to.  
COOKE & SONS, Successors to COOK & GREGORY.

**DO** NOT FAIL to send for our NEW PRICE LIST. More complete than ever. Contains descriptions of every thing required for use, with over 1000 Illustrations. Send nine cents for it. (Stamps will do.) We sell all goods at wholesale prices in quantities to suit the purchaser. The only institution in America who make this their special business. Address,  
MONTGOMERY WARD & CO.,  
227 & 229 Wabash Ave., Chicago, Ills.

**Patents** OBTAINED IN U. S. AND FOREIGN COUNTRIES; trademarks, labels and copyrights registered through DEWEY & CO.'S MINING AND SCIENTIFIC PRESS Patent Agency, San Francisco. Send for free circular.

Winchester Repeating Rifle,

MODEL 1873.



One-third size by Dr. E. H. Tardca.

The Strength of All its Parts,  
The Simplicity of its Construction,  
The Rapidity of its Fire,

The Power and Accuracy of its Discharge,  
The Impossibility of Accident in Loading,

String measuring from center of target to center of each shot, 32 inches. Average distance of each shot, 1 9-100 inches.

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carabines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder,

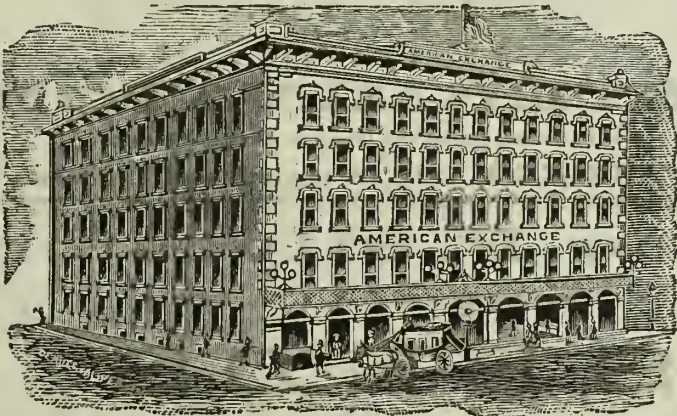
**JOHN SKINKER, No. 115 Pine Street, San Francisco,**  
SOLE AGENT FOR THE PACIFIC COAST.

**The American Exchange Hotel,**  
SAN FRANCISCO, CAL.,

Is situated on Sansome street, next adjoining Bank of California, and is in the very center of the great city.

Sansome Street is one of the finest and principal business streets in S. F.

The Hotel is situated within two blocks of the U. Land Office and U. S. Surveyor General's Office; also within



two blocks of the City Hall, Supreme Court and all the District Courts; within two blocks of the Postoffice and Custom House. All places of amusement are convenient to the Hotel. Street cars for all parts of the city pass the Hotel every minute.

**THE AMERICAN EXCHANGE HOTEL**

Having been recently renovated and refurnished throughout is in every respect the BEST FAMILY HOTEL in San Francisco. It has Two Hundred Rooms, well ventilated and neatly furnished, and being easy of access, fire-proof and sunny is decidedly the Hotel for comfort and convenience for the traveling public.

— OFFICE OF THE —

**BLACK POINT PACKING AND SLAUGHTER HOUSE.**

MERRY, FAULL & CO., Proprietors.

**TO OWNERS OF LIVE STOCK!**

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

**SQUARE DEAL and FULL MARKET PRICES**

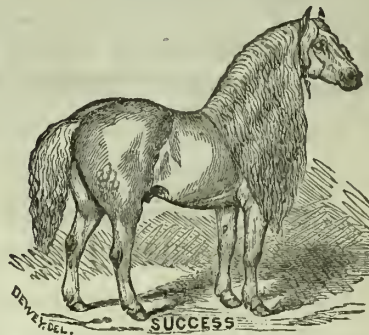
For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices.

Please address our

Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.

60 Elegant Perfumed Cards, Chromo, Motto, Lily, Etc., 15c. Gift with each pack. H. M. SMITH, Clintonville, Ct. Dewey & Co. { 202 San- } Patent Ag'ts some St.

M. W. DUNHAM  
Just Imported 36 Head  
FOR HIS OAKLAWN STUD OF  
**Percheron-Norman**  
HORSES.



Largest and Most Complete Establishment of the Kind in the World.

More than 200 Stallions and Mares  
Imported from Best Stud Stables of France.

Winners of First Prizes in Europe and America, awarded First Prizes and Gold Medals at the Universal Exposition at Paris, 1878, over all First Prizes and Grand Medals at Centennial Exhibition, 1876.

The public appreciation of its merits is indicated by the great demand for stock from every part of the country. During the past twelve months, the provinces of New Brunswick, Canada, and the States of New York, Pennsylvania, Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Nebraska, Kansas, Texas, Louisiana, Colorado, Nevada, California and Oregon, and Utah, Washington and Idaho Territories have drawn supplies from its Stables.

100-page Catalogue—finest thing of the kind ever issued; 25 pictures of Stallions and Mares, sent free on application.

M. W. DUNHAM,

Wayne, DuPage County, Illinois.

N. B.—All Imported and Pure Native Bred Animals Recorded in Percheron-Norman Stud Book.

**THE WILSON ADJUSTABLE CHAIR,**  
With 30 Changes of Position.

Patented in the United States and Foreign Countries.  
BEST CHAIR IN THE WORLD.

Parlor, Combining  
LIBRARY, Beauty,  
Invalid Chair, Lightness,  
Rocker, Strength,  
BED or Simplicity  
LOUNGE, and  
READING POSITION, Comfort.

Same Chair in Cane Seating, very desirable for summer. Manufactured of the best of wrought iron and rivets. Casters made purposely for the Chair. Everything to an exact science. **IT WILL LAST A LIFE-TIME.** Has been awarded Medals, Prizes and Diplomas for its superiority and merit which has been exhibited. Orders by mail promptly attended to. Goods shipped to any address. C. O. D. Send for Illustrated Circular.

Address the WILSON ADJUSTABLE CHAIR M'f Co.,  
535 Washington St., Boston

**PLEASANT SUMMER READING.**

**THE NEW PENELOPE**

— AND —

**Stories of California Life.**

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. Agents wanted for this popular work. Easy sales and large commissions. Address

MRS. F. F. VICTOR,  
721 Market St., S. F., Bancroft's Building, top floor.  
PRICE, \$2.00.

**MONEY TO LOAN**

AT LOWEST RATES

On Country Real Estate and Grain in Warehouse.

McAFEE BROTHERS,  
202 Sansome Street, San Francisco.

**A Card to Grangers and Farmers.**  
HAY, GRAIN, HORSES and CATTLE.

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nos. 11 and 13 Bluxome St., San Francisco.

**Agricultural Books.**

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.

60 Perfumed Chromo, 2c. Cards, name on, 10c. 42 Mixed Cards and fine Pocket Knife, 25c. Autograph Album, 25c. Game Authors, 15c. 55 Fine Cards, 10c. — Clintonville, Clintonville, Conn. —



**Commission Merchants.****DAVIS & SUTTON,**

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCE.—Traders' National Bank, N. Y.; Ellwanger &amp; Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk &amp; Co., San Francisco, Cal.

CHARLES NAUMAN.

FRANK NAUMAN.

**C. & F. NAUMAN & CO.,****Wholesale Commission Merchants**

— AND DEALERS IN —

GRAIN, POTATOES, FRUIT, BUTTER, POULTRY, EGGS, GAME, ETC.

227 &amp; 229 Washington St., San Francisco.

Consignments Solicited.

**Berries and Small Fruits.**

The most certain and best paying Market Berries and well tried sorts.

**Monarch of the West  
STRAWBERRIES,**

Most Productive, Largest Berries and Healthiest Grower.

**English Red Antwerp, Naomi & Hersteine  
RASPBERRIES,**

Best paying for market, and are perpetual bearers when irrigated.

**KITTATINNY BLACKBERRY,**

The most prolific, largest and most popular sort.

I offer also a large assortment of new and old varieties of

**STRAWBERRY, RASPBERRY,  
Blackberry, Gooseberry and Currants.**

For full Price List send for a Catalogue.

To secure a crop of Berries the first season it is important to plant very early.

**JOHN ROCK,**

San Jose, Cal.

**Fine Engraving.**

The Engraving Bureau belonging to the office of this journal is prepared to design and engrave all kinds of Wood Cuts for illustrating newspapers, books, catalogues, cards, circulars, advertisements, labels, badges, seals, etc., in the best style of the art. Our portraits and illustrations of machinery, buildings and landscapes, are superior. Good engravings can be made from paintings, lithographs, steel and copper plate prints, photographs, models, patent office or other drawings. We have a photographic department and the best of machinery for producing accurate and perfect work at the lowest prices. Original maps, charts, and diagrams are made by our NEW PHOTO-RELIEF PROCESS at greatly reduced rates. By the same process copies can be cheaply and quickly produced of printed cuts, in fac simile, or they can be enlarged or reduced with equal facility.

Any hand writing in perfectly black ink on clear white paper for manuscript letters or circulars, will be accurately reproduced in metal plates suitable for common printing. Also, fac simile signatures, monograms, sheet music, etc. We excel in trade cuts and matched plates for combination color printing. With a large business, long established, and every facility for improvement, we can guarantee more than ordinary satisfaction to all of our patrons. All interested are invited to send for or call and see specimens and obtain prices.

Orders for electrotypes, stereotypes, steel and copper plates, lithographing, stamps and seal presses executed at low rates.

**SEEDS!****Thomas A. Cox & Co.,**

Importers and Dealers in

Vegetable, Flower, Field, Grass and Tree Seeds.

We wish to announce to country merchants and the trade generally that we are ready to supply all descriptions of Seeds of the New Crop of 1879. Special prices on application. Vegetable and Flower Seeds put up in small packets for the retail trade.

**FRESH AND TRUE TO NAME.**

We will send the following Seeds, postpaid, on receipt of price. Remit by P. O. Order or postage stamps.

Beets, per oz. ....10c	Parsnips, per oz. ....10c
Carrots, per oz. ....10c	Radish, per oz. ....10c
Cabbage, per oz. ....25c	Spinach, per oz. ....10c
Lettuce, per oz. ....15c	Turnip, per oz. ....10c
Onion, per oz. ....15c	Tomato, per oz. ....25c

We will mail to any address a collection of 20 packets of choice Flower or Garden Seeds for \$1.  
Fruit and Ornamental Trees at Nursery Prices.

**THOMAS A. COX & CO.,**

409 Sansome Street, San Francisco.

Farmers, write for your paper.

**THE PLANTING SEASON!****THE RAINS CALL TO THE GARDEN!**

Timely Hints May be Found in the

**PACIFIC  
RURAL  
HANDBOOK.**

Containing a series of brief and practical Essays and Notes on the Culture of Trees, Shrubs, Vegetables and Flowers, adapted to the Pacific Coast. Also, Hints on Farm and Household Economy.

*Embracing One Hundred and Twenty Original Pages—Written in Plain and Pleasing Style.*

By **CHAS. H. SHINN,**

An able author, and practical California Nurseryman and Cultivator. Prepared especially for the publishers of the PACIFIC RURAL PRESS. It is purely a California book, fresh and interesting to rural readers at home and abroad.

Sold in substantial cloth binding (post paid) for \$1.00.

**DEWEY & CO., Publishers,**

"Pacific Rural Press" Office (No. 202 Sansome St.) San Francisco.

**Wakelee's Patent Squirrel and Gopher****EXTERMINATOR!**

Sold by General Dealers and Druggists throughout the Coast.

**H. P. WAKELEE & CO., Druggists and Chemists, S. F.****Geo. F. Silvester,**

IMPORTER, WHOLESALE AND RETAIL DEALER IN

**SEEDS,****Fruit and Evergreen Trees, Plants, Etc.****ALFALFA, GRASS AND CLOVER SEEDS**

In large Quantities and offered in Lots to suit Purchasers.

GREAT REDUCTION IN PRICES.

Seed Warehouse, 317 Washington Street, San Francisco.

**BUY LAND**

Where you can get a crop every year; where you will make something every season; where you are sure of having a crop when prices are high; where you have a healthy place to live; where you can raise semi-tropical as well as other fruits; where you can raise a diversity of grain and vegetables and get a good price for them. Go and see the old Reading Grant (in the upper Sacramento Valley), and you will find such land for sale in sub-divisions to suit purchasers—at reasonable rates and on easy terms. Send stamp for map and circular to EDWARD FRISBIE, proprietor, (on the Grant), Anderson, Shasta Co., Cal.

**KEATING'S COUGH LOZENGES!**

The Great British Remedy. There is unquestionably no other remedy so certain in its effects. ASTHMA, WINTER COUGH, BRONCHITIS and DISORDERS of the THROAT alike yield to its influence. The highest medical testimony states no better cure for these complaints exist (now proved by over a half a century's experience.) They contain no opium, morphia, or any violent drug. KEATING'S COUGH LOZENGES prepared by THOMAS KEATING, London, Britain, are sold by all Druggists.

**MONEY!!****\$5,000 to \$50,000 Ready to Loan**

On Mortgages of first-class Farms in Monterey, Santa Cruz, Santa Clara and San Mateo counties. Address the Real Estate

**EXCHANGE & MART,**

Santa Cruz, Cal.

MEYRICK &amp; Co., Insurance and Money Brokers and Agents

**Baling  
Fencing  
Telegraph  
Telephone  
Galvanized****WIRE****Barbed Fence Wire.**

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the  
Trademark.**A. S. HALLIDIE**

Wire Mills.

Office, No. 6 California St.

SAN FRANCISCO.

**WIRE ROPE and CORDAGE**

Of every kind on hand or Made to Order.

**R. J. TRUMBULL & CO.,**

SUCCESSORS TO

**R. J. TRUMBULL,**

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

\* "Guide to the Vegetable and Flower Garden" will be sent FREE TO ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

**R. J. TRUMBULL & CO.,**

419 and 421 Sansome Street, S. F.

**J. P. SWEENEY & CO.'S****SEED WAREHOUSE,**

409 &amp; 411 Davis St., San Francisco.

ESTABLISHED IN 1853.

Keep constantly on hand the largest stock of FIELD, GARDEN, CONIFER, or

**CALIFORNIA TREE SEEDS,**

On the Pacific Coast. Seeds all FRESH and GENUINE. Our Stock is large, especially of the following varieties:

**ALFALFA, BLUE GRASS,**

Red and White Clover, Red Top, Timothy, Australian Rye Grass, Mesquit Grass, Lawn Grass and Millet Seeds

Of different varieties. Field Seeds, Mangel Wurzel and Sugar Beets, Rutabagas, Carrot Seeds of all varieties, Peas, Beans, etc. Our assortment of GARDEN and FLOWER SEEDS are full and complete. Also, FRUIT and ORNAMENTAL TREES at Nursery Prices.

Trees For Sale at Lowest Market Rates.

For Catalogue, Price Lists, etc., apply as above.

**CHEAPER YET!****Tension Sewing Machines!**

A large number of nearly new genuine SINGER, WHEELER & WILSON, HOWE, WEED, WILSON, GROVER & BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

**NO TENSION MACHINE.****Wilcox & Gibbs' S. M. Co.,**

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.

**FRICK DROUTH-PROOF BARLEY**

For Sale,

AT FOUR CENTS PER POUND.

By **SALZ & CO., Agents.**

Centerville, Alameda County, Cal.

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 120 Sutter St., S. F.





Volume XVIII.]

SAN FRANCISCO, SATURDAY, NOVEMBER 22, 1879.

Number 21

### The Boom in the Lumber Interest.

We know of nowhere that a "boom" can be more properly placed than in saw-logs and their resultant products. At all events there is a boom, and during the last week, there has been an advance of about \$4 per thousand in "rough redwood," and a corresponding appreciation in finished lumber. This is the direct result of the better feeling which has crept into all our industries and in sympathy with the advance in other building materials. There has been an advance all along the line of builders' supplies, and those who have been intending to build during the cheap times, but have thus far failed to place their contracts, may now add perhaps 20% to former estimates.

It is a peculiar and yet a clearly intelligible disposition of the public, to refrain from using building materials when they are at a very low mark. Such low values are of course incident upon a slack demand, and the slack demand is the product of "dull times." It takes an amount of heroism to build as an investment simply because one can build cheaply, and such heroic action is seldom indulged in. When lack of confidence is general, few are strong enough in hope to stem the tide. Therefore while building material has been at bedrock prices, there

only hint comes from the carload of boards. The coming of better times to the lumbermen means the extension of comforts to many thousands of our citizens, and therefore should be hailed with general satisfaction.

### The Dried Beet Question.

We learn by the Los Angeles papers that Mr. Gennert has changed his front on the method of using the dried beets which it has been found the southern counties can produce with such success. It is stated in the *Express* that the sugar interest in this city was hostile to any effort toward working up the dried beets in a sugar establishment which is now idle in this city, and therefore Mr. Gennert was obliged to withdraw the proposition of an enterprise to buy the southern dried beets, which he thought would be easily inaugurated. Hence he has returned to Los Angeles, and now proposes, as the *Express* says, "to establish a beet-sugar factory on a very moderate scale in Los Angeles county; have the farmers raise the beets, which he will work up on shares for the farmers, and thus inaugurate a home industry. The thousands of acres required under the first plan will be reduced to hundreds now; but should this work well, as we have no doubt it will, it may

### Pickled Olives.

Since our notes on the olive industry in last week's *PRESS* we met Mr. H. G. Ellsworth, of Mission San Jose, Alameda county, whom we have formerly mentioned as a producer of pickled olives. Mr. Ellsworth has studied out the process of olive pickling which he employs mainly through his own experiments, and it differs in some respects from any which we have before described in the *PRESS*. In the first place, before picking, he allows the fruit to become fully ripe and black. He considers the green olive of commerce as an immature, tough-fleshed and corky material which must be more or less indigestible. In operating with the ripe fruit he gets a tender substance with an indescribable sweet, pure and delicate oily flavor—a flavor which wins the taste at once and does not have to conquer an acquired taste, as is often the case with the green fruit. The effect of the ripe olive upon the system is exceedingly satisfactory.

Mr. Ellsworth removes the bitterness with lye as is generally done, but he uses a rather strong lye, strong enough to remove the bitterness in four to six days. After rinsing the fruit from the alkali with fresh water he puts it in a bath composed of three parts of water and

to Mr. Ellsworth's standard of perfection in the ripe and black pickled olive, but he finds that his family and friends approve the idea by the quantity which they consume.

### Ostrich Farming in Algeria.

We give on this page a glimpse at the ostrich ranch of Madame Carriere, at Kouba, near Algiers, in the French colony of Algeria. Some time since we illustrated the methods and appliances of the ostrich farmers in South Africa. There the birds were given wide ranges, as the land is of little value. At the north of Africa the ostriches are bred and kept in comparatively small enclosures, as shown in the engraving. Below the terrace and near the dwelling may be seen the mating pens. Up the hill, at the extreme left of the engraving, are a number of enclosures or corrals, each furnished with a conical-roofed summer-house. In these umbrella-like structures the females sit and hatch their eggs. We may hereafter give special pictures of the mating pens and hatching houses. It is better, however, to hatch the eggs by incubators, as is done in South Africa, but this necessitates a large establishment and plenty of fresh eggs. If ostrich ranching should be undertaken on this coast, and we hope the



GENERAL VIEW OF THE OSTRICH PARK OF MADAME CARRIERE, NEAR ALGIERS, NORTH AFRICA.

has been but little building except such as was done for present use, or immediate sale to users. And now with affairs looking up and a general tone of trust in the community, building will revive and the rise in materials will be counted a small objection when the other attendants of investment are so auspicious. We can but hope, however, that our friends who have been long contemplating improvement in their homes and buildings, have already carried out their plans, for there will probably be enough new ventures incident upon the return of prosperity, to sustain the better rewards which seem now to be before our vast lumbering interest.

The rise in lumber prices will be heralded with satisfaction in our forest counties, where for a long time the pall of unprofitable production has rested. The axes will ring and the brisk stroke of the "cross cut" will invade the solitary sighing which the woods have long enjoyed. The desolate mills will again warm their boilers, and a host of idle men will rally again in the fragrance of the sawdust. The thriving coast towns of the north will awake from their lethargy and feel the spirit of advancement which they have been long awaiting for, the wharfs will again be covered with lumber awaiting shipment, and the long chutes will be dangerous for those who lay hold upon the hand ropes. Nor will the interior lumber interests be less stimulated. The general result will be most gratifying to those who hold timbered property, to those who labor in the mills, and to all who furnish supplies to a busy people. The lumber-producing interest of our State and of the coast besides is a grand one, and one which is apt to be overlooked by those whose

be duplicated next year indefinitely, because every locality could afford to have a factory which requires the investment of only four or five thousand dollars."

Now, if this can be worked out in successful practice, as we expressed a hope it might in our paper last week, then it makes the beet-sugar interest a far more available sort of a thing than it is generally regarded. The whole thing seems to hang upon the using of sun-dried beets. We hope the home establishment in Los Angeles county will be put under way that its success may be demonstrated. There has been so much said and written on the subject, that a local object lesson in the shape of a paying sugarie on a small scale would be very gratifying.

Concerning the quality of sun-dried beets as produced in the southern counties, there seems no room for doubt. Prof. Hilgard has written Mr. Gennert the following note:

In advance of the complete termination of all the data of the composition of the dried beets sent from Los Angeles some time ago, I make the following statement of the amount of sugar found in the samples, respectively: The dried beets from Santa Ana contained, when received, about 20% of moisture; but upon further exposure to the air, soon assumed the average of about 10%. The sugar percentage was, in that condition, 60 pounds of sugar, in 100 pounds of dried beets. I find to-day in the weighing of the first reliable batch of fiber residue, that your polarization of the fresh Santa Ana beets is borne out by it. The beets from Riverside were more, though roughly dried, containing 10.6% of moisture; they contained in 100 pounds 64.7 pounds of sugar. The watery extract from the dried beets was altogether of the taste and character of the fresh juice; this, as well as the results of the other determinations, show that there will be at least no greater difficulty in working it for sugar than with the fresh juice.

PRESIDENT HAYES is visiting New York city.

one part of vinegar. As the acid is naturally the enemy of alkali, this mild sour solution neutralizes it completely. He found it difficult to remove the alkali perfectly by washing in pure water. In fruit thus treated he would chance upon an olive now and then which had held on to the alkali (sometimes it would seem to be gathered close to the pit), but whenever the alkali taste occurred it was so objectionable to his taste that he hit upon acid as the chemical foe of alkali, and has found great satisfaction in its use—not one olive in a barrel showing the objectionable flavor. After the application of the sour solution the black fruit was found to be discolored with a light hue, but this passed away after a time, after the fruit had been placed in the brine.

When the taste showed the olives to be absolutely free from alkali flavor he removes them from the vinegar and water, and rinses them thoroughly in pure water before putting them in the finishing brine. The water for this brine should in all cases be boiled before using, for all water if not thus purified is apt to assume objectionable flavor, which does not seem to be obviated by the introduction of the salt. Boiling does away with the chance for this change in the water afterward.

Mr. Ellsworth thinks that some samples of California olives which are put on sale in our city stores do not sell as readily as they might from the fact that sometimes the bitterness is not perfectly removed, sometimes the taste of the alkali remains, and sometimes the ill-smell and flavor from the decomposition in the water is noticeable. We do not know what will be the result of the effort to educate the people up

experiment will be tried by some one having plenty of money to spare, it is probable that the South African method would be best to adopt, for in the southeastern part of this State and in Arizona there would be no difficulty in getting all the land which the most restless ostriches would desire.

PRICES OF PURELY BRED SHEEP.—Our breeders of improved sheep may derive some indirect encouragement from the fact that the revival in wool at the East is lifting the prices for thoroughbred Merino rams. A Vermont paper states that the sheep business in that State is on the flood tide again. Such prices as \$2,000 are being offered and refused for single rams, and in one case noted, \$1,500 was paid for a half interest in such an animal. It is stated that these prices are by no means infrequent. We also read that at the Melbourne show last August, 24 rams from South Australia sold at an average of \$257.50 each, one bringing over \$550, and another about \$475. This should bring liberal views to customers of our local breeders, for they have some of the best Merino blood in the world. The high price of wool must stimulate sheep farming on this coast, and flockmasters in this and adjoining States and Territories can secure their improved sires to better advantage here than abroad.

THE RUSSIAN HARVEST.—The annual official circular on the crops of Russia has just been issued by the government of the empire. From it we learn that the harvest of the present year will be, on the whole, fairly good.





## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

## Tuolumne County Notes.

EDITORS PRESS:—The days are dull and rainy, the nights dark and dreary; but with weeping skies we have smiling farmers. Green are the meadows and hillsides, where stock are luxuriating on tender grasses. Never before was the young grass so forward as it is this season, since the days of '49. Providence has set apart California to be the granary of the world and a home for the industrious of all nations. While flood, storm and tempest leave distress and desolation in their track in other States and nations, we seem to be wonderfully exempt. The years and seasons come and go, leaving us in the midst of prosperity and plenty. Smiling skies greet us day by day, and quiet cool nights for recuperative slumbers. Again and again have we alluded to this theme, and ever occasion comes round for repetition.

The present lengthened rain comes down in a drizzling form, and seems to be taken into the soil without wasting. The creeks are almost as free of water as in summer, but the ground is full, and if the storm continues must begin to swell the creeks and rivers. If winter ends as it has begun, we may expect great abundance next spring. Farmers are elated and busy. More ground will continue to be seeded from year to year, so long as crops yield a rich reward.

The only persons nonplussed are the money lenders; those men who live by interest money. The flow of money into their coffers, and cancelled notes and mortgages into their secretary, makes them look around for some safe mode of investment at a much reduced rate of interest. God grant that it may not be among the farmers, for it is a double death engagement to be under their tender mercies. Let every farmer first scratch the mortgage record before building extra accommodations or purchasing fine blooded stock or fancy carriages. Freedom from interest is as much freedom as to the galley slave. We are glad to record a general paying up of old obligations, so far as our information extends, even with those considered irretrievably burdened. If such is the general record for this eventful year of good crops and good prices, what may we expect of the farmers' condition for the future?

No wonder that land has advanced so much within the past six months. The real value of good land is only beginning to be appreciated. It is now in order to limit possessions, so that the yeomanry of the State may occupy land for cultivation and not for speculation. A few acres well cultivated may provide bread for one family; and it seems almost a sin to keep thousands of acres of rich land for higher rates, to the exclusion of willing hands and honest hearts. Europe has set such an example of land aggrandizement that law—right and might—ought to restrain the inordinate greed for broad acres, of some men. Now is the time before we have a crop of princes and paupers, lords and lodge keepers. JOHN TAYLOR.

Mt. Pleasant, Nov. 13th, 1879.

## Notes on Carp Growing.

EDITORS PRESS:—Farming runs with the seasons; so does the carp business. As we have had some rain, the plows are started and seeding commenced. Some grain is up and looks well. The carp season is on hand and I have drawn the water off one of my ponds and find the fish all right and in good condition. This pond was stocked with year-old fish last spring, and contains about 40 square rods of surface. I put in it last spring 1,300 carp, and I now find that they have increased to about 2,500 or 3,000; so I find that some of them will breed at one year old.

I have made two shipments, one of 13 fish to L. T. Fish, at Martinez, the other to A. C. Robinson, No. 217 Washington street, San Francisco, consisting of 26 fish. I find that I have had too many for the space and amount of water. They kept good and healthy, but did not grow near so well. There were over 50 fish to the square rod, and the European rule is from 6 to 8 where not fed. My family has been using out of this pond all summer, and you would not miss them. I am now prepared to fill orders, and order or no order, I shall continue to fill my breakfast plate.

I have two other ponds that I have not examined yet. I think when I open my breeding pond there will be a grand sight, and I wish you could be here then. I shall open it in February. LEVI DAVIS.

Forestville, Cal.

NEW YORK INVENTORS' INSTITUTE.—Peter Cooper has passed over \$30,000 to the Cooper Union, in New York, for the purpose of adding another story to the building, which will be occupied by the Inventors' Institute. The work will be completed by December. The object of the Inventors' Institute is to give the inventors the free use of a library of all the works which they may desire to consult.

## THE FIELD.

## Cultivation and Fertility.

EDITORS PRESS:—As your columns are open to those who wish to give their views and experience for the advancement of agriculture, I propose to give my views of the causes of the great falling off of the yield in wheat under our system of cultivation. When we commence with the virgin soil, nature has been preparing it for ages—not by turning it over, as we do, but adding new material to the top and then fertilizing it by sunshine and rain. Our first effort at cultivation reverses that of nature, and we turn up soil to the sun that has not seen his rays for years, and of course it has to undergo a change, which takes time.

The sun is the great fertilizer in this State, which is fully demonstrated on all the land that is plowed in the spring, either as summer-fallow or for corn, or any summer crop. The nature and composition of our soil is such that it is inexhaustible, if we only follow nature and not violate her laws. To prove my position I will give a sample: Mr. A has a field that yielded 20, 30, or more bushels of wheat when it was "new," as we term it, than now. He has been cropping it in wheat for ten years, without change, and his yield is now only 15 or 20 bushels. He changes it into corn or summer-fallow, and the next year he gets as good a yield as he did when the land was new. Is that not good proof that his land was not worn out? He has let it fallow or has put in corn, and then he gets a full crop again. Why? Has he manured it? Has he put in any of the fertilizers of the shops? No; but, without knowing why or how, nature has fertilized his field, and he gets a full crop off of his "worn-out" fields. And so would it continue to yield, but instead of aiding nature, he commences to reverse her laws as soon as he commences to plow for the next crop. That which nature has been a year preparing for the top he turns under six inches, and of course turns up soil that has to undergo a change, because it has not been exposed to the rays of the sun.

By this time your readers are ready to ask the question, how are we to plow our land, if we do not plow as our fathers did? It is said that our fathers carried a stone in one end of the bag, and then, to relieve the horse, he took the bag on his shoulder, and then straddled the horse and rode to the mill, had his grist ground, and then returned home the same way. I will now give my views, and how I will plow all of my land in the future. I have had constructed a plow without a mold-board, to which I can attach a sub-soil plow to break up the hardpan that has been made by the horses walking in the furrow. I can also attach a pulverizer which leaves the surface in perfect order for the seed. My plow is so rigged that the horse or horses do not walk in the furrow, to make the hardpan that we find in all the land that has been cultivated, nor do we allow the horses or the plowman to walk on the plowed ground. I may take out a patent. I know that there never was any plow ever made like it, and I am certain I have solved the cause of worn-out land. J. R. SIMMS, M. D.

Near Santa Rosa, Cal.

## Comments by Prof. Hilgard.

EDITORS PRESS:—As you ask me to comment on the above, I remark that while the facts cited by Dr. Simms are undoubtedly correct, we should hesitate to substitute the vague idea of the fertilizing effect of "sunshine," for the perfectly definite and well proved explanation given of them by a century's investigation in the domain of agricultural chemistry.

The greater productiveness of the surface soil, as compared with the subsoil, is due to two causes, viz.: First the decomposing ("fallowing") action of the atmospheric gases upon the minerals of the soil, whereby their ingredients become soluble and therefore available as plant food. This is the simple and irrefragably demonstrated basis of the efficacy of the fallow; and it likewise explains the fact, impressed by costly experience upon mankind, that the fallow loses its efficacy after a while, if persisted in. That sunshine helps and intensifies the chemical processes of decomposition in the soil, is well recognized; but it is also known that an excess of it tends to remove from the soil its vegetable matter, so important for plant growth; and hence we find shading, instead of sunshine, strongly recommended as a fertilizing agency in southern climates—as the result of practical experience. Here we deal with the second cause of the greater fertility of the surface soil, namely, the accumulation in it of the substance of previous vegetation. This, of course, simply returns to the soil what was taken from it; and if this simple principle were but kept in view in our agricultural practice, land could, without the purchase of manure, be made to hold out many times longer than it now does, and in some cases (cotton) indefinitely.

Now as to plowing, Dr. S. is undoubtedly correct in one sense. It is not intrinsically desirable to use the turning plow; but its universal introduction is the outgrowth of the necessity of plowing more cheaply and rapidly than can be done by means of any implement that

simply loosens the soil, as does the old-style forked limb of a tree, or the bull-tongue plow, or scooter. The furrow-slice they take is either too narrow, or the draft enormous, as compared with the turning plow. The "Murfee sub-soiler" is, I think, the most perfectly constructed implement now in use as a non-turning plow; but even with it, it costs at least one-third more to get a field into any condition comparable to the seed-bed produced by the turning plow, under the most advantageous circumstances. Then again, we must often turn under the vegetation growing on the surface of a field; and we can thus produce a soil many times deeper, and therefore safer as regards crops, than nature usually gives us, yet, nevertheless, fully as fertile in all its parts as any natural soil.

I think we shall hereafter, as heretofore, find it safe and profitable to be guided by the experience of three thousand years, which has uniformly taught the necessity of returns of plant food to the soil, rather than to rely on the efficacy of sunshine, or of any modification of our implements of tillage. E. W. HILGARD.

Univ. of Cal., Nov. 10th, 1879.

## The Beet Sugar Question.

EDITORS PRESS:—Some favorable accounts were given, editorially, in the last number of the RURAL PRESS, of the success of beet-sugar making in this country, and the pertinent question raised, why cannot this industry be made commonly successful in California. The answer is plain—we have too direct or too nearly equal competition with cane sugar. Beet sugar never did, and in the nature of the case never can, sustain anything like an equal or fair competition with cane sugar, mainly because the cane contains double the quantity of sugar that the beet does; practically, it is believed considerably more than double, and may be more cheaply manufactured.

The manufacture of beet sugar was forced into existence by Napoleon, when he warred against all Europe and prohibited his subjects from purchasing from British traders, and the production of beet sugar has fluctuated since that time in that country with the amount of duty or tax on sugar. In France there were 58 beet-sugar factories in 1828. In 1833 the duty or tax upon cane sugar was raised to 80 and 105 francs on 100 kilogrammes, and the number of beet-sugar factories rose to 349 in 1835, 466 in 1836, 542 in 1837. In 1838 a domestic tax was laid upon beet sugar, of 11 francs, and the number of factories sank at once to 389 in 1840; and when the tax was raised to 27½ francs, the number of factories was reduced to 325 in 1844.

In 1837, under the influence of exorbitant protective duties, beet sugar was produced equal to one-third the amount of sugar consumed (45,000,000 kilogrammes.) In 1844, when the protection of the tariff had been lessened by one-fourth, the production of beet sugar sank to only 28,000,000 kilogrammes.

When the subject was officially inquired into in France, it was ascertained that one hectare (2½ acres) can produce on the average 1,980 kilogrammes of beet sugar, or from 9,200 to 11,000 kilogrammes of cane sugar.

If we spend double the amount of labor on an acre of sugar cane that we do on an acre of corn or beets, we still have as the result of the same labor several times as much cane sugar as of beet sugar. Again the manufacture of beet sugar is much more complicated, critical and expensive.

The truth is that beet sugar is a high-priced sugar, and its manufacture can only prove successful when the price of cane sugar is high, either from taxes, duty or other cause. Beet-sugar factories in this country, from the first one about the year 1830, down to the present time, have proved failures. It seems impossible for the few now in existence to meet with that degree of success which the enterprise of their managers merit, and in a few years they will probably go the way of their predecessors.

Just now we find the Louisiana sugar planters clamoring for the abrogation of the Hawaiian treaty, in order that they may be protected in their business. If we had 20 beet-sugar factories in this State, we should have another host clamoring for the same object, in order to force high-priced beet sugar upon us.

The introduction of the beet-sugar industry into California seems like an ill-judged enterprise; in fact, very much like folly, when we consider the fact that we have in California large areas much better adapted by climate than Louisiana for the growth of the true sugar cane, and the additional fact that in nearly all parts of the State the Chinese and African cane, or sorghum, can be grown without difficulty. From the latter, by Cook's evaporator, 10 years ago, 1,500 pounds of sugar was produced to the acre. By later-improved methods of management, much better results have been obtained, and it is believed now that quite as much, if not more, sugar can be produced from an acre of sorghum as from an acre of beets. From sorghum there remains an amount of syrup which, when clarified, is equal to the best, while beet syrup is offensive always. One hundred gallons of syrup per acre, as a secondary product after the sugar has been obtained, would pay all expenses.

It may be that the editor of the *Prairie Farmer* is aware of some wonderfully easy

method of making beet sugar to justify his assertion quoted by the RURAL PRESS. It may be that drying beets by a California sun will give a great advantage to beet-sugar making, yet there are stubborn natural laws or facts against beet sugar that cannot be overcome; that is, when placed in fair competition with cane sugar.

There is undoubtedly an important future for the sugar-making interest in this State whenever a little capital and enterprise shall be started in the right direction, and it is believed that the time is at hand for the inauguration of such a movement. L. D. MORSE.

San Mateo, Nov. 17th.

## POULTRY YARD.

## Pomeranian Geese.

Pomerania, says the *London Farmer*, is an earthly paradise for geese, so long as they are not quite ready for killing, and Herr Neumünster, of Greifswald, would appear to be the Prince of Pomeranian geese crammers. His birds find their way to Berlin, Metz, Dantzic, and far more distant places, and none ever turned the scale at less than 22 lbs. This year he has succeeded in bringing up to the enormous weight of 30 lbs. As a rule they are sold whole at 10l. or 1s. a pound, but occasionally the livers or the smoked breast are disposed of separately at higher prices. Forty-five shillings has often been paid for a single bird. Twenty-seven years ago, when the great Imperial Chancellor, Prince Bismarck, was a simple deputy at Frankfort-on-the-Main, he made a bet with the French ambassador as to which could procure the heaviest goose. The Frenchman's bird weighed 18 lbs., but Bismarck's turned the scale at 27 lbs. Needless to say, it was obtained from Neumünster, of Greifswald. M. de Bismarck paid for it with three Friedrichs d'or enclosed in a silver goose egg, on which were engraved an effigy of the successful bird, and the simple inscription "27 lbs." In 1870 again, Pomerania, in the person of Neumünster, forwarded two magnificent geese to grace the table of his Majesty, then staying at Versailles, at the head of his victorious army. The patriotic offering was heartily accepted and royally rewarded. Pomeranian geese, it should be noted, are of immensely large proportions; the birds, when in a miserably thin condition, weighing as much as 14 lbs. apiece, so that it is little wonder that they attain such prodigious weighing after a judicious course of cramming. The secret of Pomeranian geese crammers is that they leave nothing to servants, but act on the sensible old law that "if you want a thing well done you must do it yourself."

TURKEY FATTENING.—A nice plump turkey. Well, we all have a weakness that way, and most of us are looking forward to the Christmas holidays, when we hope to help dissect a nicely browned turkey and discuss its merits along with the many other good things provided at that time. Turkeys are undoubtedly profitable to raise when they have been reared on profitable principles, which means plenty of food, care and exercise. There is a great difference of opinion in regard to fattening turkeys, but experience has shown breeders that the best way to get the greatest number of pounds of flesh is to feed the birds all they will eat, right from the time they hatch out till they are ready for market. While they are running at large is the time to develop them. They undoubtedly get much food in the fields, the shattered grain, the "hoppers," worms, etc., but then they must be supplemented by daily or twice daily feeds of grain at the barn. Turkeys cannot bear confinement, especially when in small flocks or singly, and should never be confined longer than a week or ten days before killing. An ordinary rail pen is one of the best for the purpose, for they like to be on the ground. At this time feed principally on cooked or soft food, and plenty of milk if you have it to spare, giving occasionally hard whole grain, to keep the flesh solid and firm.—*Poultry Monthly*.

TO MAKE HENS LAY.—An exchange gives the following prescription: Put two or more quarts of water in a kettle and one large seed pepper, or two small ones. Then put the kettle over the fire. When the water boils stir in coarse Indian meal until you have a thick mush. Let it cook an hour or so. Feed hot. Horseradish chopped fine and stirred into mush as prepared in the above directions, and for results we are getting from five to ten eggs per day, whereas previous to feeding we had not had eggs for a long time. We hear a good deal of complaint from other people about not getting eggs. To such we would warmly recommend cooked feed, fed hot. Boiled apple skins seasoned with red pepper or boiled potatoes seasoned with horse radish are good for feed—much better than uncooked food. Corn when fed to the hen by itself has a tendency to fatten rather than produce the more profitable egg laying. A spoonful of sulphur stirred with their feed occasionally will rid them of vermin and tone up their system.

BLACK SEA CANAL.—The gigantic project for the construction of a canal through the Caucasus, from the Black sea to the Caspian sea, is meeting with great favor in St. Petersburg from those interested in direct commerce from the Black sea with Central Asia.



## THE PUBLIC LANDS.

### Report of the United States Land Office.

The telegraph brings from Washington a digest of the annual report of the General Land Office. The following shows the disposal of public lands in California, during the last fiscal year:

Taken for homesteads, 223,014 acres; purchased for cash under pre-emption entries, 114,228 acres; timber culture entries perfected, 15,619 acres; taken under the Desert Land Law, 24,067 acres; cash receipts from all sources, \$276,505; incidental expenses, \$48,342. Only about 5,900 acres were patented to the State of California last year under Federal grants for all purposes, 5,273 acres being the total for indemnity school selections. The total number of desert land entries in the whole country was 530, embracing an aggregate of 165,996 acres, or only about half the totals of the preceding year.

The desert land entries in Nevada aggregated about 28,000 acres; in Montana, 39,000; in Arizona, 15,000 acres, and in Oregon, 6,000 acres.

The General Land Office report incorporates large portions of a report received from Surveyor-General Wagner. It shows that only about \$30,000 was allotted for the survey of California agricultural lands, \$10,000 for timber land, and \$4,000 for private land claims, and about \$32,000 was advanced by settlers and railroad companies for surveys. Total number of acres of public lands in California surveyed during the last fiscal year was 1,910,531 acres, leaving about 41,000,000 acres still unsurveyed. Surveyor-General Wagner says that nearly all the lands in California now unsurveyed should be sectionized, without restrictions as to their character, and recommends the removal of all restrictions. He says grazing and other lands are so intermingled that it is practically impossible to properly draw a line of demarcation; and consequently small tracts of valuable land must be left unsurveyed. The restrictions have not resulted economically to the Government, as the surveys frequently necessitated by this patch-work system cost more than the saving, besides giving rise to much litigation on account of changes in the topography. He says it is imperatively necessary to complete the survey of standard and meridian lines and township exteriors at the earliest possible date, in order to avoid in the future the serious errors resulting from the present piece-meal system of subdivision into sections. They may then proceed as settlements demand and Congress makes appropriations. Wagner makes a strong argument for liberal appropriations, and shows that the policy of Congress in making such limited provision for surveys in California has operated injuriously to the best interests of the State and also of the National Treasury. He calls attention to the fact that the occupants of unsurveyed lands are unable to acquire title, and although the State has passed laws for the protection of these actual settlers, it also protects speculators in holding large tracts, without cost or taxation, which would be impossible if the lands were surveyed and subject to entry. In that event these tracts would furnish homes for a large number of families by simply fencing, using and occupying them. He reinforces his plea for increased appropriations by showing that much land in California, formerly considered worthless, is now discovered to be very valuable. He instances the San Joaquin valley lands, and also quotes articles from the *San Francisco Bulletin*, showing that public attention is being directed toward a neglected belt of land between the foothills and snow lines of the Sierra Nevada mountains, where there are thousands of acres sufficiently level for farming purposes. He also gives statistics showing the rapid development of California wine-producing interests. He remarks that even the scant products of the Mohave desert are now being utilized by the manufacture of paper from a species of cactus; but as this is too widely scattered to justify the purchase of land from the Government, and as the industry, although giving promise to become valuable to California manufacturing interests under favorable conditions, requires an outlay of considerable capital for machinery, he recommends that Congress be required to authorize these lands to be leased to any party desiring them for a term of years, the lands, however, to remain subject to entry under the homestead or pre-emption laws.

Gen. Wagner also argues that all money which may be appropriated by Congress for surveys in California would in a few months be returned to the Treasury by sales of land. Thus, for instance, the total amount expended last year in the survey, sale and disposition of public land in California was \$103,747, and during the same period the sales yielded to the Treasury \$456,773. He also shows the necessity for liberal appropriations to bring up the long accumulated arrears of office work, and asks \$20,000 for that purpose, besides \$135,000 for ordinary land surveys, \$50,000 for timber lands, and \$10,000 for the survey of private land claims. Gen. Wagner recommends that the law authorizing homestead and pre-emption surveys to be made upon deposits of estimated cost, be extended to agricultural lands in mineral districts, and also to desert lands and timber lands. He says very little of the timber land in California has been surveyed, and as enormous quantities of timber are used in the neighborhood of mines, and as there are no adequate means of protecting un-

surveyed lands, they are rapidly being despoiled. He therefore requests that the timber lands should be surveyed so that persons entitled to enter them under the law of 1878 may obtain title. He adds: "There is no danger that non-resident speculators would monopolize the timber lands under this law, for, aside from its safeguards, they would be no better able to protect the lands from speculation than the Government."

The Surveyor-General says in regard to mineral lands, that the rectangular system is so readily understood by all classes that it cannot be supplemented by any so-called scientific system; that the contract system of survey is better than the proposed system of salaried deputies; that the classification now made by Deputy Surveyors is as accurate as can be made at moderate cost, and that the whole matter should be left undisturbed. The total number of mines surveyed thus far in California is nearly 2,000.

## THE APIARY.

### Beginnings in Beekeeping.—No. 2.

EDITORS PRESS:—Well, this time I was to give a description of the hive we use with directions for making. As I am not a carpenter, and have only a hatchet, saw, short plane and pair of matching planes, all the nice work of miter joints, etc., such as described in the books, will have to be dispensed with. I have been making hives of the planed lumber taken from old dry-good boxes, also from pine boards, planed on one side, at four cents per foot, but I am now using unplanned Maderia lumber at two and a half cents per foot, and propose to whitewash them on the outside, putting large black numbers on the front of each, so the bees will know their home, for if all are alike, and near together, they may get into the wrong hive and be killed. The numbers are also handy in keeping memoranda of the condition of the hives.

For the sides, procure boards 10 inches wide; cut the pieces just 20½ inches long; and for the ends, cut pieces from the same board 14½ inches long; use a square, and not only be accurate in the measure, but saw the ends square; now make one side of each piece straight, then plane them all down until just 9¾ inches wide; that finishes the sides, but in the upper edges of the end pieces a rabbit must be cut to rest the frames on; this rabbit can be sawed out, but more readily made by a machine made for the purpose. I use the groove plane with a piece of wood slipped in so it will only cut in three-eighths of an inch from the inside, and cut it down about three-quarters of an inch, then tack a strip of tin along so the straight upper edge will come a quarter-inch above, or just nine and a quarter inches from the bottom. Now nail the box together with sixpenny nails, nailing the sides on the ends so the box will be 18½ by 14½ inside measure. Make a bottom board by either getting lumber 16 inches wide, or putting pieces together with the match plane to that width and cutting to two feet in length in the end intended for the front. Cut out a beveled triangle four inches wide; at the front three-quarter inch deep, growing shallower until it becomes about three-sixteens deep at the inner point.

Now when the hive is placed even with the back part of this board, it will be closed in front so no bee can come out, and by pushing it forward the opening is enlarged. At this time of the year we leave it so as to only permit two or three bees to pass at one time, but during the honey harvest, especially on warm days, push the hive so far front as to give them the whole space, at which time it is well to have a beveled board in front for them to alight on.

For a cover, I use a board prepared for a bottom board, with one-inch strips nailed on the other side so as to just fit on the top; the cross strips serve to keep the boards from warping, and any cover will be a bottom, or vice versa.

Now we want 20 brood frames made of strips ¾ of an inch wide and ¾ thick, the end pieces 9 inches long, the bottom piece 17 inches long, top piece 19 inches long; nail them together with ¾-inch brads, the bottom one between the end pieces ¼ of an inch from their ends, and the top piece on the other end of the end pieces so it will project over ¾ of an inch each side; this is to support the frame by resting on the tin rabbits, and if all are cut and put together true, when hanging in the hive the bottom piece of the frame will just hang ¾ of an inch clear of the bottom board. Ten of these frames are intended for each box or hive, and we put two boxes together one on the top of the other. Some use clamps to hold them together; to save that expense we are just using a button to keep them from getting slid off. If the work is not done so they will fit together accurately you will have to tack a slip around the bottom of the upper half of the hive and perhaps do the same with the cover. Now we take all the frames and put a piece of No. 23 tinned wire from one of the upper corners through a hole a half inch from the middle of the bottom strip back through another hole a half inch the other side of the middle, thence up to the other corner; this is a guy to keep the bottom bar from sagging. A thin strip ¼ of an inch thick and ¾ of an inch wide is

put up between the bottom and top bar to support the latter, then we run very fine tinned wire from top to bottom bar and back about two inches apart. On the frames thus prepared we place a sheet of wax comb foundation, and holding it in a hot sun or over a stove, warm the wax just so that a little roller made with a spool will press the wire into the center of the foundation. We procure by mail from the East about 20 sheets for \$2, but for large quantities we will get by freight or nearer home.

You may say all that work on the frames with the comb foundation is quite an expense, but when your hives are thus fixed up there is no danger of breaking down, killing queen and bees, and when you put a new swarm in a hive thus prepared, you will be surprised to see how soon they will have the comb drawn out and filled with brood and honey. Why, I put a frame thus fitted up into a hive on the second of November, and in two days they had half of one side drawn out, and in four days about two pounds of honey stored in it.

As fast as these frames become full, we place them in an extractor, throw out the honey by centrifugal force, and put them back in the hive to be filled again. These extractors can be procured of any one keeping apiarian supplies, and though they cost about \$10, one will last for years. I think they will pay to have, even where a person only keeps a few swarms, for the increased quantity of honey soon pays for one. Any one who is handy with tools can get by mail for about \$2.50 gearing and wire cloth, and rig up one in a cask.

If you prefer to do without an extractor, and keep more bees to get the same quantity of honey, put no wire in the top frames, but attach a little strip of foundation for a starter and then take out a frame full as you want it. Some fill all the upper part full of one or two-pound boxes filled in frames about two inches wide, with a little starter fastened in the top of each box. Thus you get the honey in a nice shape, but probably much less of it.

I have had some frames of one-pound boxes put next to the side in each of my hives, but find little disposition to work there at this time of the year, while they still draw out and fill whole sheets of foundation. Some swarms do much better than others; and I have one colony of black bees which will make more bees and more honey than two of the others. That is the one to raise queens from. I will talk about queens next time. J. B. RUMFORD.

Bakersfield, Cal.

### The Bee of the Future.

At the recent meeting of the North American Beekeepers' Society in Chicago, there was a paper read by a Canadian apiarian on "the bee of the future," in which the following points were made: The writer did not believe in the unlimited advance of improvement in bees; neither did he think that there was any great danger of unlimited deterioration. He described the Java bee as being one of the worst stingers in existence, and that it has the awkward habit of building combs horizontally instead of in a perpendicular manner. The one redeeming feature of this bee is the length of its proboscis.

The speaker's conclusions were as follows: No breed accidentally discovered in some far away part of the world has ever been imported and adopted just as it was. Certain races that, either by natural selection, or judicious pairing, have developed a high standing of excellence, have been taken as the foundation; then the best specimens have been chosen and bred from. This is the history of the thoroughbred and other horse tribes; of Short Horn and other cattle; of Merino, Cotswold, Leicester and South-down sheep; the improved breeds of hogs; and the more valuable varieties of poultry.

By all means, let us import as we have been doing, only with more care, breeding only from the choicest and finest specimens. Undesirable variations and inferior types will occur, but just as other breeders make beef of their poorer cattle, mutton of their worst sheep, pork of their second rate pigs, and pot-birds of their poultry that do not reach the standard of excellence; in like manner let us remorselessly sacrifice all but A queens. By so doing, at the same time selecting first-class drones; breeding in full colonies; at the most favorable seasons of the year; sparing neither time nor pains; we shall ultimately succeed in producing the bee of the future, *Apis Americana*, which will satisfy our own ideal, and "beat the world."

ELECTRICITY IN THE APIARY.—A correspondent of the *Deutsche Presse* has adopted electricity as a successful means of overcoming the difficulties in handling bees. Trials on large and small clusters, and even on single insects, answered perfectly; the bees coming in contact with the conducting wires fell stunned and motionless to the ground. They were then sorted and marked, according to the strength of the current applied. The time required for their recovery varying from ten minutes to eight hours, was proportionate to the strength of the shock, but all came out of their trance safe and sound. Encouraged by the result of this experiment, Herr Freiwith resolved to try it on a larger scale, namely, on bees in the hive. To this end he introduced the ends of two conducting wires into a fully occupied honeycomb,

and turned on the current for a moment; the bees soon lay on the ground, and it was half an hour before they resumed activity. Herr Freiwith then constructed an apparatus in a small box, six inches each way, which, similar to a cartridge pouch, he wore with a strap round his body. The two wires of the apparatus were, when required to be used, fastened to rods of a suitable length, the wires, of course, always projecting over the ends of the rods. These ends were then applied to the swarm, a knob similar to that employed for a room-telephone being attached to the apparatus, that the current might be turned on at the proper moment.

## THE DAIRY.

### Experience with Forage Plants.

EDITORS PRESS:—Believing that I am benefited by the publishing of the results of the experiments of others, and desirous to repay in part the debt I owe to those who write them for the PRESS, I send the following, hoping it may be of interest and profit to some of the many readers of your valuable paper: Last November, a somewhat lengthy and very interesting article on "New Forage Plants," by W. A. Sanders, of Fresno, appeared in the RURAL PRESS. Having about ten acres in a lot for pasture, and wishing to plant it with something that would stay, after considerable deliberation, which was necessary to a choice between the different desirable descriptions, my preference was given for what his man called, "that come to stay with you kind of grass," by Mr. S., *Panicum spectabile*, and which has since received from Prof. C. H. Dwinelle of the Agricultural Department of the State University, the name of *Angola Panic*, it being of the *Panic* family and native of Angola. It was ordered, by return mail came word that he had been able to save very little seed, and was getting more from New Zealand, at an expense of \$10 per pound.

My next choice was "Kennedy's Minnesota Amber Cane," which came to hand in good time, and with it some dwarf broom corn seed, some pearl millet, also chufas, artichokes, prickly comfrey, and last but not least six pieces of jointed roots which proved to be "that come to stay with you kind of grass"—my first choice.

The ground was prepared with a cultivator for all the forage plant seed alike, not worked deep, but several times, so as to destroy as much of the foul seed in the ground as possible, with the intent to sow the seeds broadcast, which was done late in April, and covered by harrowing. North winds delayed the sprouting of the seed until the late rains which came during haying time. The roots of the *Angola Panic* were planted in the same field, same time. They did not delay coming up, but seemed determined to make a good record, and they did. The stools are now at least two feet each in diameter at the ground. The stalks about three feet high, having been cut three times for seed, of which there has been saved from three of them nearly a pound, they having been fenced from stock. The others were in another part of the field, being put in a place where the water stands in the winter, so as to test the qualities of the plant in that respect. The stalk or straw of it resembles blue joint. The top is somewhat like red top, but a closer and coarser head. Horses and cattle are very fond of it, as is shown by their keeping those stools they have access to close down to the ground. No irrigation, no cultivation, except to cut away the weeds which spring up after the rains. From what it is doing, there seems no reason to doubt what Mr. Sanders says, that it will do well where there is moisture enough to sprout the seed.

The amber cane, pearl millet and dwarf broom-corn came up with the late rains and the thistle came with them. There was no chance to cultivate and it was too expensive to hoe, so the pearl millet of which there was a small patch and a little of the others just for a test were hoed once. Where thus tended, they all grew luxuriantly. The rest lived with the weeds, and were mowed to destroy part of the thistle, July 28th. Since then, they have done pretty well, except the pearl millet which was destroyed by the cows keeping it down by eating, and some being pulled up by them.

My horses do not seem to relish either of the three plants. The cows ate the millet first, then the broom corn and are now on the cane, doing well in flesh, and the butter we make from their milk (of which they give a good quantity) is "gilt edged" in every respect. The broom corn and cane are green and growing and seem inclined to stay. The soil is a rather heavy clayey one and is hard and dry. There is no water nearer than 15 feet below the surface, and no fog. It is not advisable for any one to plant the *Angola Panic*, where they do not want it to stay, because it will be as hard to get rid of as morning glory. A. T. HATCH.

Cordelia, Solano Co., Cal.

[Good; these letters on forage plants which several readers have written for the last few numbers of the PRESS, have been straight forward, explicit and practical. Now let us keep up the subject, and let all who have tried new forage plants send in the results for publication.—Eds. PRESS.]



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### Memorial Address to Alhambra Grange.

At the meeting of Alhambra Grange, Nov. 1st, 1879, Dr. John Strentzel, Worthy Master, delivered the following address, which the Grange request may be published in the RURAL PRESS.

*Sisters and Brothers:* One of the brightest and most valuable members of our Grange departed this life on the 24th ultimo—our beloved sister, Carrie A. Colby—the Worthy Lecturer of Alhambra Grange. Short as was her stay in our midst, and lessened in its efficiency by sickness, all had the opportunity to fully appreciate her character for goodness, her unceasing desire to alleviate suffering, and to develop and advance to a higher sphere all the best interests of humanity.

The Grange was an inviting field for her labor and she worked most assiduously and unremittingly to promote the welfare of the Order, consecrating herself especially to the service of our sisterhood.

Well deserved praise and gratitude follow her name wherever heard.

Mourning friends consigned the mortal remains with tender care to a flower-wreathed grave. How consoling the thought that her unencumbered spirit was met on the threshold of immortality by angelic friends, and that, henceforth, her aspirations to do good, unchecked by time or space, will permit her to be an ever-living presence hovering over our brotherhood, guarding and extending its influence, and inspiring all with devotion to the noble work before us.

Peace to her ashes. In our hearts is an abiding memory of her faithful life on earth.

J. STRENTZEL, Master Alhambra Grange.

#### In Memoriam.

Over five years has the bond circling the brotherhood of Alhambra Grange stood unbroken and entire, till the short space of the last few months three links have been rent asunder, or mayhap removed their earthly seal that the brighter impress of heaven might mark them all her own.

In sorrow and tears were laid away the forms of our Brothers Edward Bent and J. R. Jemison; yet that reaper, death, rested not satisfied until a sister branch of the tree of life was called to its storehouse of immortality. Sister Carrie A. Colby must needs answer this imperative call. By this, to us, seemingly cruel stroke, not only Alhambra Grange loses her brightest light, but the great brotherhood of California Grangers has lost a champion as valiant and steadfast in principle as was the acknowledged strength of those true womanly instincts that made her a model wife, most exemplary mother, devoted daughter and loving sister.

Acceptably filling the chair of Worthy Lecturer in our little circle, and at the same time holding in her hand the responsible trust of Editress of the *California Patron*, and in each respective station ably exemplifying not only striking business capacities, but that true healthful, moral status of woman, so nobly honoring, first herself, then her home, and last, but not least, her sisterhood everywhere. In the broken fullness of this one life, the Grange body of our Pacific border suffers an irreparable loss, and while we reverently and sorrowfully accept that irrevocable decree of passing away, may we, in this heart-chastening, humbly bend the knee, and be haptly anew in such measure of brotherly love, as will more surely enforce in our hearts those heavenly attributes of faith, hope and charity.

That vacant flower-strewn chair is a sad memento of our honored and loved Sister, though the beauty of her life, unlike those fading and now almost odorless flower-gems proclaiming our broken life-stem, will ever wait a pleasing fragrant breath of memory; whose wave-echoes will again and again break the stillness of her immortal life.—(Mrs. Henry Hollinbeck, Mrs. Maria B. Lander and Miss Nellie Carothers, Committee.)

Accepted and ordered printed by Alhambra Grange at regular meeting November 15th, 1879.—Mrs. MARIA B. LANDER, Secretary, Martinez, Cal.

### How Shall the Grange be Made Useful and Powerful?

Popularity is, in most walks of life, the measure of success. The Grange must be popular. What is popularity? Perhaps no word in our language has more shades of meaning. The best of men may not be popular, while the worst often have a meretricious popularity based on the arts they practice. The politician works for popularity and is successful as he achieves it. There have been men whose popularity came unsought and was based on excellence and moral worth, combined with good judgment in management of public affairs. Such a man, whether he is found in public or private life, is an honor to the community. While many seek preferment and exercise popular arts to win it, the man deservedly popular is sought out and preferred by the people.

The Grange should be popular without pretension simply because good works represent it. It should be respected in every community where it exists on account of the principles of fair dealing inculcated, habits of life practiced, systematic benevolence that springs from it, liberality and generosity of character that grows out of it. Its social features should make the world around better, and all that world sees and knows of it should be attractive and strictly honorable. It should disarm criticism, at least of fair-minded men, and practice no exclusiveness except to keep outside those immoral characters, or unhappy disposition would be sure to produce trouble, ill feeling and disorganization. No personal prejudice or private bitterness should mar its workings. Its effects, even outside its ranks, should be to prevent discord and preserve the best good of the community. All public enterprise should be fostered by it, if worthy, and its solid opposition should confront the un-

worthy. The cause of public education should be under its protection, for education that shall liberalize thought and add culture to man will give the Grange greater power. It should be conducted so openly and so much in the interest of society at large that the little secrecy of its inside working should not be objectionable to any man of good common sense. In short, the Grange should be popular because its works speak for it and its members show progress and improvement and make better members of society.

The Order should be broad in its benevolence, high in its aims for good, deep in its devotion to worth and duty. Its popularity should be such that the husbandmen of America should bask in its sunshine. Not the short sunshine of a day, or a season, but the permanent prosperity that crowns high motives and earnest endeavor, governed by the best human judgment. Give the farmers of the United States this confidence in the Order and it would enlist all worth counting in its ranks and be a mighty power for good, to advance material prosperity and correct the evils that afflict the world.

To acquire such popularity the Grange must hold itself, as its ritual exhorts, "unspotted from the world." We are all human, and more or less selfish, and some are narrow-minded, but the excellence of the Order must overcome the defect in the individual. In the aggregate the Grange can and must represent all the excellence of which human nature is capable. It must protect society at large, and show breadth enough to include the good of all in its aspirations. While many individuals are narrow-minded, the Order must have broad views. The narrow-minded man may accumulate and lay up the miser's hoard, but he cannot carry on great enterprises and make the world respect his abilities, but the Grange must do this, or tread the narrow walk that circumscribes the details of so many human lives.—*Willamette Farmer.*

### The Extravagant Farmers!

EDITORS PRESS:—Since the conclusion of my articles on exorbitant interest as a potent cause of hard times among California farmers, I have been waiting patiently for some fit reply. I had hoped that some hard-faced, two-per-cent.-a-month money lender would step into the arena and take up the glove and do his best to defend the great enormity. So far I have waited in vain. True, there have been a few expressions of general dissent; but so far no one has laid vigorous hold of a single position taken in those articles with intent to overthrow it. This is not because the points were not made definite and tangible, for the articles were full of handles sticking out on every side. Why not take hold of one of them, and let us test its strength? Come on, Mr. Usurer! Come in person, or by your attorney, or by your lackey, look over those arguments and positions, and tell us to which you take exception.

Having said thus much in regard to the argument against high rates of interest, I pass to take suitable notice of an article entitled "Other Causes of Hard Times," published in the RURAL PRESS of November 8th. The writer (he don't give us his name) denies that "the rate of interest California borrowers have been paying has in any material degree caused the hard times." And he adds, "were I in search of a cause for the present depression in business throughout this State, I believe it would be found in the extravagance which so universally prevails among all classes of citizens, and also in man's haste to be rich." Of course "all classes" includes the farming class. It was that class of which I wrote in the articles dissented from. It is this farming class of which the writer specially speaks in the subsequent parts of his article. And he makes mention, as an example of the "extravagance" he refers to, "a young farmer who gave his wife a valuable silver tea-set," which cost \$100. Then of another who borrowed a few hundred dollars, built a new house just prior to taking a new wife and putting her therein, when he had an old house which might have answered. These are his illustrations and proofs of the "extravagance" which prevails among farmers, and which has been the great producing cause of the hard times. Now it is to this point I wish to call attention.

Are the farmers of California, as a rule, extravagant? I deny it indignantly. As a class they are less worthy of this charge than any class of farmers in the Union, who produce as much as they, and are therefore entitled to a respectable measure of that production. I am not well acquainted with the condition of farmers in all parts of the State. But I do know something about those who live in the counties south of San Francisco. I have lived among them for the last dozen years, and I avow it as my opinion, that their homes, dress, conveyances, hard hands and care-wrinkled countenances, bespeak anything but "extravagance," and to charge them with it is both cruel and false. That there are individual cases of extravagance, is admitted. But how many farmers sport a "silver tea set" on their tables? How many live in a costly new house? We are talking of rules, not exceptions? We are inquiring after general causes of "hard times." Let the reader of this charge, call before him the humble homes where live (or rather stay) the farmers about him. Are they as costly as

he has seen in other lands? or are they mostly "box-houses"—little better than huts—scarcely fit for his horses? How many of them are lathed and plastered? Through what proportion does the rain leak freely? How many of them are painted, and how many only whitewashed to keep up appearances? How many of them have convenient rooms for the children, hired hands, or have a spare room for the traveler who taries with them for a night? Ah! "extravagant" are they?

How about their table and food? How often do a majority of these farmers afford the luxury of beefsteaks, oysters and the like? Ah! it is the same round, week in and week out, and the poor wife is put to her wits-end to break up the endless monotony of their table. Why? They cannot afford these things.

Look now at the furniture of that house of "extravagance!" Those rickety chairs, the broken and scant dishes, the hard straw bed, that lean and almost empty ward-robe, where remain little else save the threadbare remnants of better days!

Who does the work in that house?—all the cooking, sewing, mending and making, and washing, too? The hard-worn wife. Why don't they hire a girl? They cannot afford it. Their cousins in the city say—but not they, the tillers of the soil! How many hours do they work a day? Eight hours? Nearer eighteen—and that poor wife's work is never done!

When these "extravagant" farmers go to town—to the church, or elsewhere—in what sort of a vehicle do they ride? A costly covered carriage drawn by matched bays in shining harness? That is the way their town-cousins go. Far from all this style, jogs along the average California farmer with his wife and children either in the lumber wagon, or, at best, in a spring-wagon which has seen much hard service, and was perhaps bought at second-hand!

Shall I pursue the matter further and show how in other respects the agriculturists of California—though the strength and glory of the State—as a class, are hard worked, poorly housed, meanly clad, and more systematically robbed, than any other of workers in the hive? Yet they are charged with "extravagance!"

But, says one: "They are extravagant in buying so much land." I reply: As a class they don't own over 160 acres each, and that is not too much for a man and his family, as land averages in productiveness.

"He is extravagant in machinery!" Would you have him like the farmers of Mexico, eschew the gang plow, the reaper, the threshing machine? Would this be economy?

But, says our critic: He often tries "suddenly to get rich by buying up all the hay or grain, and fails," etc. Who does this? The average farmer? Not a bit of it. You have mistaken the man; it is not the average farmer, it is the speculator, the capitalist, the man of money, and not the hard toiling farmer.

Let me conclude this indignant rebuttal of the charge that the hard times, which has nearly broken up the majority of California farmers, is due to their own "extravagance" by repeating what I have said above: That the average California farmer, of all classes among us, is the farthest removed from "extravagance"—that he is poorer fed, more meanly clothed and housed, and harder worked, more systematically robbed and less rewarded, than the average man of any other profession in the State.

S. BRISTOL.

San Buenaventura, Cal.

### Bank Commissioners' Report on the Grangers' Bank.

This report which we give below, shows that the Bank has maintained well its healthy condition and has increased its business considerably since the last examination by the Commissioners, and thus justifies the confidence in its management which the stockholders themselves expressed at their last meeting by the reelection of the old managers. The following is the report:

Hon. Jo Hamilton, Attorney-General—DEAR SIR: We have examined the affairs of the Grangers' Bank of California, and herewith is a statement of its assets and liabilities on the 11th instant, at the close of business.

Respectfully,  
E. J. COLEMAN,  
Wm. F. WHITE.

San Francisco, Nov. 13th, 1879.

ASSETS.	
Banking house and lot (two-thirds undivided interest).....	\$ 77,200.00
Other real estate owned.....	3,964.62
Loans on real estate.....	129,879.56
Loans on stocks and bonds.....	78,093.78
Loans on personal security.....	117,682.53
Loans on other securities (grain, etc.).....	235,332.33
Money on hand.....	52,836.55
Deposits in other banks.....	1,561.11
Office furniture, fixtures and safes.....	3,226.30
Interest in arrears.....	10,570.45
Expenses, taxes, etc.....	13,643.15
Other assets.....	2,756.43
<b>Total.....</b>	<b>\$723,153.99</b>

LIABILITIES.	
Capital paid in coin.....	\$400,000.00
Due depositors.....	115,630.71
Due banks and bankers.....	129,550.82
Interest account (undivided profits).....	87,937.39
Other liabilities, viz: mortgage assumed on real estate.....	40,000.00
<b>Total.....</b>	<b>\$723,153.92</b>

A FORMIDABLE revolution is in progress at Chihuahua, Mexico, and new difficulties have arisen in Yucatan.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### BUTTE.

FRUIT CANNING.—*Record*: We learn that our townsman, H. T. Morse, has been engaged in the canning business this summer, and with gratifying success. By his own labor he put up between 2,000 and 3,000 cans, and has disposed of every one. He says there is money in it, and maybe millions, and he intends next year to branch out. His effort this season was merely experimental, and he was well repaid for his trouble. Mr. Morse, after canning his fruit, disposed of it in the mountain towns of Plumas and Lassen, and after a trial of the article, he had no difficulty in disposing of all he could bring into the market.

AGAINST THE VARMINTS.—*Register*, Nov. 14: We notice several associations and individual persons, and in one or two cases county governments, in different parts of the State, have offered bounties for coyotes scalps. This is good as far as it goes, but it does not lead to the extermination of these pests to stock men, especially wool growers. In our opinion a bounty should be offered by the State, to be paid by the County Treasurer of any county to which the scalps may be delivered, and the sums so paid to be a State charge. This would stimulate their destruction in counties where bounties are not offered, and prevent those doing so from being imposed upon.

#### CONTRA COSTA.

WORK.—*Gazette*, Nov. 15: Upon some loamy stubble land in our section the surface is wet deep enough for light plowing, but few farmers think it judicious to begin plowing upon such land until we have had a few more days of bright warm weather to give the weeds a further start. Adobe ground wet to the depth of three or four inches is in better condition for plowing than it will be after more rain, and some farmers are improving the opportunity of plowing as much as possible of it in this condition and taking the chances of weeds.

#### FRESNO.

ITEMS.—*Republican*, Nov. 15: The Eisen vineyard will turn out a larger quantity of wine and brandy this year than ever before. The crop of almonds on the McNeil ranch this season was abundant and of an excellent quality. Many acres of raisin vines will be set out on the Nevada colony this winter. We learn that Dick Myers has within a few days lost the majority of his land of sheep, numbering 2,400, from eating some poisonous weed. C. Meyers is making some very excellent syrup. Some of it being one-half pure granulated sugar. This, we believe, is made from Imphee cane. Those who planted Early Vermont potatoes in mid-summer, are now digging some very large, fine potatoes; those who planted Early Rose have no digging to do.

WOOL GROWERS' ASSOCIATION.—*Expositor*, Nov. 13: Pursuant to a notice calling a meeting of wool growers at Fresno, Nov. 10th, 1879, a number of the parties assembled. On motion of Mr. Dusy, James Cottle was chosen Chairman, and John J. Luce Secretary. It was proposed by Messrs. Dusy, Duncan and others, that a joint-stock company be organized for the purpose of building a warehouse. It was moved and seconded that the Chairman appoint a committee of three to draft a plan for a warehouse, and estimate the cost, etc. Messrs. Dusy, Duncan and Shillings were appointed as such Committee. It was moved and seconded that the meeting adjourn until Monday, the first day of December, 1879. Now that the organization is started, it is to be hoped that all the wool growers in the county will join it, and assist in making the organization a success.

#### KERN.

FEEL.—*Courier*, Nov. 13: The much-needed rain commenced falling on Sunday in showers, and during that night a heavy rain fell. The grass on the mountains and plains, that started with the early rains of October, will soon be excellent feed for stock, and we learn that a number of bands of sheep are on the way from the coast counties to take advantage of the feed in this county. The rains have given new life to everything.

#### LASSEN.

NOTES AT SUSANVILLE.—Hay is selling at \$5 per ton on the farms, and but little to sell at that price. The stock men have bought up most of the hay to feed to cattle. The fall plowing has commenced. A larger acreage of grain will be sown this fall. Several new farms have been located in the sagebrush this season. Baughams and Moore are fencing in 400 acres of sagebrush land, which they propose to put into alfalfa for pasture.

#### LOS ANGELES.

CITRON PRESERVING.—*Anaheim Gazette*: It is strange that the great demand for citron has not induced many persons hereabouts to embark in the business long ago. The erroneous impression which long prevailed, that the citron so common in southern California was not the real citron of commerce, may have had a great deal to do with retarding experiments. But it is now well established that the citron of this country makes a preserve "equal to the best imported," to quote the words of a leading San Francisco commission firm, and all that remains to ascertain is the best and most economical way of getting it ready for market. Mr. T. P. Hindo, of Anaheim, is in a fair way to solve



these problems. He is now experimenting in preserving citron and is succeeding very well. We hope soon to chronicle his complete success. **MERCED.**

**EDITORS PRESS:**—We had gray frost here yesterday (Monday) morning. Nearly quarter of an inch of ice formed on standing water. Teams are busy getting in grain and plowing. Some intend to reharrow, others roll sown grain. After the late rains the ground is hard crusted. — M. J. O'BRYEN.

#### MONTEREY.

**GETTING RID OF MANURE.**—*Democrat*, Nov. 15: The other day we observed a "renter" in the act of dumping into a marsh successive loads of stable manure—to get rid of it, he said. He seemed to be of European nativity, and to our remark that "he wouldn't do that sort of thing at home," replied "No; not by a long shot. There, every straw is preserved. They wouldn't let you burn a handful of it." Now, what he was after was simply to clean his barn. As a renter he has no interest in maintaining the quality of the land temporarily occupied by him, and so was deliberately throwing away what he knew to be valuable for the purpose.

#### PLACER.

**THE OUTLOOK.**—*Argus* Nov. 15: We have had a fine rain, and it makes the farmers feel happy on account of the prospects for good crops and plenty of grazing for stock. Teams can be seen in every direction plowing and harrowing. The seeder is heard in many directions. Several hundred acres have already been sown, and the grain was up two weeks ago in many places. The farmers have started early enough to put in large crops, and if prospects continue good there will be a good deal of grain sown. The feed in the foothill ranges for cattle was never better at this season of the year. The young grass has received a good start from the rains which have come, and the mild weather in the intervals between showers has caused a rapid growth of feed.

#### SAN BENITO.

**AN ACTIVE COMMUNITY.**—*Bitterwater Cor.* *Hollister Enterprise*: The farmers in this valley and vicinity show no signs of being discouraged on account of there having been two dry seasons out of the three just past, but on the contrary are preparing to sow a larger acreage in grain this season than ever before. There will be about 2,000 acres under cultivation in the valley. D. M. Selleck and Charles Zoellin have rented several hundred acres of the Topo Grant of Mr. Donnelly, which will be sown in wheat. Farmers are rushing around the country in search of seed wheat, of which there is not a sufficient quantity to supply the demand, some having to go as far as Hollister to obtain the article. Seed wheat has been selling at two cents per pound, and scarce at that. The farmers are improving their places more this season than on any former one, the reason being that they know the Railroad Co. have forfeited their land, and another reason, being a dry season they had but little else to do. The principal improvements made are setting out orchards, building new houses, adding additions to old ones, building cisterns, and so on.

#### SAN BERNARDINO.

**BUYING DRIED FIGS.**—*Colton Semi-Tropic*: Mr. Gay, of the firm of Woodhead & Gay, of Los Angeles, was in our county last week, buying dried figs, for which he was offering four cents a pound. This was quite a surprise to many who had raised an abundance of the fruit, much of which they had suffered to go to waste, and some had fed large quantities to their hogs, supposing there was no market or demand to justify the care of them.

**THE SEASON.**—It's a glorious rain we had. Ground is wet down over a foot, and farmers are jubilant. Plows are running.

#### SAN DIEGO.

**A PIONEER.**—*Union*, Nov. 15: San Diego county this year adds another important item to her products—that of raisins. Mr. R. G. Clark, of the Cajon, has the honor, we believe, to be the first to make raisins for the market, having produced, without irrigation, about a ton and a half of the finest quality. In this connection, we may say that Mr. Clark is said to have been the producer of the first ton of honey in this county, and also the first to attempt the growth of the Australian blue-gum or eucalyptus tree.

**THE FARM OUTLOOK.**—*News*, Nov. 14: The rain Sunday did a vast amount of good. It will enable all to get in their crops quite soon, both of cereals and potatoes, and bring on the grasses for stock, so that if we really have the beginning of the rainy season, and it shall amount to our average or over, these products will be advanced steadily and that is better than if the articles were started and then died out.

#### SAN JOAQUIN.

**A JACK AND MULE-BREEDING ENTERPRISE.**—W. F. Freeman, in *Stockton Independent*: I shall probably arrive at Stockton on Monday next, 10th inst, with a carload of jacks and jennets. They are the joint purchase and importation of Mr. C. Swain and myself, and were bought in Kentucky. I have been doing something in this line for some years, importing the first in 1858. We now design to rear jacks with a view to supplying the attractive markets of Japan, China, British Columbia, Oregon and Central America, as well as in our own State, all of which have been supplied by Kentucky. Our climate is the best adapted to the business of raising jack and mule stock. The above stock has been purchased with the view of raising the very best of jacks, and we hope to be

instrumental in giving our county a reputation of jacks and mules, such as it is now justly entitled to in rearing horses.

**THE ALPHA POTATO.**—*Lodi Review*: In our issue of July 26th, we gave some facts and figures from Mr. Robert Taylor of this place, in his experiments with the Alpha potato. In March he planted 100 pounds in the low land of the Mokelumne, for which he harvested the first of July, 1,922 pounds. The last of the month he planted three acres, and this week he has set men to digging them, and as yet cannot tell their yield, but he has brought us a couple which measured, the largest, 16 by 12½ inches, the other, 15½ by 12½; one weighs one pound and ten ounces; the two weigh three pounds and one quarter. He says what they have dug will average in size about two-thirds these samples. He has contracted the sale of a good share of these at five cents a pound, for seed. We must state that they are very white and mealy-meated and will keep well.

**SQUIRREL KILLING.**—*Independent*, Nov. 17: Our farmers seem to have very good success in poisoning squirrels this year, judging from the amounts allowed by the Board of Supervisors for scalpings secured, from the Bounty Fund. A few parties who are making a business of poisoning, report having killed and scalped over 6,000 squirrels since last February.

#### SAN LUIS OBISPO.

**RATHER HAVE IT DRY.**—*Las Tablas Cor. Tribune*: Farmers generally are late in plowing this fall and were praying for a little longer dry spell, as this adobe soil plows much better when dry than when wet or even moist.

**CABBAGE AND POTATOES.**—*Advocate*: Mr. J. W. Slack brought us last week three potatoes raised in one hill from one stem, which weighed 5½, 5½ and 3 pounds respectively. Total weight 14 pounds. They are the Early Goodrich variety, and were grown by him on his farm near Morro Bay. Mr. E. A. Atwood brought in to town last week a cabbage of the Marblehead variety, from seed procured from Massachusetts and sown in May last, which weighs 39 pounds. This week he brought in one of the same variety which weighs 45 pounds.

#### SAN MATEO.

**CUZCO CORN FOR STARCH.**—*Journal*, Nov. 14: If we had any starch factories in this State, the Cuzco corn, if it can be grown here successfully, would prove quite valuable for starch-making. Nearly all the starch consumed of late years has been made from Indian corn by a process that was for a long time kept a secret. Much of it has been put up in small packages for cooking purposes, blanc mange, custards, puddings, etc. For all such purposes the Cuzco would be quite superior, the grain being nearly all starch, and apparently much like Bermuda arrow-root.

#### SANTA CLARA.

**BRAZILIAN ARTICHOKE.**—*Advocate*: Mr. Goff, of San Felipe, has introduced the Brazilian artichoke, which is regarded in the East as a very profitable and wholesome feed for hogs. Henry Miller, and others in this vicinity, purchased seed last year, and we believe they have found the artichoke easy to cultivate and an excellent hog feed.

#### SOLANO.

**THE GOVERNMENT FARM.**—*Vallejo Chronicle*: The plan for working the farm at the Navy Yard was found to work so well last year that the authorities have given the contract to Robert Gore for another season, to work the ground on the same plan, viz.: Gore furnishes all of the labor and seed, and gives the Government a certain portion of the crop raised, which is far more remunerative than having the Government do all of the work. Heretofore about the time for plowing or harvesting to commence the mechanics in the Yards and Docks Department would be obliged to quit work, so that the money could be used to pay the farm hands employed, and after all was done and the cost counted, it was found that the expense for running the ranch was greater than the produce obtained, even at the highest price. Now all the Government has to do is to receive and store their share of the crop, and without having to suspend a mechanic to obtain money for the same. The contractor makes a good profit out of the transaction, and so all hands are satisfied. Mr. Gore went to the Island to-day for the purpose of seeing what condition the ground was in for plowing, which will probably be commenced next week. The seed wheat has already been taken over to the Island.

#### STANISLAUS.

**AT WORK.**—*Herald*, Nov. 13: A much larger area will be planted to grain in this county this year, than ever before in its history. Some farmers say one-third more, while others say one-half. Plowing is now being pushed vigorously throughout the county, where the nature of the soil will permit, after the recent heavy rains. In some localities it is too wet to plow.

#### VENTURA.

**THE OUTLOOK.**—*Santa Paula Cor. Free Press*: Since the late rain our people have assumed a more business gait, and there lingers around the hatchway of their stomachs a sort of a contented and pleasing corrugation which bespeaks that they are satisfied that Jupiter Pluvius has taken charge of the weather bureau and will give our county a "miniature Noachian boom" this season. The farmers are busy preparing their agricultural implements, and should it not rain within the next week, hundreds of acres of grain will have been sown and plowing will be the special order of business among men. There

will probably be sown between 500 and 1,000 acres of wheat the coming season, quite a portion of which will be sown in Odessa wheat.

#### Legal Labyrinths.

We have due respect for the law, although we are sometimes, we acknowledge, quite at a loss to understand the peculiarity of its goings in and comings out. This does not, as a rule, interfere with the feeling of respect, for we count it our misfortune, not the fault of the law. But sometimes there are important and tangible issues involved, and when these fall into mazes of law, and are so strangled by the winding of red tape that the real points are pronounced outside the action, then we are prone to deplore the fact that the law thus subjugates the important to that which seems a mere technicality.

A case in point is the decision of the Supreme Court in the mining debris case, rendered on Monday in Sacramento. This decision is briefly reviewed by the *Sacramento Bee* as follows: "The decision does not attempt to discuss or to enter in any manner upon the merits of the subject at issue. Can, in such case, a number of individuals or companies be joined in one suit as defendants, or must a separate suit be commenced against each? That was the real and only question decided. Farmer Keyes, for the purpose of avoiding a multiplicity of law suits; for the purpose of saving the time of the courts, the time of witnesses; for the purpose of saving money to both plaintiff and defendants, as well as for the purpose of having the issue settled within his own lifetime, thought it proper to bring into court at the same time, all and singular the parties whom he charged with injuring his property by running their slickens upon his land. This, he no doubt, supposed to be the interest of peace, and neighborly feeling, and he knew that it was in the interest of economy. The defendants did not like his plan and for the purpose of tiring him out, or to deplete his purse, or to harass him, or to gain time, or to delay a final award, objected to being joined together in the suit and insisted that they ought to be served separately—that is, that instead of one suit against all, there should be a suit against each, and the court held that the defendants were right. This will be a good thing for the lawyers that may be employed. It will be the means of continuing the case in many multitudinous ways, and the end will be that only the lawyers will be benefited by the lengthened struggle; for, whether the miners are right or the farmers are right, will ultimately have to be decided no matter how the result may be reached or how long it may be delayed. We do not contend that the court was right or wrong in making this ruling. Law is law, and if those paid to comprehend it do not, who should?"

Thus it appears that, although the result is in favor of the miners inasmuch as it removes the injunction and allows the hydraulicing to proceed, while the farmers are forced to begin the legal campaign over again on broader grounds, it in no way affects the question of rights involved in the issue. This still remains to be adjusted, and we understand that the farmers, whose lands have been ruined and cities whose existence is threatened, will push the matter by a stronger organization and union of interests than has yet prevailed.

#### The Rainfall.

We have compiled the following table of the amount of rainfall for the season to the end of the last storm, at the places named. A number of places are omitted because the whole fall for the season is not given in the reports. For example, Los Angeles had over three inches during the last storm, and must be over four inches for the season, but we have not the exact figures:

Place.	1879.	Place.	1879
Napa.....	1.88	Lompoc.....	2.56
Colusa.....	1.30	Guadalupe.....	1.42
Sacramento.....	2.14	Chico.....	1.60
Gilroy.....	2.46	Lodi.....	1.80
Santa Barbara.....	2.22	Las Tablas.....	2.25
Visalia.....	1.82	Anaheim.....	2.62
Martinez.....	1.98	Salinas.....	1.92
Oakland.....	2.46	Stockton.....	1.80
Auburn.....	5.03	San Jose.....	2.22
Hollister.....	1.73	Lakeport.....	3.52
San Diego.....	3.04	Dixon.....	1.05
Sanders.....	2.13	Calistoga.....	2.40
Castroville.....	1.63	Modesto.....	3.85
Antioch.....	1.22	Forestville.....	2.69

**A GAY COW AND A HEAVY MESS.**—At the recent fair of the British Dairy Farmers' Society, prizes were offered for dairy cows giving the largest messes of milk at two milkings. We read that "the highest result was from a pure Dutch (Holstein) cow, blue and white in color, the weight being 64½ pounds at the two milkings." At first reading, "a blue and white cow" seems startling, but such is doubtless the word used to signify that lustrous black which possibly might carry a bluish tinge to the eye of a newspaper reporter, although we fear a person of less acute perceptions could hardly detect it.

THE Putes are in war paint at Carson, Nev., vowing vengeance against the Washoos.

NAVIGATION on the canals in New York will be closed Dec. 6th.

#### News in Brief.

ALEKO PASHA has arrived at Constantinople. GREAT preparations are making in Spain for the King's marriage.

THIRTEEN persons were drowned Sunday at Islay, Scotland.

THE Vatican is to issue a new daily newspaper—the *Aurora*.

ABDUL-KADIR, the famous Algerian chief, is dead, aged 72 years.

GENERAL CIALDINI, Italian Minister to France, has resigned.

BULLION in the Bank of England decreased £886,000 the past week.

W. F. WILCOX, an old citizen, died at Portland, Or., Sunday evening.

THE Sultan has ordered the re-equipment of the forts on the Dardanelles.

HEAVY gales on the English coast have caused much damage to shipping.

THE wife of Baron Manteuffel, Governor of Alsace-Lorraine, is dead.

A WOMAN and her two daughters were drowned Saturday near Columbus, Ind.

ONE of the Kahns and his brother are inciting an insurrection in Kohistan.

MEMORIAL services in honor of the late General Hooker took place at Boston.

THE shore end of the new French cable has been landed at North Eastham, Mass.

THE Czarowitch and Czarina and King and Queen of Denmark have arrived in Vienna.

THE war in New York against dealers in lottery tickets is being vigorously prosecuted.

A DROUTH of alarming proportions prevails in the section of country around Petersburg, Va.

S. M. OAKES was shot and killed at Reno, Nev., Sunday night by Mrs. Dr. T. N. Snow.

THE inquiry into the Ameer's connection with the Cabul massacre has been commenced.

AN explosion of fire damp in a colliery near Wolverhampton, Eng., caused the death of six men.

It is reported from Paris that two French explorers have discovered the source of the river Nile.

SILVER in London is quoted at 53½d; consols, 97 15-16; 5% U. S. bonds, 103½; 4s, 106½; 4½s, 108½.

A SHIPMENT of flour was made from New York Saturday, destined for Queen Victoria's kitchen.

FORTY-NINE Afghans have been hanged for complicity in [the massacre of the British Embassy.

THE German authorities have prohibited Russian steamboat traffic in the Prussian section of the river Niemen.

ENGLISH farmers and merchants, to the number of 120, some with families, left Liverpool lately for Texas.

REV. J. B. McNAMARA was installed at New York Sunday as Bishop of the Independent Catholic Church.

IN a railroad accident near Alton, Ill., Saturday, a brakeman was killed and an engineer and fireman injured.

AT Liverpool wheat is quoted at 10s 8d to 11s 6d for average California white, and 11s 5d to 11s 10d for club.

THE withdrawal of the greater part of the Turkish troops on the Greek frontier has been ordered by the Porte.

AUGUST WORHLER, who attempted to assassinate Dr. E. B. Foote in New York recently, committed suicide.

REV. ALEX. MACKONOCHE has been suspended from his ecclesiastical functions in England for ritualistic practices.

A SCHOONER foundered Friday near Point au Pelee, Lake Michigan, and the entire crew, with one exception, perished.

THE future Queen of Spain, Archduchess Marie Christine, has officially renounced her right to the Austrian succession.

IN this city half dollars are quoted at par; trade dollars, 95 buying, 96½ selling; Mexican dollars 96 buying, 96½ selling.

GENERAL GRANT announces his inability to visit Washington on the occasion of the unveiling of the Thomas statue.

A DISPATCH from Cape Town announces that hostilities between the Boers and Colonial authorities have been resumed.

FERNANDO C. BRAMAN has been appointed by the Governor of Michigan United States Senator, vice Chandler, deceased.

THE General Committee of Church Extension of the Methodist Church are holding their annual meeting at Philadelphia.

ALL the hostile Ute chiefs are gathered at the Los Pinos Agency, except Jack, who positively refuses to come in and confer with the Commission.

THE official vote of Pennsylvania for State Treasurer is as follows: Republican, 280,153; Democrat, 221,815; Greenback, 27,207; Prohibition, 3,219.

IN New York Government bonds are quoted at 103 for 4s of 1907; 102½ for 5s of 1881; 106½ for 4½; sterling, \$4.81@4.84; silver bars, 115½; silver coin, ¾@¾ discount.

#### The Free Labor Exchange.

Established by voluntary donations, for the special object of providing work for the needy and destitute, free of charge to all, continues its benevolent designs and operations. Employers of all classes of help, male or female, are earnestly requested to patronize this institution, and send their orders to the Free Labor Exchange, 33 O'Farrell St., S. F.

G. W. SCHROEDER, Manager.





### Grandpa's Thanksgiving.

[Written for RURAL PRESS by LAURA J. DAKIN.]

Well, wife, I 'spose you want the wood,  
All cut up proper fine,  
So you can do your very best  
In the cooking line.  
Because the children Thanksgiving day,  
Are coming home to dine.

Oh, won't it be a jolly day  
For two old folks like us;  
I do declare I shall enjoy  
All the stir and the fuss,  
And shan't mind if the little tots  
Do make a dreadful muss.

You make the best mince pies, wife,  
That ever man did taste;  
And the turkey is such a rouser  
That I will help you baste  
Its plump sides, so the good juices  
May not all run to waste.

You've fixed the house neat as a pin,  
The beds are dressed in white  
As though they knew the children  
Were coming home to-night.  
Oh, don't it warm our old hearts, wife,  
To feel this near delight?

We'll have out those gay China plates  
With roses on the rims;  
And the big old-fashioned goblets  
All silver to the brims.  
Why, wife, I'm so very happy,  
I feel like singing hymns!

Have you stretched the table long enough?  
Are all the new spoons on?  
Here's the place for Fred and his wife,  
And here's the place for John;  
Margaret always sat by me  
In the years past and gone.

Thomas you called your right hand man,  
But on your left was Jane,  
And next to her was darling Bess—  
She'll never come again,  
But we know that she is happy  
And free from care and pain.

She is with our dear boy Willie,  
Whom we cannot forget,  
And how he felt at Gettysburg,  
He, our pride and pet,  
Leaving us to think of him  
With love and vain regret.

But we must cheer up now, good wife,  
Before the children come,  
And make the house look glad and bright  
For all their little ones,  
Who think there is no place so nice  
As their old grandpa's home.

Soquel, Cal.

### Hester's Thanksgiving.

Miss Payne was 35 if a day, but she had managed far better than many of those who were girls with her to keep some of the old freshness in the roses of her cheeks and the old brightness and luxuriance in her brown hair.

She was thinking of old times this morning as she rolled out her flaky crusts for Thanksgiving mince pies.

Fifteen years ago she had been getting ready for Thanksgiving, just as she was doing now. But there was another in the kitchen then—a young man with a handsome face and laughing eyes, and she remembered how saucily he interfered with her work and how she threatened to shower him with the contents of the flour-bowl if he didn't behave himself; and he had dared her to put her threat into execution, and she had kept her word.

She could see him now as he stood that morning looking like a veritable miller with his eyes full of mischief as he begged so humbly for her to dust it off. And she remembered, as if it happened yesterday, how when she had undertaken the job, all of a sudden he had taken her in his arms and kissed her; and when she shook herself away from him she was such a sight to see, with powdered hair and snowy eyebrows and cheeks as white as any ghost's.

And just then her father had come in and stopped in surprise on the threshold, looking from her to John with a twinkle in his eye. And all he had said was:

"Seems to me you forgot to powder a spot on your cheek, Hester;" and then he went away chuckling, and Hester had proceeded to brush herself up, with sundry threats of dire retribution directed at the laughing culprit who had retreated to a position outside where he felt himself safe from feminine wrath.

And the next day the quarrel came which had set his feet in paths far away from that in which she had trod for 15 years, and in which she had expected to tread until the end. And she thought it all over this morning with a little sigh here and there.

Her romance was not forgotten if it was kept out of sight of curious eyes.

Yesterday she had heard that a new preacher was coming to the town.

He was to preach his first sermon on Thanksgiving, and everybody said he was a "powerful preacher."

And his name was Ashley.

"But of course it can't be him," she said to herself, as she clipped the edges of her pies,

"for he was one of the wildest, most rattle-brained fellows I ever knew, and I am sure there wasn't anything about him that could be made into a minister. But he had one of the kindest hearts in the world, and I was the one to blame."

"Some one coming here," called out Susan, her niece, from the bedroom up stairs.

Everything was in baking-day confusion, and the room wasn't swept out yet, and she couldn't attend to visitors until her cake was out of the oven.

Click went the gate. Miss Payne dusted off her hands, smoothed her shining hair, gave her collar a twitch, and was ready to answer the visitor's knock.

Something in the laughing eyes which met hers as she opened the door made her start and turn pale.

"Hester Payne, I'm pretty sure," he said crossing the threshold.

"Yes, sir," she answered, with a little catch in her voice; and you—

"Don't you know me?" he cried, "I'm John Ashley. I didn't suppose I'd changed so much that an old friend wouldn't discover some familiar look about me. I should know you anywhere."

"I'm glad to see you, John," she said, giving him her hand, with a very suspicious moisture in her eyes. "I've been thinking of you, for they said the new minister's name was Ashley. It can't be that you're the one, can it?"

"I'm the man," he answered, with a twinkle of humor in his eye. "I don't suppose it seems possible to you, or anyone else that used to know me, that I have become a minister, but it is so. It seems as strange to me as to anyone else, but I honestly believe God has a work for me to do, and I'm trying to do the best I can," he added, earnestly.

"I'm glad of it," she answered, "I always said you'd steady down, but I never thought you'd be a minister, John."

"That's right," he said, heartily. "Don't go making me anybody but John. I'm the same man you used to know, come back to renew old friendships and do the work I've undertaken."

"I'm getting ready for Thanksgiving dinner," explained Miss Payne, "and I'm busy just now, so you'll have to entertain yourself for an hour or so, till I get the things out of the oven. Then I'll be at liberty, and we'll have a good, old-fashioned visit."

"I'll come to the kitchen, and we can talk and you can work at the same time," said John; and without waiting for any reply he proceeded to do so, and put for himself a chair close to the table, where he could watch her to the best advantage. For there seemed to him to be something wonderfully attractive in her face.

How the morning flew!

It was noon before Miss Payne knew it. But then they had talked so busily that they could keep no note of time.

"I'd like to know if that man's going to stay here forever?" said Susan to the old brindle cow that night, as she drove her up from the pasture. "I should 'spose he'd feel it his duty to visit other folks. 'Stid o' that he's a-settin' round here, an' Aunt Hester and he's a-talkin' the whole endurin' time, an' he ain't said a word about any o' them things all the other ministers used to, as I've heard."

But old brindle didn't seem to be able to enlighten Susan on any point, and that young person went to bed feeling that ministers weren't what they used to be.

The minister and Miss Payne sat and talked quietly in the still twilight.

He told her all about his life since she had known him 15 years ago, and how the change had come into it which transformed him into a minister.

And then there fell a little silence about them, which neither broke for a long time.

By and by he spoke.

"I don't know why I came here first, Hester. I suppose I ought to have gone to Sawyer's, but I couldn't get by here. From the time I knew I was going to be stationed over this part I've been thinking of you and longing to talk over old times with you as I have done to-day. And some way it seemed to me as if God had a plan to carry out in stationing me over here. I don't know what you'll think about it, Hester, but I believe I could do better work in the world if you would help me. We've been parted for a good many years, but I've never loved anyone else and I never shall; and it seemed to me to-day that I took up life just where we left it 15 years ago—in this old kitchen. I've always blamed myself for what happened afterwards, and I want to confess it to you now, whether you think as I do about what I have told you or whether you don't."

"No, John, I was the one to blame," she said. "I was telling myself that this morning, not half an hour before you came. I saw it all afterwards."

"Is it yes or no, Hester?" he asked, tenderly. "We're old enough to know ourselves better than we did then. Can you help me in my life-work without regret for what you must give up?"

"I will help you!" she cried, her whole face aglow. "I shall give up nothing but loneliness, and I shall gain—you!"

What a speech to make to a minister!

If Susan could have heard it she would have become an immediate convert to the theory of total depravity. And to come from Miss Payne, too!

"God bless you, Hester, and may you never be sorry for this," he said, and kissed her with

a long, lingering kiss, while the moonlight fell about them like a benediction from heaven.

The next day was Thanksgiving, and Hester, as she listened in wrapt attention to the words of the "new minister," she declared to herself that never were thanks so eloquently expressed; and when the new minister formed one of the group at the Thanksgiving dinner in the old farm house, and he and Aunt Hester were so suspiciously happy even for a time of general rejoicing that even blunder Susan took a hint which she breathed to no one save the old brindle cow as they walked up from the pasture together as the sun was setting.

### Gems of Thought.

Truth is the most dense, yet the most transparent, of all principles.

What is fame? The advantage of being known by people of whom you yourself know nothing, and for whom you care as little.

Genius is too often like the bird of paradise, all wings. When it wishes to alight or settle on anything, it finds no support.

Those who excel in strength are not most likely to show contempt of weakness. A man does not despise the weakness of a child.

Nothing betrays a greater ignorance of the world, of the human heart, and of good manners, than the assumption of a self-sufficient, dictatorial tone in conversation.

A smile is ever the most bright and beautiful with a tear upon it. What is the dawn without the dew? The tear is rendered by the smile precious above the smile itself.

If thou art wiser than the many, do that which thou thyself approvest, rather than what they may look at; and be assured that when they admire the most, thou hast not done something wrong.

A happy home is one spot in all this beautiful world where the most perfect rest is found, and the most undivided confidence given. Its joys are like the flowers of paradise, perpetual in their fragrance, and most delicate in their beauty.

There is a proper pride which is commendable, and which is the offering and safeguard of self-respect. We should avoid haughtiness, arrogance, and presumption; but we may, and should harbor a proper degree of pride—a pride based upon self-respect, which prompts us to endeavor to preserve it.

Great thoughts belong only and truly to him whose mind can hold them. No matter who first put them in words, if they come to a soul and fill it, they belong to it, whether they floated on the voice of others, or on the wings of silence and the night.

There are four good habits we should strive to acquire, viz.: punctuality, accuracy, steadiness, and dispatch. Without the first, time is wasted; without the second, mistakes, the most hurtful to our own credit and interest and that of others, may be committed; without the third, nothing can be done well; and without the fourth, opportunities of advantage are lost, which it is impossible to recall.

THE END OF THE WORLD.—A lecture was lately delivered at the Berlin University, bearing the above ominous title. The learned professor argued that every movement upon our planet, with the exception of ebb and flood tide, which are caused by the attraction of the moon, is occasioned by solar heat. As, however, the sun loses a portion of his caloric every year, science has lately come to the conclusion that as an emitter of warmth, the sun will only last 17,000 years longer. During that space of time our earth will get colder and colder, in proportion as the solar heat shall diminish. The ice will advance from the poles to the equator; the earth's population will gradually recede before the advancing glaciers; the sun will become less and less luminous, until he will present the appearance of a dark red ball; and finally ice will annihilate all vitality on our planet. It is very easy to establish an admitted hypothesis. If solar heat is the source of motion, of course its withdrawal will produce lamentable consequences. Anybody can understand that. But science has not established any such fact. Another scientific writer whose name has escaped our memory, demonstrated with mathematical precision, that the earth's orbit is gradually contracting and the earth approaching nearer the sun in consequence, until finally our planet will become food for solar heat, so far as it goes. Perhaps both theories are partially true. If the sun is losing annually a portion of its heat, so also is the earth annually approaching the sun and in about the same ratio, so that terrestrial conditions must remain unchanged. Climate may have something to do with these theories. A native of the tropics would probably be convinced that we are approaching nearer the sun, while the Laplander might argue that it was losing its heat. The natives of the temperate zones would be divided in opinion, depending upon an unusually cold winter or hot summer, or vice versa.

By an oversight of the proof-reader, the article entitled "Will-o-the-Wisp," was credited to Mrs E. E. Greenman, instead of Miss Mary E. Benton, the author. We hope to have more of the same kind from the same source.—*Work and Play.*

### Deserts and Oases.

Few of us, I will venture to say, often think how completely environed our State of California is, on two sides—south and east, by deserts. Deserts very little more attractive or less dangerous than those of Africa. What we do not like to tell strangers, but which is nevertheless true, is that the largest and most desolate one of them all is in the southern part of California itself, and it occupies no small part of the state, as it stretches north and west from all along the line of the Colorado river, for 150 to 200 miles.

If a person travels on either bank of the Colorado river, and even many miles inland, it would be difficult for him, by any difference of characteristics in the landscape, to tell whether he was in California or Arizona. The close proximity of the river seems to have no effect upon the land in benefiting it, beyond the immediate and temporary effects of its overflow. Even the vegetation so produced is short lived, for the merciless and capricious river most often changes its channel by a great sweep to one side or the other, where, in the absence of mountains, broad bottom-lands are formed, and in its destructive voraciousness eats away in a day whole miles square of half matured trees, that have taken rapid root in the alluvial soil.

From a mountain-top, the river may be traced for miles and miles by the green fringe of tall trees, except when a mountain chain is cut through, and then the river, the barren rocks and sand confront each other in stolid indifference. The eternal glaring sun pours down by day upon the great level stretches of stony mesa, upon the burnt and scarred mountain chains; and the moon by night lights up the scene with a softening touch, transforming the jagged rocks and groups of stately column cactuses, sometimes reaching twenty-five feet in height, into mysterious forms, and touching up the solitary stunted trees of the dry water-courses so as to make one think them garden groves. Little flowers grow in this country. One could scarce believe it. Yes, grow in such abundance that they color the very sand hills white, or pink, or purple. Even this country has its redeeming trait and time, and in the spring, after a few showers of rain, the sand sends forth numberless flowers, as if that was its occupation all the time, and none other. White lilies stare at one, bursting through the sand, and one cannot walk without stepping on a perfect carpet of pink flowers that resemble verbenas. One species of cactus bears a rose-like flower; another, bunches of brilliant coral-like blossoms.

Oases are not to be found everywhere, but some of the little groves on the lowlands of the river, spots where nature seems to have stopped in her waste to produce a thing of beauty and life, astound one by their shady freshness and the evidences of life. There you hear the most musical of birds; the air is alive with the hum of insects; a wildcat has left the print of his trail on the damp ground, and just the other side of the underbrush you detect the peaceful quack, or splash, of the wild duck in some retired pool.

The thought, I suppose, that such a spot is closed in by desolation on every side makes it doubly charming, and one feels loth to leave it, after wandering on a hot day over sand and rocks. These pleasant places verify the old saying, that there is good to be found in almost everything, even in an Arizona or California desert.—*L. A. M., in Work and Play.*

ONE IN THEORY, BUT TWO IN PRACTICE.—A rustic bridegroom left his bride on the station platform at Troy, and bought a ticket for Chicago by way of the Albany and Susquehanna. When the train was made up the affectionate pair settled themselves in the rear of the car and began to drink beer and make merry. When the conductor came along the groom handed him the Chicago ticket, whereupon this dialogue ensued: Conductor: "Where is your other ticket?" Groom: "Why, I ain't got one." Conductor: "Well, is this lady with you?" Groom: "Why, yes, of course, she is." Conductor: "Well, where is her ticket?" Groom: "Why, Mr. Conductor, she is my wife. Don't you know, why, we just got married; my wife, don't you see; we don't need but one ticket." The conductor could not make the bewildered groom understand the rules of the road, and that it would require two tickets to carry them to Chicago, and finally when the train reached Schenectady, the bridal party were put off. They took the next train back to Albany in search of the man who had sold the ticket that was not good for man and wife.

ROSE TERRY COOKE'S EXPERIENCE IN LEARNING TO SEW.—I shall never forget my own childish sulks and tears over my sewing. My mother was a perfect fairy at her needle and her rule was relentless. Every long stitch was picked out and done over again, and neither tears nor entreaties availed to rid me of my task till it was properly done; every corner of a hem turned by the thread; stitching measured by two threads to a stitch; feeling of absolutely regular width, and patching done invisibly; while fine darning was a sort of embroidery. I hated it then, but I have lived to bless my mother's patient persistence; and I am prouder to-day of the six patches in my small girl's school-dress, which cannot be seen without searching, than any other handiwork—except perhaps my bread.



## Chaff.

A SCHOOLMISTRESS asked a child what s-e-e spelt. The child hesitated. Said the teacher: "What do I do when I look at Mr. Smith?" "Thquint," replied the pupil.

POSTMAN'S FRIEND: "Got a heavy load, John?" Postman: "Load? I should think so. Blow this wet weather, I say. Folks can't get out, so sits indoors and does nothing but write all this ere stuff to one another."

ALL the spelling reforms of all the men in all the world will not succeed in lessening the intensity of the school-boy's affection, who scrawls on his slate with a broken pencil: "I lu yu," and hands it across the aisle, with a big apple, to a pretty little blue-eyed girl who reads in the Second Reader.

AN American tourist was visiting Naples, and saw Vesuvius during an eruption. "Have you anything like that in the New World?" was the question of an Italian spectator. "No," replied Jonathan, "but I guess we have a mill-dam that would put it out in five minutes!"

THE Virginia City Stage explains that Buttermilk canyon is in the Paradise mountain, northeast of Eden, about ten miles from "Gouge-Eye," on the road leading from "Limburger," to "Whoop-em-Up," via "Bull Town," "Lay-em-Out" and "Hungry," and just over the mountains from "Buug-Eye" and "Knock-em-Stiff."

WHAT BROUGHT HIM TO PRISON.—The following conversation between a colored prisoner and a temperance lecturer who was in search of facts to fortify his position and illustrate his subject, explains itself: "What brought you to prison my colored friend?" "Two constables, sah," "Yes, but I mean had intemperance anything to do with it?" "Yes sah; dey wuz boff uv 'em drunk."

## Do Good.

Thousands of men breathe, move, and live, pass off the stage of life, and are heard of no more. Why? They do not a particle of good in the world; none are blessed by them as the instrument of their redemption. Not a word they spoke could be recalled, and so they perished. Their light went out in darkness, and they were not remembered more than the insects of yesterday.

Will you thus live and die, O man immortal? Live for something. Do good, and leave behind you a monument of virtue that the storm of time can never destroy. Write your name in kindness and love and mercy on the part of thousands you may come in contact with, year by year. You will never be forgotten. No! Your name, your deeds, will be as legible on the hearts you leave behind as the stars on the brow of evening. Good deeds will shin as the stars of heaven.

A HEROIC WOMAN.—It is related that in the year 1786, the Grand Master of the Knights of Malta sent, as a present, a costly bracelet of rubies to Madame du Fretoy, a French lady of great beauty, in token of her extraordinary and gallant conduct, when a Algerine corsair attacked the vessel in which he was a passenger. This lady was in a polacr, bound to Genoa, and the Algerine coming alongside poured in a broadside, and then grappling with her, a number of the Algerines hoarded her sword in hand. The crew were about to submit to the enemy, when Madame du Fretoy snatched a saber from a wounded sailor, and wielded it with astonishing courage and effect. The crew, animated and inspired by such an example of female valor, fought with enthusiasm, killed several of the pirates; and drove the remainder back to their own vessel. When this lady reached the shore, she was everywhere greeted with acclamations by the populace. The laquis de Christeaux waited upon her, and with his own hands placed a crown of laurel on her head, and a portrait of her was taken for the Queen of France.—*Scrap of History.*

FEMALE DELICACY.—Above all other features which adorn the female character, delicacy stands foremost with the province of good taste. Not that delicacy which is perpetually in quest of something to be ashamed of, which makes merit of a blush, and simpers at the false construction its own ingenuity has put upon an innocent remark—this serious kind of delicacy is far removed from goosense; but the high-minded delicacy which maintains its pure and undeviating walk alike among woman and in the society of men—rich shrinks from no necessary duty, and campeak when required, with a seriousness and kindness, of things of which it would be ashamed to smile or blush—that delicacy which knows how to confer a benefit without wounding the feelings of another—which can give alms without assumption, and pains not the most susceptible being in creation.—*N. Y. Home Journal.*

Look on the bright side. It is the right side. The times may be bad, but it will make them no easier to wear a gloom and sad countenance. It is the sunshine, and not the cloud, that makes the flower. The sky is blue ten times where it is black once. You have troubles; so have others. None are free from them. Trouble gives sinew and tone to life—fortitude and courage to man. That would be a du sea, and the sailor would never get skill, who there was nothing to disturb the surface of the ocean. What though things look a little dark, the lane will turn, the night will open into a broad day. There is more virtue in one sunbeam than in a whole hemisphere of clouds and gloom.

## Young Folks' Column.

## Our Puzzle Box.

## Cross-Word Enigma.

My first is in small, but not in large;  
My second is in ship, but not in barge;  
My third is in smooth, but not in rough;  
My fourth is in soft, but not in tough;  
My fifth is in quick, but not in slow;  
My sixth is in scull, but not in row;  
My seventh is in hearse, but not in bier;  
My eighth is in smile, but not in tear;  
My ninth is in prose, but not in rhyme;  
My tenth is in peace, but not in dime;  
My eleventh is in birds, but not in mates;  
My whole is a river in the United States.

JERRY.

## Syncopeans.

1. Syncopeate to reduce by friction and obtain a contest between nations.
2. Syncopeate a portion and obtain a gentle blow.
3. Syncopeate to peruse attentively and obtain a pretty color.
4. Syncopeate a poet and obtain not good.

ANTHONY.

## Charade.

In pans the lactal fluid was held,  
As Jenny tripping came toward it;  
And then, with steady arm and careful hand,  
Gently into my first she poured it.

One night I passed the open convent gate;  
And as I slowly walked along,  
Within its darkened walls I glanced, and saw  
My second's form—nay, more—a throng.

Across the ocean's stormy wave I've roamed;  
Into the pasha's land I've passed;  
And oft my whole I've heard on hill and plain,  
Storming armies in battle massed.

MELANTHON.

## Buried Cities.

1. Is a command from Gen. Brown to be implicitly and unquestionably obeyed?
2. The riot act was read to the mob a third time.
3. Form a cone as perfectly as possible.
4. They describe the ascent of Mount Blanc as terrible.

UNCLE CLAUDE.

## Diamond Puzzle.

1. A consonant.
2. An instrument for catching fish.
3. A kind of meat.
4. A mercantile paper.
5. To raise.
6. To open.
7. Found in tenacity.

THEO.

## Answers to Last Puzzles.

NUMERICAL ENIGMA.—Stolen waters are sweet, and bread eaten in secret is pleasant.

PROBLEM.—9,731 rods.

DECAPITATIONS.—Scrawl, crawl, awl, law.

BLANKS.—1. Vile, evil, Levi. 2. Time, emit. 3. Part, trap. 4. Shut, thus.

DOUBLE ACROSTIC.—

G arl C  
U nit Y  
L uir M  
Thum B  
Alpac A  
Repeat L

## Gussie's Ride.

It was a mite of a boat just large enough for two, that belonged to Gussie's fourteen-year-old brother, Rohert.

It was painted blue and white, and was named "The Arrow," because it flew over the water so swiftly.

It was Gussie's one great wish to ride in this pretty boat all alone.

He wanted to make it go "just his own self," he said, and his mamma had answered:

"Gussie is too small a boy. He must wait till he wears pants. Then, some time, he shall go in the boat."

Gussie did not forget the promise, though his mamma did, and the first thing he did when the long-coveted trousers were put on was to straighten himself up to his very highest, and say:

"Now, mamma, don't you he at all worried about me! I shan't be a bit."

Of course mamma laughed at this speech, and then went away to her work, while Gussie, with Rover at his heels, went as straight as he could go down through the garden path to the river.

"The Arrow" was rocking lazily to and fro on the water.

Gussie loosened the chain that held it. Then he got into the boat, Rover followed, and away they went, slowly at first, but faster as they neared the middle of the stream.

Gussie clapped his hands in delight.

"It's nice to wear pants and go boating all alone, ain't it, Rover?" said he, and in the next breath:

"I hope they'll have lots of pudding for dinner. S'pose I'll eat more now, course."

Pretty soon Gussie thought of something.

"O Rover, I shall be nervous, I know. We didn't bring no oars."

Rover blinked his eyes very hard, and looked as if he was very well satisfied as things were, and presently Gussie said:

"It's just as nice this way, after all, and nicer, for if I had oars, I'd have to oar the boat, and now I've got nothing to do but 'joy the ride.'"

Rover was fast asleep now, and Gussie hoisted an umbrella which he found under the seat, "just for company," as he said to himself, and then he fell to watching the trees and bushes go past with eyes that wouldn't stay open try as he would.

Once the boat bumped against a stone, and that brought them wide open enough, and Rover's too.

"I guess that was a big fish—hope 'tain't a whale though; we might be swallowed up, mightn't we, Rover?"

Rover blinked, as much as to say he thought so, and Gussie leaned over the side of the boat to look for fish.

"O, Rover, there's red things away down in

the bottom that may be gold, or pearls, or something, and if you wasn't the sleepest-headed dog in the world, you'd dive down and bring up some."

Rover knew something was wanted of him, no doubt; for he went over and sat down behind him, watching him as closely as if he had never blinked in his life.

Gussie had his hands in the water. He thought he could almost reach what was in the bottom. He tried a little harder. His heels flew up in the air, and in the next instant he would have been in the river had not the dog caught his clothing, and held him back. Gussie didn't care for the red stones after that. So he turned round, and putting his arms about Rover's neck, and drawing the umbrella over them both, went to sleep.

The boat went on and on, till it came to a bend in the river, where it followed the current in near the shore. Then all of a sudden it lodged in the branches of a fallen tree, and Gussie's boat-ride was ended.

When he awoke he was conscious of hut two things, hunger and loneliness. Even Rover was not with him. The leaves were so thick about him that he could see neither the bank nor the water.

When Gussie was sure that the dog was really gone, and that the boat was fast, he hurried his hands in the pockets of his new pants, and cried with all his might.

By-and-by he stopped crying to listen. Some one was wading in the water, then his father's form parted the branches of the tree, and Gussie was in his arms in a moment.

Rover had guided the gentleman to Gussie's enforced retreat.

"Pants is no good!" said Gussie that night. "You might just as well wear dresses for all the better you're off with them."—*Mrs. A. E. Story, in Youth's Companion.*

## GOOD HEALTH.

## Is Alum Poisonous?

This question has caused a good deal of discussion. Alum is used by many bakers to whiten their bread, enabling them to use an inferior flour. It is more extensively employed as a cheap substitute for cream of tartar, in the manufacture of baking powders. It has not been considered immediately dangerous; although if continued it induces dyspepsia and obstinate constipation. But the fact that many cases of poisoning have occurred from baking powders which contained alum, puts the question in a more serious aspect, and prudent people will exercise caution in selection of baking powders.

Under what conditions, then, does this substance—formerly used only for mechanical or medicinal purposes—become poisonous? They are certainly obscure, and at present we can only surmise what they may be. We suspect that the cause exists in the individual poisoned; some peculiarity of the constitution producing a morbid change in the secretions of the stomach, with which the alum combines and forms an active poison; or the secretions may be healthy but in unusual proportions, and that these less or greater proportions, in combination with the alum, constitute a poison.

For example: Two parts of mercury and two parts of chlorine form calomel, which is not poisonous; but change the proportions to one part of mercury and two parts of chlorine, and we get corrosive sublimate, which is a deadly poison.

Then, again, we know nothing of the causes of constitutional peculiarities. Why is it that one person can eat all kinds of green fruit and vegetables with impunity, while the same course might cost another individual his life? One person can handle poison ivy and sumac without being in the least affected, another is poisoned if he approaches to within 10 feet of them. Out of a family residing in a malarial district, some of its members will suffer half the year with fever and ague, while the others will enjoy excellent health during the entire year. Foods that are wholesome to some persons are actually poisonous to others. This is especially true of some kinds of fish. There is no safety in taking alum into the stomach, as it is shown to be always injurious, and often dangerous. Baking powders properly compounded, and containing pure cream of tartar instead of alum, are more convenient than yeast; and bread and pastry made with them are just as wholesome, and far more palatable.—*Hall's Journal of Health.*

ENEMIES OF HUMAN LIFE.—An English paper, *Capital and Labor*, thinks that, while excessive labor, exposure to wet and cold, deprivation of sufficient quantities of necessary and wholesome food, habitual lodgings, sloth and intemperance, are all deadly enemies to human life, none of them are so bad as violent and ungoverned passions. Men and women have survived all the former, says the writer, and at last reached an extreme old age, but it may be safely doubted whether a single instance can be found of a man of violent and irascible temper, habitually subject to storms of ungovernable passion, who has arrived at a very advanced period of life. It is, therefore, a matter of the highest importance to every one desirous of preserving "a sound mind in a sound body," to have a special care amid all the vicissitudes and trials of life, to maintain a quiet possession of this own spirit.

## DOMESTIC ECONOMY.

ORANGE AND LEMON MARMALADE.—Take equal weights of fine loaf sugar and Seville oranges, wipe and grate the oranges, but not too much, cut the oranges the cross way, and squeeze out the juice through a small sieve. Scrape off the pulp from the inner skins, and pick out the seeds. Boil the skins till perfectly tender, changing the water, to take off part of the bitter. When cool, scrape the coarse, white and thready parts from the skins, and thrusting three or four skins together for dispatch, cut them into narrow chips. Clarify the sugar, and put the chips, pulp, and juice to it. Add, when hoiled for 10 minutes, the juice and grate of two lemons to every dozen oranges. Skim and boil for 20 minutes; pot and cover when cold. Lemon marmalade may be made as above, but is seldom seen.

TO PRESERVE GREEN TOMATOES.—Take two fresh lemons to every three pounds small green tomatoes; pare the rinds very thin, so as not to get any of the white part, and squeeze out the juice; first boil the tomatoes gently until they begin to get tender, in sufficient water to cover them well, then add the lemon, a few peach leaves and powdered ginger tied in thin muslin bags; hoil together until the tomatoes are tender; take them carefully out; strain the liquor and put to it one and one-fourth pounds white sugar for each pound of tomatoes; put the tomatoes into the syrup and boil gently until they appear to be done. In the course of a week pour the syrup from the tomatoes, heat it scalding hot, and pour it over them. They resemble West India sweet meats.

LEMONS AND ORANGES PRESERVED IN SUGAR.—Wipe the fruit clean and dry. Cut upon the rind any devices of stars, rings, flowers etc., being careful not to cut lower than the white pith. Throw them into a saucepan of cold water; put this on the fire and let them hoil till rather soft, then throw them into cold water. When they are cold, drain and wipe them very dry, then put them into boiling syrup, and let them hoil three or four minutes; afterwards empty out the whole together to cool. The next day repeat the boiling in syrup. This may be repeated the third day. When cold, they are to be poured into glass jars, syrup and all.

JELLIED VEAL.—Cut a knuckle of veal into three pieces; place it in boiling water and keep on the simmer until the bones will slip out; chop the meat fine and strain the liquor in which it was hoiled; then season it with salt, pepper, allspice and onions chopped fine, and hoil it again until there is not much over a pint. Place the chopped meat in a mold; turn over the liquor; let it stand over night and serve in thin slices, garnished with sliced hard-boiled eggs and bits of parsley. The juice of a lemon will improve the jelly and the peel can be grated into the meat for seasoning, which will be preferred to the allspice by many persons.

MINCED VEAL AND EGGS.—Take some remnants of roast or braised veal, trim off all browned parts, and mince it very finely; fry a shallot, or onion, chopped small, in plenty of butter; when it is a light straw color add a large pinch of flour and a little stock, then the minced meat, with chopped parsley, pepper, salt and nutmeg to taste; mix well, add more stock if necessary, and let the mince gradually get hot by the side of the fire; lastly add a few drops of lemon juice. Serve with sippets of bread fried in butter round, and the poached eggs on the top.

FOR SCALLOPED OYSTERS.—Have plenty of fine crushed cracker crumbs—either soda or butter crackers; put a layer in the bottom of a buttered pudding dish; wet slightly with oyster liquor and milk mixed; next a layer of oysters, alternately till the dish is full. Let the top layer be of crumbs. Beat an egg and mix it with a little milk to pour it over the top, cover the dish and bake half an hour; remove the cover a few minutes before taking from the oven to let it brown.

BROWNED TOMATOES.—Take large, round tomatoes and halve them; place them, the thin skin down, in a frying-pan in which a small quantity of butter has been previously melted; sprinkle them with salt and pepper and dredge them well with flour; place the pan on a hot part of the fire and let them brown thoroughly; then stir them and let them brown again and so on until they are quite done. They lose their acidity and the flavor is superior to stewed tomatoes.

CELERY PICKLES.—Take good-sized cucumbers, slice on a vegetable slicer quite thin, and pour a weak brine, boiling hot, over them, and let stand 24 hours; then to a gallon of vinegar add an ounce of white mustard seed, one of celery seed, and half a teaspoonful of pulverized alum; boil and turn over the pickles. Put in old pickle bottles and seal, or in a jar with a cloth over, rinsing the cloth occasionally.

BEEF JUICE.—Broil a thick cut of fresh, juicy steak over the coals for one minute. Put it over a warm bowl set in a basin of hot water; cut it in many places, and with the aid of a meat squeezer press out all the juice. Salt it slightly, and serve, free from fat, with a wafer cracker. This is a simple recipe but invaluable.





DEWEY & CO., Publishers.  
A. T. DEWEY. W. B. EWER.  
Office, 202 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.  
ADVERTISING RATES: 1 week. 1 month. 3 mos. 12 mos.  
Per line..... .25 .80 \$2.00 \$5.00  
Half inch (1 square)..... \$1.00 \$3.00 7.50 24.00  
One inch..... 2.00 5.00 14.00 40.00

The Scientific Press Patent Agency.  
DEWEY & CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. G. H. STROGO

SAN FRANCISCO:  
Saturday, November 22, 1879.

### TABLE OF CONTENTS.

**EDITORIALS.**—The Boom in the Lumber Interest; The Dried Beet Question; Pickled Olives; Ostrich Farming in Algeria, 321. The Week; The Public Schools of California, 328. Letters from Southern California.—No. 4; National Agricultural Society; Design for Village Residence; Light vs. Heavy Oats; Horticultural Society Meeting, 329. Notices of Recent Patents; Sugar Beet Pulp as Stock Feed; Explanation of the Course of the Wheat Cable, 332.  
**ILLUSTRATIONS.**—General View of the Ostrich Park of Madame Carriere, near Algiers, North Africa, 321. Design for Two-Story Cottage, 329.  
**QUERIES AND REPLIES.**—Seedling Apples; Ramie Fiber Manipulation; Early Peabody Sweet Potato, 328.  
**ENTOMOLOGICAL.**—Apple Tree Scale Insects; Woolly Aphis, 328.  
**CORRESPONDENCE.**—Tuolumne County Notes; Notes on Carp Growing, 322.  
**THE FIELD.**—Cultivation and Fertility; The Beet Sugar Question, 322.  
**POULTRY YARD.**—Pomeranian Geese; Turkey Fattening; To Make Hens Lay, 322.  
**THE PUBLIC LANDS.**—Report of the United States Land Office, 323.  
**THE APIARY.**—Beginnings in Beekeeping.—No. 2; The Bee of the Future; Electricity in the Apiary, 323.  
**THE DAIRY.**—Experience with Forage Plants, 323.  
**PATRONS OF HUSBANDRY.**—Memorial Address to Alhambra Grange; How Shall the Grange be Made Useful and Powerful; The Extravagant Farmers; Bank Commissioners' Report on the Farmers' Bank, 325.  
**AGRICULTURAL NOTES** from the various counties of California, 324-325.  
**NEWS IN BRIEF** on page 325 and other pages.  
**HOME CIRCLE.**—Grandpa's Thanksgiving (poetry); Hester's Thanksgiving; Gems of Thought; The End of the World; Deserts and Oases; One in Theory, but Two in Practice; Rose Terry Cooke's Experience in Learning to Sew, 326. Chaff; Do Good; A Heroic Woman; Female Delicacy, 327.  
**YOUNG FOLKS' COLUMN.**—Our Puzzle Box; Gussie's Ride, 327.  
**GOOD HEALTH.**—Is Alum Poisonous? Enemies of Human Life, 327.  
**DOMESTIC ECONOMY.**—Orange and Lemon Marmalade; To Preserve Green Tomatoes; Lemons and Oranges Preserved in Sugar; Jellyed Veal; Minced Veal and Eggs; For Scall-pot Oysters; Browned Tomatoes; Celery Pickle; Beef Juice, 327.  
**MISCELLANEOUS.**—A Thoughtful Government; A New People; Engineering Triumph; Traveling Rocks in Canada; Inuitation Oak Floors; Singular Cave, 330. Nordenskjöld's Northwest Passage, 332.

### Business Announcements.

Thos. Meherin, Seedsman, S. F.  
To Let, Bartlett Vineyard, San Bernardino, Cal.  
Improved Sowing Machine, P. Saxe, Agent, S. F.  
Christmas Cabinet, Eureka Trick and Novelty Co., N. Y.

### The Week.

Before another issue of the PRESS reaches the hands of readers, the National Thanksgiving holiday will have come and gone, having, we trust, filled many homes with joy and brightened many hearts with sincere rejoicing and thanksgiving. That we may add our word to the official commendation for observance of the day, we take this occasion to call upon all to banish care and anxiety, and give the day to heartfelt praise to the All-giver. Let all celebrate the day in the old historic way. Let thus our homes be cheered again by the presence of those who have wandered; and as our homes upon this far-away shore are thus filled with the joy of reunions, let us not forget the older homes whence we came, and assure our distant loved ones that in spirit we rejoice with them.

### Proclamation.

In harmony with the proclamation of the President of the United States, designating a day of national thanksgiving and prayer, and in pursuance of a custom generally, if not universally, observed by the Executives of the States of the American Union, as well as in response to the religious emotions and impulses of a Christian people, who recognize their dependence on Almighty God for all the blessings they enjoy, I, William Irwin, Governor of the State of California, do hereby appoint Thursday, the 27th day of November, 1879, to be observed by the people of said State, as a day of thanksgiving and praise to Almighty God. The past year has been one of much material prosperity; the laws have been impartially enforced and order strictly maintained; and the people have enjoyed the inestimable blessings of civil and religious liberty. I, therefore, most earnestly call on them to meet, on the day above designated, in their accustomed places of public worship, and render to the Giver of all Good, devout thanks for the many blessings He has bestowed on us as individuals and as a people.

In testimony whereof, I have hereunto set my hand, and caused the Great Seal of the State to be affixed, at the city of Sacramento, California, this 15th day of November, in the year of our Lord, 1879.

WILLIAM IRWIN, Governor.

### The Public Schools of California.

The school system of California has been often pronounced, by experts, one of the best ever organized, and in some points it has proved superior to all its rivals. In this State only have teachers "a legal right to be examined exclusively by members of their own profession;" and she alone "recognizes the State Normal School diploma or the life certificate of other States as entitling the holder to the same legal immunities as are enjoyed by the holders of our own." An act, passed in 1874, provides that "females employed as teachers in the public schools of this State shall, in all cases, receive the same compensation as is allowed male teachers for like services, when holding the same grade certificates."

The report of Dr. E. S. Carr, State Superintendent of Public Instruction, upon the condition of the public schools for the two years ending June 30th, 1879, is before us. Of this orderly, comprehensive and interesting document, we present an outline and some leading features; and would make more copious extracts from its 50 pages, did space permit.

The number of schools at the above date was 2,743; the attendance, 144,806 out of 216,404 census children, and the amount paid to teachers, \$2,285,732.39.

In his introductory remarks, Dr. Carr argues at length concerning the value of education to the State. The Constitution of '49 was based upon the fundamental principle: "That it is the duty of a republican government, as an act of self-preservation, to educate all classes of the people, and that the property of the State should be taxed to pay for that education."

"The first people is that which has the best schools; if it is not so to-day, it will be tomorrow." Prof. Huxley has truly told America that her sole safeguard and one condition of success is "the moral worth and intellectual clearness of the individual citizen." To this, Dr. Carr adds as another indispensable condition, the industrial capacity, or self-maintaining power of every citizen, through which alone the moral worth and intellectual clearness of the masses must find expression. There is now a strongly marked tendency toward such reform as shall render practically useful the knowledge gained in the schools. The demand is that culture studies shall give way to wage-earning studies.

Another marked tendency is toward improved methods of primary instruction. Froebel's motto, "let us live for the children," is now heard in an ever-swelling chorus. The highest educational honors are to-day bestowed on the nation which lays the broadest foundations for universal popular intelligence.

Under the old Constitution, a Superintendent of Public Instruction was elected every four years; the Legislature was required to "encourage, by all suitable means, the promotion of intellectual, scientific, moral and agricultural improvement;" while the proceeds of all lands granted by the United States for the support of schools, the 500,000 acres granted to new States by Act of Congress, approved 1841, together with all estates of persons dying intestate and without heirs, and certain other means, were inalienably dedicated to the support of common schools. It was made imperative upon the Legislature to provide (1) for a system under which a school should be kept up in each district at least three months in every 12, and (2) for the support of a University, "with such branches as the public convenience may demand."

The new Constitution, while recognizing such high, evening, normal and technical schools as may be established by Legislative, municipal or district authority, requires that the whole revenue derived from the State school fund and the State school tax shall be applied to the support of primary and grammar schools exclusively.

The original magnificent endowment by the general Government, amounting to millions of acres, was ample, had it been wisely cared for, to have given free elementary education to every child in the State, without resorting to taxation; but "the frauds upon posterity, committed under cover of law in the management and sale of school lands, have been too well known to need comment." Had the State of California, in disposing of this inheritance of her children, protected the settler instead of the speculator, we should not be hearing to-day complaints of the cost of our schools.

Dr. Carr maintains the justice of the present system of taxation for schools. "Why should San Francisco pay for the schooling of the cow counties? Because a State is an organization, and no speedier means could be devised for its destruction than would result from the atrophy of its extremities, by withholding an equal support to all the schools, an equal education to every child. \* \* \* Every dollar hitherto expended belonged to the children, and the claims of the future are equally just."

The State having made generous provision for the training of her children, it appears consistent to require their attendance upon school; and the principle of compulsory education is conceded by all advanced and progressive peoples. The Legislature of 1873-74, therefore, passed an act to enforce the educational rights of children; but having never become popular among our citizens, it remains upon the statute book a dead letter.

At the close of a careful resume of the legislation, since 1851, upon matters of school policy,

the Superintendent remarks: "A school system cannot be manufactured—unless it is a growth, an organism, in which every part has fitted itself to a felt want of the community, it is not worthy of the name. \* \* \* Our school system is such a growth; its imperfections can be remedied; its direction changed as the people become more intelligent, thoughtful and patriotic. Whoever seeks to amend or improve upon it, needs first of all to understand what has been done, and why; and to remember that parsimony will evade, ignorance maladminister, or apathy render inefficient the best school laws, unless their execution is watched over and enforced by intelligent, active and independent supervision."

Comparing existing laws and regulations with Article IX, and especially Section 7, of the new Constitution, Dr. Carr avers "that the essential features of a State, as distinguished from any other system for the maintenance of public schools, have been abandoned, and the most important element of State control, viz., the determination of the qualification of teachers and selection of text-books, is now relegated to local municipal boards, city and county. We have thus gone back twenty years, and unless the wisdom of the Legislature should prevent, may experience all the evils which result from the lack of unity in plan, in standards and in control."

The University has, it is claimed, "reached the ideal standard of its original projectors, with full departments of Law and Medicine; courses or Colleges of Agriculture, Mechanics and Engineering, and affiliated Colleges of Dentistry and Pharmacy. The faculties of the University are of unexceptionable ability in all the departments, and include the names of several gentlemen who brought continental reputations as teachers and scientists to this new field."

Statistics are given respecting the Normal School, and praise is accorded for the economy and efficiency of its management.

The State Asylum for the Deaf, Dumb and Blind is also noticed with high commendation.

The many private and denominational institutions of learning are approvingly mentioned; particularly Miss Marwedel's Normal Kindergarten School at Berkeley, and Miss Kate D. Smith's Kindergarten in San Francisco, which is at once a model of its kind and a mission to the juvenile hoodlums.

The latter part of the report is devoted to "outlooks" and various "suggestions and recommendations." Under the former head some account is given of what has been done in technical and industrial education in the State of Massachusetts and in European countries. With a summary of the duties and work of the State Superintendent this valuable pamphlet closes.

### ENTOMOLOGICAL.

#### Apple Tree Scale Insects.

EDITORS PRESS:—I send you some twigs and fruit covered with the scale insect that is killing our trees. I hope you can give us some information on the subject.—G. W. TARTLETON, San Jose.

The specimens were sent at our request, as we heard indirectly of a scourge visiting the locality. The twigs sent by Mr. Tartleton were badly infested, so that there was hardly room to stick a pin between the scales in some places. There seems to be several species of scale insects combining to do this work. One is the well-known oyster-shell bark louse (*Aspidiotus conchiformis*), which was fully described and illustrated in our issue of May 31. There are other species which we do not recognize, and we shall send specimens to Washington for identification. The scale insects of this class differ in the size, shape and color of the scale, the color of the eggs and larvæ and in other points which the entomologist would recognize. Their work is of the same kind and done in the same way. The scales are the remains of females and serve as covers for the eggs. From these eggs the lice hatch, and when grown the females become fixed upon the bark and lay eggs for another generation. The difficulty in killing off the pest consists in reaching the eggs beneath the scales. Alkaline washes will kill the insects when outside the scales, but the latter, being impervious to most applications, the eggs are unharmed by many liquids which destroy the free insects. If a vigorous rubbing with a stiff scrubbing-brush is given, that is if the trees are scrubbed with soap suds as a floor is scrubbed, the scales are dislodged and their contents destroyed. This, however, calls for much labor. One of our San Jose readers, Mr. Britton, if we remember correctly, sent us some time since some twigs, which he had painted with a solution of concentrated lye, and there seemed to be no life in or out of the scales. The same result has been attained in some experiments with a mixture of kerosene oil and water, but this must be used cautiously and not too strong, for some plants are quite sensitive to kerosene. Prof. Hilgard lately gave us an article describing his success with a steep of the Buhach power (not allowing the solution to boil); the application cleaning off the scales satisfactorily.

There is nothing in the visitation at San Jose which cannot be overcome by diligent work. Of course this causes expense, but this is the cost of good fruit and healthy trees nowadays. We have to fight these injurious insects early and late or they will certainly get the upper hand and destroy our orchards. There is no occasion

for alarm except as alarm sets people to work to overcome an evil.

#### Woolly Aphis.

EDITORS PRESS:—I send you a piece of an apple tree which is badly infested with an insect. Please tell what it is, and how to remove it.—A. T. HATCH, Cordelia, Cal.

The insect is that commonly known as the "woolly aphis" (properly *Eriosoma lanigera*), which is one of the most abundant foes of the orchardist. It is called the "apple tree blight" at the East, the insect apparently taking name from the result of its presence. The insect may be overcome by the diligent use of strong soap suds or lye from wood ashes. It is also destroyed by a decoction of tobacco, like that sometimes used for sheep dipping. Whale-oil soap suds is a sure dose for it. As it is a free insect in all its stages, it easily succumbs to alkaline washes, and is much easier to kill than the scale insects.

### QUERIES AND REPLIES.

#### Seedling Apples.

EDITORS PRESS:—I send you samples of two varieties of my seedling apples. You will find three of the Excelsior; the other has no name, and you will notice it is longer and more pointed. The yellow specimen of the Excelsior grew in the shade where the sun could not shine on it; the two others grew in the sunshine and you can see the effects in rich stripes and blotches of red. The yellow one is overripe and does not look as nice as when picked. The specimens are little above medium size. The other variety does not vary as much in color and appearance, whether in shade or sunshine. Both varieties are very decided in favor, and make the finest of dried fruit in quality and appearance. They are very fine for sauce and pies, and are splendid to eat from the hand, where an apple of "high tone" is wanted.—O. N. CADWELL, Carpinteria, Santa Barbara Co., Cal.

These specimens are indisputable evidence of the ability of southern California to produce fine apples, and of the value of new varieties originating there. We find the characteristics of the "Excelsior," mentioned by Mr. Cadwell, borne out by the fruit. It is a large apple, nearly four inches in horizontal diameter. It is oblate in form, base and apex quite deeply depressed. The variation in color in sun and shade, mentioned by our correspondent, is more marked than is usually observed in such situations. The "Excelsior" in the shade has a pale yellow skin, and resembles in other points the flat or Pittsburg pippin. The "Excelsior" in the sun has hardly a trace of the pale yellow, but is wholly red—light red streaked with claret. It resembles in color the "Bell Boude," an old French apple very popular in Central New York.

The unnamed apple is large, oblong, tapering toward the apex, something like the "Yellow Bellflower." It has a dark red and somewhat unhandsome skin, but the flesh is noticeably tender and juicy, and invested with a flavor somewhat peculiar, but very pleasant. Both these apples would do well in the market.

#### Ramie Fiber Manipulation.

EDITORS PRESS:—desire to convert the fiber of the ramie plant from its crude condition into a condition where it can be worked with silk in other words, I wish to find out how to remove the gum, bleach the fiber, and render it soft and pliable. Can you suggest or tell me where I may go to find information upon this point?—A. B. C., San Francisco.

The successful working of ramie fiber is as yet a problem unsolved. No machine or process thus far made public has proved successful, except the hand manipulation of the Asiatics, and this is, of course, impracticable in this land of high wages. There is now a prospect that the problem will soon be solved, but proof must yet be furnished. There is a machine and process now being perfected in this city. We have seen the prepart fiber, and it is very good. We have not seen the machine, and consequently cannot express any opinion of it. The projectors of this machine are confident that they have solved the problem. The public will be glad to know that is the case, and wait for the proof. There is another chance that something practicable will be brought forward, and that is in the device submitted in competition for the large prize offered by the government of British India. The time for entering these devices and processes was in September last, but our foreign friends do not yet bring information of the results attained. So soon as we can get the facts we shall publish them in the RURAL PRESS.

#### Early Peabody Sweet Potato.

EDITORS PRESS:—The Early Peabody sweet potato has not one as well with me this as last year, though read of all but Southern Queen, which it beats in quality, I would like to hear what success others have had with it, and to know if any of the vines to blossom and produce seed, for think a seedling raised from it in California might be valuable. We have not been able to get any variety to blossom, but cannot see why they should not bloom here as well as in Georgia. If any one who bought slips of me last spring for any reason failed to raise tubers to plant again next spring, I will send them a pound or so if they send enough stamps to pay the postage, or if they prefer a few slips in the spring, for I want all to have a chance to try the which wish to do so.—J. B. RUMFORD, Bakersfield, Cal.

EXPLOSION IN RAILROAD TUNNEL.—A terrible explosion took place in Tunnel No. 3, near Wright's station, on the South Pacific Coast Railroad, on Wednesday morning, by which 24 Chinamen were instantly killed, and a number of others injured. The cause of the explosion was supposed to have been the ignition of petroleum gases.



## Letters from Southern California.—No. 4.\*

## San Gabriel Valley.

One of the most interesting and important localities in Los Angeles county is San Gabriel valley, lying some ten or twelve miles north-east of the city of Los Angeles. This beautiful valley was made the seat of one of the early Missions, and the quaint old church and the long street of adobe dwellings still stand much as they did a hundred years ago—the march of modern improvement having passed by and beyond them into other sections of the valley.

Having expressed a desire to visit this locality, our friend, Mr. N. C. Carter, the next day drove up to the Pico House with his carriage and gave us a hearty invitation to take a ride to his residence and spend a few days in looking around the valley. This was an invitation we could not refuse, and the proprietors of the RURAL PRESS soon found themselves "at home" at his beautiful residence in Willow Dale. With the early morning of the next day we rode out to visit some of the vineyards and orange orchards to the southward, and skirting along the flanks of the Sierra Madre, bringing up, at noon, at the "Villa," a noted place of health resort, located upon the mesa, or tableland, just at the foot of the mountain. This is one of the best places of resort for invalids in the State of California, and one to which we shall refer more fully at some future time.

## Tobacco Culture and Cigarette Manufacture.

Adjoining the Villa is a large field of tobacco most carefully cultivated with a choice variety of the weed, and belonging to Mr. J. C. Davis, who is making preparations to go extensively into raising tobacco and the manufacture of cigarettes. In order to do this economically, he has gone to work and invented and manufactured a machine for making cigarettes, which, with two hands to run and tend it, will turn out a greater number of cigarettes per hour than can be produced by the ordinary hand-mode of manufacture by twenty hands, and put them together in a better shape. Another important advantage which his cigarettes will have over all others, arises from the fact that each one will have a separate mouth-piece made of wood and firmly secured to one end of the cigarette. The tobacco, after being properly pulverized and prepared for the manufacture, is placed in a hopper upon the top of the machine, whence it is made to pass down, upon properly cut strips of paper, into which it is rolled, the edges of the paper gummed and secured and delivered from the machine ready for having the mouth-piece affixed. Mr. Davis has erected extensive buildings for preparing and curing his tobacco, also a shop for the manufacture of his machines, which are of very intricate and delicate workmanship.

He appears to be a man of a very ingenious turn and of very careful habits, and just the one who might be supposed would win success in so novel and peculiar a business as that in which he is now embarking.

## Vineyards and Orchards.

During this first day's ride we visited the vineyards and orchards of Mr. Chas. G. Hutchins; the Lake Vineyard property, belonging to the estate of the late B. D. Wilson, and now managed by his son-in-law, J. DeBarth Shorb, one of the most enterprising men in the valley, whose residence and grounds adjoin those of his father-in-law's estate. Passing on from this place we come to those of Mr. James Foord, Mr. L. H. Titus, the famous Rose's vineyard, and that of Mr. W. S. Chapman. The latter named gentleman is somewhat noted among his neighbors for his manner of growing the orange tree with branches close to the ground, while others in the neighborhood trim clean to three or four feet high. The former mode of trimming, we subsequently found the general practice at Riverside. The Rose's grounds are particularly deserving of mention. They occupy 1,300 acres, covered with about equal areas of vines and orange trees. On all these places the mode of irrigation practiced in this valley is most admirably displayed. The orange trees are set from 25 to 30 feet apart; a main ditch is carried along the highest side of the orchard, and from that smaller ditches are arranged, generally a simple furrow made with a plow and connecting at each tree with a large earth basin from 8 to 12 feet in diameter, according to the size of the tree, into which the water is allowed to run until filled. The basin is generally filled twice at one irrigation, and the trees irrigated four or five times each season. These orchards, with their long, straight rows of trees rich in foliage and in every stage of growth, blossom and bearing, present one of the most beautiful and gorgeous sights on which the eye can rest.

## El Monte Rancho—The Residence of Col. E. J. C. Kewen.

In the course of the day's ride we entered the grounds of Col. E. J. C. Kewen, a gentleman whose name and fame is familiar to every part of the Pacific coast. Knowing that the Colonel had been recently prostrated by a severe attack of paralysis, and was then confined to his bed, we simply intended to drive in so as to get a bird's eye view of the same, and pass quietly out; but the quick eye of Mrs. Kewen chanced to fall upon us, and with that ready open-hearted hospitality which has ever been so characteristic

of this estimable lady, nothing would do but that we should alight, and allow her to show us more fully about the premises and the old mansion, whose doors have been so long and so freely opened to entertain both neighbors and strangers who have visited the valley. The location is a most delightful and romantic one. Embowered in trees and flowers and shrubbery, springing from a soil as rich and mellow as nature can produce, fed and nourished by living springs of the purest water everywhere springing from the ground, stands that gray old structure, built over a hundred years ago by the early Missou fathers, and for many years used by the early Spanish settlers for 25 and 30 miles around for milling purposes. Some 20 years ago the property came into the possession of Col. Kewen, by whom it was converted into a dwelling. The walls of this structure were not built of adobe, the material usually employed in those days; but were constructed of stone some three feet thick, carefully laid up with the best of mortar to withstand the jar and weight of machinery. The timbers were of *lignum vitae*, brought from Central America. When the changes were made, the mortar had become so thoroughly hardened and crystallized, that, as we were informed, in cutting through the walls for windows and doors, the work was quite as difficult as it would have been to have cut through a solid wall of rock, of equal thickness.

## The Indiana Colony at Pasadena.

One of the most successful colony enterprises in Los Angeles county is that known as the Indiana Colony, at Pasadena. The colony was originated by a number of Indiana families, to whom were subsequently joined several families from Los Angeles and other parts of California. The association bought 4,000 acres of land, with a suitable water privilege, for \$25,000. To this amount was subsequently added \$25,000 more, to convey the water to the land and construct thereupon a suitable reservoir. The water is conveyed in a four-inch main, and distributed through every street in the colony by smaller pipes. The reservoir has a capacity of 4,000,000 gallons. The company was thus started with a capital of \$50,000, divided into 100 shares. The original company consisted of some 40 members, to which nearly as many more have since been added. Each share re-

yet come into bearing, to any extent, but the few that have fruited produce equally as good and large fruit as do those in the vicinity which are irrigated. No one in the colony has produced any better grapes for raisin making. It will be interesting to note, as his trees increase in size, whether they will find natural moisture sufficient to sustain such increase, and the still greater requirements for maturing a large growth of fruit. Just after leaving the ground of this colony, and passing on up the valley, the traveler enters the extensive vineyard of

## General Stoneman.

The celebrated cavalry leader, and now one of the most successful viniculturists and wine producers in Los Angeles county. Moreover, as is well known, the General has also just been elected one of the Railroad Commissioners, under our new State Constitution. We were very much interested in looking over his vineyard and orange orchard, the two occupying a tract of something over 450 acres. The General seems to have his own way just as much in the peaceful pursuit of farming as he formerly had in raiding after the enemy in "Ole Virginny," and appears to be quite as successful in the former as he was in the latter. We were much interested in his mode of pruning the orange tree. His method is to prune high from the ground, and from the center outward, so that in going under and looking up among and into his trees we find the branches in the center clear of foliage, and open to both sun and air; and we may also say to the birds, who can thus have free access to the limbs, and feast at their leisure upon any noxious insects which may harbor there. We have seen it stated that when they can get at them, the birds will feed freely upon the scale insect. Be that as it may, Gen. Stoneman is not at all troubled by the scale insect, which is working so much destruction to nearly all the vineyards in the valley and about Los Angeles. Whether this immunity is due to the birds, to open pruning, or to more careful cultivation, we are not prepared to say. The General is gradually getting rid of the less desirable varieties in his orchard by substituting therefor the Havana and other approved varieties. This he is doing by budding in gradually, and leaving the majority of the branches



First Floor.



DESIGN FOR TWO STORY COTTAGE.



Second Floor.

presents 15 acres in the town, 5 acres of wood land, and about 10 acres of what may be termed outside land, not susceptible of irrigation.

Six years ago all this property was a dry, arid plain, with scarce a green thing upon it. As we rode through the settlement a few days since, we beheld a collection of orange and lemon orchards, interspersed with vineyards, and fig, pomegranate and various deciduous trees, and other products, with flower-embowered cottages on every side. There are to-day about 50 neat, well-built residences, varying in cost all the way from \$1,000 to \$12,000 each, five or six of which have been built the past year. The settlement also contains two churches, Methodist and Presbyterian, a fine schoolhouse, and a store, where almost everything except ardent spirits can be obtained, for which latter there is no demand.

It will be seen from the above figures that the first cost of the 15 acres was about \$33 per acre, which included the title to water, to 5 acres of wood land, and 10 of non-irrigable or pasture land. Unsold and unimproved land in the colony, of which a few acres yet remain, is now worth from \$75 to \$100 per acre. As yet but little profit has been derived, as oranges do not pay until the trees are about ten years old. In the meantime reliance must be had upon vines, which will begin to pay in three or four years, and other small culture, poultry, etc. To-day a 15-acre tract, covered with a well-selected variety of trees, aside from any dwelling, is worth about \$8,000, and has cost, in original outlay and labor, not over \$4,000. Raisin curing promises to become an important business in the colony, as was evidenced in several exhibits at the late fair in Los Angeles. One exhibit in particular, by Dr. Conger, attracted nearly as much attention as did the Riverside exhibit. Next year raisin making will be more generally undertaken.

## An Interesting Experiment.

We may here remark that the Doctor is making some interesting experiments in the way of cultivating without irrigation. Although he has an excellent reservoir on his premises, and water in abundance, which he has paid for, he persistently refuses to use it upon his land; but lets everything grow without any irrigation whatever—depending solely upon careful cultivation. And yet his trees and vines look equally as well as do those of his neighbors who irrigate freely. His orange trees have not

to produce as usual, thus keeping up all the time his regular yield of fruit. He has now about 800 Havana trees in nursery.

Gen. Stoneman is probably the largest grower of the pomegranate in California. He has now 4,000 trees in bearing, and finds ready sale for them in San Francisco at from six to eight cents per pound. This is a very valuable fruit to grow while the orange is coming on, as the pomegranate bears from the ship in three years, while the orange requires more than twice that time before anything can be realized from it. Among other notable things on the General's grounds we noticed a rosebush, 15 inches in diameter at the ground, and an almond tree over two feet. He uses winter irrigation for his vines, and he cultivates mostly for wine. He has made as high as 40,000 gallons in a season, although he considers 30,000 a very good season's yield. Everything about his vineyard and winery is conducted with a close eye to economy. All the cuttings from his vines are cut up into short lengths by an instrument similar to an old-fashioned hay cutter, and in that way returned to the ground from whence they have been derived. He uses oil for fuel, instead of wood or coal, for driving his engine, because he considers it cheaper. All the processes of moving his fluids from the crushers to the wine cask for shipment are done by gravity—simply letting his wine run down hill. The same principle is applied to loading his teams. His conveniences are such that the largest casks can be handled by one man. All his waste pulp is used for making high-proof raw spirits, which in turn is used for fortifying such of his wines as need that process. Steam alone is used for distilling purposes.

We may remark here that the General's first acquaintance with this locality was made in 1847, during the Mexican war, when he was stationed here and had his camp upon this very place, to look out for Indians and other enemies to American settlers. He fell in love with the place then, and never let it get out of his mind until he purchased it in 1871. Long may he live to enjoy it, as well as the laurels which he has so fairly won, both in war and in the arts of peace.

GREAT excitement exists in Spain over the renewed insurrection in Cuba, which has assumed an alarming aspect.

THE Nihilist trials have begun at St. Petersburg before a court-martial.

## National Agricultural Society.

We notice that there is now being organized at the East a movement toward establishing a National Agricultural Society. The design is a broad one and intended to embrace every agricultural interest and represent every section of the country, as well as the advancement and protection of American agriculture by practical measures. Its scope will also include the promotion of immigration, the holding of national fairs and the dissemination of thought and experience on matters pertaining to agriculture. The society will, in many respects, allowing for changes rendered necessary by the difference in locality and methods, be modeled upon the principles of the Royal Agricultural Society of England, an institution numbering over 7,000 members. At a preliminary meeting recently held in New York city, Mr. J. H. Reall delivered an address explaining the object of the meeting, in which he recited the history of the former national agricultural societies, three in number, the last of which succumbed to the effects of civil war. The aim of the present movement, he said, is to form an association that will command the respect and confidence of the whole community, an organization free from secret methods and combinations. The sole purpose is the advancement of agriculture, by a society based on truthful practices and clean-cut principles, the improvement by natural means of the condition of all. It is not intended to supplant a single existing organization, but to co-operate with all that will work with the new one. They will be as necessary as ever. The society should be so broad in scope, and the expense of membership so light that every one interested in the soil and its products might become a member. A committee of 13 was appointed to carry on the work of organization, and another meeting will be held at New York, December 10th. The chairman of the committee is J. H. Reall, No. 323 Pearl street, N. Y., who would be pleased to receive correspondence from all who favor the organization proposed.

## Design for Village Residence.

We give on this page an engraving of a pretty village residence just completed in Berkeley by Mr. J. L. Barker. Mr. Barker owns a tract eligibly located, and has built this house in case it might meet the taste of some one desiring to establish a home in the village. We give this engraving from the drawing of the architects, Messrs. Meeker & Banks, in case the design may suit our readers in different parts of the State. It is admirably adapted for a village or suburban location, and for convenience of arrangement and beauty of design and construction would make a home which any family of moderate means might be proud of. The floor plans are so fully explained by names of rooms and measurements that nothing remains for us to do in this connection, but commend a study of the engravings to those interested.

LIGHT vs. HEAVY OATS.—We read that a French chemist named Grandeau publishes in a French agricultural paper some analyses of light and heavy oats, from which he concludes that "there is practically no difference between the composition of light and heavy oats, at least so far as chemical composition goes." In connection with this conclusion there is a letter from a man who fed two sets of post horses, which were accustomed to go over the same road at the same rate of speed, consequently each set did the same amount of work. One of these sets (of 12 horses each) was fed light oats, the other heavy oats, for a space of six months. No difference in their power or endurance was noted, and the practical conclusion was that one was as good as the other for horse feed. This experience may be of value to those who buy oats, for the light oats, sold as they are here, by the cental, are far cheaper than the heavy oats. It may also aid growers of light oats, by removing part of the prejudice against them. But it remains that heavy oats are fine things for the producer when the sacks come to the scales. Our northern county oat growers, as in Humboldt county, for instance, find that the market price for their heavy grain is a very comfortable thing, especially as their rich land produces more heavy bushels than growers in some other counties secure of light bushels.

HORTICULTURAL SOCIETY MEETING.—We trust our readers will not forget the meeting of the State Horticultural Society, which will be held in this city the day after Thanksgiving. The subject for discussion, "Injurious Insects," is one of the greatest importance, and we hope much valuable experience and observation will be drawn out. The meeting will be held at Y. M. C. A. Hall, 232 Sutter street, at 1 P. M., Nov. 28th. All are cordially invited to attend, and those desiring to apply for membership may hand their names to the Secretary at the meeting.

THE COLORED people's first industrial exposition opened at Raleigh, N. C., Nov. 17th, with flattering prospects.

\* The preceding numbers of this series of letters from our editorial correspondent may be found in the three preceding issues of the PRESS under other headings. The letters will now be numbered regularly through the series.



## A Thoughtful Government.

The Washington correspondent of the Salt Lake Tribune, in a recent letter to that paper, gives an interesting sketch of the secret workings of land claimants. The writer says that under the law of 1850 there was issued from the Interior Department in October 27th last, about 100 military land patents for service rendered in almost every scrimmage in which the United States has ever been engaged. There were patents for services as volunteers and regulars rendered in the wars of 1812-14, Creek war, Cherokee war, Black Hawk war, Florida war, and one for service in "the Indian war," whatever that may mean. He says further: "In looking over these patents I could not find half a dozen in the name of heirs of the soldiers, but they were almost invariably 'duly signed' to somebody else. And another peculiarity was that every acre called for has been located in the agricultural lands of the auriferous State of California." It is very fortunate that the State of California is of respectable dimensions, any common-sized State would long ago have been swallowed up. We cannot say we are sorry that these claims should be located in California, because it affords a proof that we are well thought of. The reason why some of these claims are not plastered on Utah or Colorado, etc., is not given, but we presume that the claimants having already survived several "bloody wars" for the commonwealth, prefer to settle in a peaceable community where there is no discount in scalp. Seriously speaking, however, some of these land schemes are mysteries, for instance:

"Some years ago—just to be definite I will say three—a score, more or less, of men, including attorneys, land agents, etc., entered into a combination to pre-empt as land belonging to the general Government and never disposed of, Dearborn Park, containing 300 or 400 acres, and about one-third also of the city of Chicago. They paid for it in what is officially known as 'Valentine Scrip.' The history of this scrip (and this is important to the story) is, one Valentine owned or claimed to have owned a 'Mexican Grant' of land which the Government had sold as its own. At all events, whether he ever owned such grant or not, he convinced a majority of Congress that he did, which is all the same, and that to ly passed a law giving him land scrip for the number of acres alleged to have been wrongfully disposed of by Uncle Sam's agent, with the privilege of locating it upon any unoccupied land belonging to the Government. The 'find' in Chicago was a very valuable one; well, there is or was 'millions' in it; indeed several of them, if the claim pans out well. Thus armed and equipped they appeared in due time at the General Land Office, and the then Commissioner, being in amiable and liberal mood, decided in their favor as demanded. Some busy-bodies in Chicago, in a moment of virtuous indignation, appealed the case to the Secretary of the Interior, who reversed the decision of his Commissioner, and for the principal cause that the Valentine scrip could only be used to take unoccupied land. The claimants have gone into the State courts where they will undoubtedly be beaten, but, as they are pretty stiff-necked chaps, and have considerable money at command, the question in dispute is likely only to be determined in the court of last resort—the Supreme Court of the United States."

Even the sacred precincts of the District of Columbia have felt the squatter's power, for not many years ago—it was when Wilson was Commissioner—a citizen with the uncommon cognomen of John Smith, found in this District of Columbia, 30 or 40 acres of Government land for which he put in a claim and got a patent. The land at the time was unoccupied. It now is included within that beautiful suburban place of villas known as Le Droit Park, near the Howard University, where Col. E. C. Ford and 40 or 50 other high-toned gentlemen live and enjoy their *otium cum dignitate*.

It is, in fact, well known to the interested few in Washington, that in every thickly settled State where the Government has ever had any land to dispose of, there are omitted parcels which have never been sold, but are mostly occupied and improved, and which could be pre-empted with impunity.

The law reports are full of cases where parties have been disposed after years of occupation and improvement, yet they suffer all the consequences of carelessness in not scrutinizing the title to their possessions.

The present aspect of our land laws seems inclined to regard every man as a competent lawyer and expert searcher of records, instead of being an ordinary patriot expecting protection against land sharks. The caveat emptor idea is carried to extremes, and it is to be hoped that some future legislative body will be endowed with sufficient wisdom to prevent the abuses of confidence in land transactions and provide for the bone and sinew of the nation without compelling him to waste his substance in law suits.

**EMIGRATION OF POTTERS**—A pottery firm in Staffordshire, England, have decided to remove their seat of manufacture across the water with a view of locating in Philadelphia. Arrangements are now being made to close up the home works, and the workmen are preparing to settle in a new land. The party will, in all probability, arrive here before Christmas. Several owners of potteries are considering the desirability of permanently settling in the United States.

## A New People.

The Arctic explorer, Prof. Nordenskjöld, found a new race of people in the Arctic regions in latitude 67° 7' north, longitude 137½° west from Greenwich. They are known as the Tschuktschi, and are described as savages because their civilization is not very far advanced. But the Professor is enthusiastic in his testimony to their excellent qualities—social, domestic and national.

They are described as distinctly differing from the Esquimaux tribes; and though it is not yet decided to what race they belong, they are thought to be related to the Kamchatkades and Koriaks.

Some very interesting and valuable details have been collected by Nordenskjöld and his staff as to their ethnography and history. About 250 years ago they were distinguished and gallant warriors. The discoverers have gathered a valuable assortment of the arms and armor of that period. Many of these implements are preserved among the families, whose habits are no longer aggressive. Very noticeable are their cuirasses, carefully wrought out of mammoth ivory, and fashioned with a remarkable resemblance to the old Roman panoply. Their spears and bows are made of whalebone, wood and ivory, spliced and bound with the sinews of the reindeer, and showing an advanced perception of artistic ornamentation on the part of the makers. One hundred and fifty years ago the famous Russian, Col. Paulovski, commanded an expedition sent against them from Siberian settlements. In his first engagement with them he was badly worsted. He subsequently defeated them, but with heavy loss to his own troops, and has recorded much such a tribute to their valor as Pyrrhus bestowed upon the Italian legions which he overthrew. A mild form of disease is averred by the natives to have been left behind by his soldiery and to be still in existence.

Strangely enough they have no government, no laws, and almost no religion, if any. A Russian starost is their nominal ruler, but has neither authority nor influence. In fact, there seems to be no necessity for the exercise of either the one or the other, for his subjects are evidently an exceptionally excellent and well-disposed people. The foreigners were on terms of intimacy with thousands of them, and never saw or heard of a single case of quarreling among them. Perfect harmony prevailed in the villages and families. Women have great influence, and are treated by the men in all respects as their equals and with much politeness and deference. The language spoken by this tribe is peculiar, and, as far as has been yet determined, shows no affinity to others.

The features are less Mongolian in type than are those of the Esquimaux or the other indigenous tribes of Siberia. The hair is generally, but not invariably, black, and the complexion is decidedly light. Young women are often very fair, handsome, and of perfect symmetry and fine proportions. The men are tall, above the average height of man's growth, some of them attaining to very little short of the splendid statue of the best specimens of humanity in northern Europe. One woman is mentioned to me as being of gigantic size, so large, in fact, that she might well be shown for money. One of Nordenskjöld's attaches has a note—F regret at this moment inaccessible to me—of her height and bulk, the former being over seven feet. They are omnivorous in their diet.

## Engineering Triumph.

The result of the jetty system of Capt. Eads in the Mississippi has been eminently successful, and the first great ocean steamship to enter the mouth of that river passed over the bar Saturday, November 1st.

The *City of Bristol*, of the Inman line, having a draft, when laden, of twenty-four feet seven inches, entered through the South Pass, and Capt. Eads, whose engineering skill has removed so many of the obstructions which commerce has encountered at the sea-gates of the Father of Waters, is not the one who will rejoice most or longest at the event. The triumph belongs most of all to New Orleans, a city which must see in the advent to her wharves of the first great ocean steamship a sure promise of that commercial importance which direct communication with European ports can not fail to yield her. And, through the hands of New Orleans, great steamships must soon bring across the ocean the wealth of foreign lands with which to make glad the vast regions beyond, and the whole Mississippi valley might well have rung with shouts of welcome as the *City of Bristol* swept through the channel from the sea. The event to which we direct attention is made especially conspicuous as an indication of that marvelous development which awaits the South.

To the Pacific coast the event is fruitful of beneficial results, and the benefits to be derived from the opening of New Orleans as an ocean port will be more apparent when its connection with San Francisco is considered. We have always understood that ocean freight was as low from New Orleans to European ports as from the Atlantic cities, and hence the odds are very much in favor of New Orleans by many hundred miles less of railroad freightage. Our mines and mineral resources will receive fresh impetus, and developments will be encouraged by the fact, that transportation can be afforded in every direction.

## Traveling Rocks in Canada.

Lord Dunraven, in an article in the *Nineteenth Century*, thus describes a curious phenomenon observed by him in Canada: A strange scene, for example, which came within my observation last year, completely puzzled me at the time and has done so ever since. I was in Nova Scotia in the fall, when one day my Indian told me that in a lake close by all the rocks were moving out of the water—a circumstance which I thought not a little strange. However, I went to look at the unheard-of spectacle, and, sure enough, there were the rocks apparently all moving out of the water on to dry land.

The lake is of considerable extent, but shallow and full of great masses of rock. Many of these masses appear to have traveled right out of the lake and are now high and dry some 15 yards above the margin of the water. They have plowed deep and regularly defined channels for themselves. You may see them of all sizes, from blocks of (say), roughly speaking, six or eight feet in diameter, down to stones which a man could lift. Moreover, you find them in various stages of progress, some 100 yards or so from the shore, and apparently just beginning to move; others half way to their destination, and others again, as I have said, high and dry above the water. In all cases there is a distinct groove or furrow which the rock had clearly plowed for itself. I noticed one particularly good specimen, an enormous block which lay some yards above high-water mark. The earth and stones were heaped up in front of it to the height of three or four feet. There was a deep furrow, leading down directly from it into the lake, and extending till it was hidden from my sight by the depth of the water. Loose stones and pebbles were piled upon each side of this groove in a regular, clearly-defined line. I thought at first that from some cause or other the smaller stones, pebbles and sand had been dragged down from above, and consequently had piled themselves up in front of all the large rocks too heavy to be removed, and had left a vacant space or furrow behind the rocks. But if that had been the case the drift of moving material would of course have joined together again in the space of a few yards behind the fixed rocks. On the contrary, these grooves or furrows remained the same width throughout their entire length, and have, I think, undoubtedly been caused by the rock forcing its way up through the loose shingle and stones which compose the bed of the lake.

What power has set these rocks in motion it is difficult to decide. The action of the ice is the only thing that might explain it; but how ice could exert itself in that manner, and why, if ice is the cause of it, it does not manifest that tendency in every lake in every part of the world, I do not pretend to comprehend. My attention having been once directed to this, I noticed it in various other lakes. Unfortunately my Indian only mentioned it to me a day or two before I left the woods. I had not time, therefore, to make any investigation into the subject. Possibly some of my readers may be able to account for this, to me, extraordinary phenomenon.

**IMITATION OAK FLOORS.**—A simple and beautiful method of giving to floors an almost perfect appearance of oak or walnut has come into vogue in London, and is largely increasing in popularity. The method consists in putting one ounce Vandyke brown in oil, three ounces pearl ash, and two drachms dragon's blood into an earthenware pan or large pitcher; on this mixture is poured one quart boiling water, and the whole stirred with a piece of wood. The article may be used hot or cold. The boards are first smoothed with a plane and sand-papered, the cracks being filled with plaster of Paris, and then a stiff brush is dipped into the stain, and with this it is well rubbed in—the brush being rubbed lengthwise of the boards. Only a small piece is prepared at a time. By rubbing in one place more than another, an appearance of oak or walnut is more apparent. When quite dry, the boards are sized with glue size, made by boiling glue in water and brushing it in the boards hot, and on this becoming dry, the boards are papered smooth and varnished with brown hard varnish, or with oak varnish—the first-named kind wearing better, and drying quicker if previously thinned with a little French polish, a smooth brush to be employed in applying it to the boards.

**SINGULAR CAVE.**—The *Courrier de Tlemcen* (near Algiers) states that some miners occupied in blasting rocks in the vicinity of the picturesque cascades, discovered the entrance to a cave, the floor of which was covered with water. They ventured upon the subterranean river on a raft, and followed it some 60 meters distance, when it disappeared in a vast lake. Here the vault of the cave was very high and covered with stalactites. In many parts the miners had to steer their raft between colossal stalactites which reached down to the surface of the water; eventually they reached the end of the lake, where they noticed a canal extending toward the south, and into which the waters of the lake flowed. The workmen estimate the length of the lake to be two miles and the breadth about one and one-eighth miles. They brought out a quantity of fish, which, they say, surrounded the raft, and which were found to be blind.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS.  
OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

**PETER SAXE & SON**, 520 Bush St. S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

**PAGE BROTHERS**, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

## SHEEP AND GOATS.

**E. W. WOOLSEY**, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

**L. U. SHIPPEE**, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

## POULTRY.

**WILLIAM NILES**, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magie Poland-China Swine.

**MRS. L. J. WATKINS**, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

**A. O. RIX**, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

**ALBERT BURBANK**, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Dors, etc. Eggs for hatching. Send for price list.

## SWINE.

**ALFRED PARKER**, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

**T. C. STARR**, San Bernardino, Cal. Poland-China Swine and Black Cochon Chickens for sale.

**JOHN RIDER**, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

## BEES.

**JOS. D. ENAS**, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## GRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000,  
In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$400,000.

## OFFICERS:

G. W. COLBY.....President  
JOHN LEWELLING.....Vice-President  
ALBERT MONTPELLIER.....Cashier and Manager  
FRANK McMULLEN.....Secretary

## DIRECTORS:

G. W. COLBY.....President.....Butte Co  
JOHN LEWELLING, Vice-President.....Napa Co  
J. V. WEBSTER.....Alameda Co  
URIAH WOOD.....San Benito Co  
J. C. MERYFIELD.....Solano Co  
THOMAS MCCONNELL.....Sacramento Co  
I. C. STEELE.....San Mateo Co  
SOLOMON JEWETT.....Kern Co  
C. J. CRESSEY.....Stanislaus Co  
SENECA EWER.....Napa Co  
A. D. LOGAN.....Colusa Co

The Bank was opened on the first of August, 1874, for the transaction of general banking business.

CURRENT ACCOUNTS are opened and conducted in the usual way.

GOLD AND SILVER deposits received.

CERTIFICATES of DEPOSIT issued for Gold and Silver.

TERM DEPOSITS are received and interest allowed as follows: 6% per annum if left for 3 months; 7% per annum if left for 6 months; 8% per annum if left for 12 months.

EXCHANGE on the Atlantic States bought and sold.

ALBERT MONTPELLIER,

Cashier and Manager.

San Francisco, Oct. 15th, 1879.

# Pianos

LARGEST MUSIC HOUSE

On the Pacific Coast.

WHOLESALE AND RETAIL

Lowest Prices and Best Goods.

Write for information concerning any Musical Instrument, and terms of sale. It will be given with pleasure.

ESTABLISHED IN 1850.

KOHLER & CHASE,

137 and 139 Post Street, San Francisco.

California Inventors

Should consult DEWEY & CO., AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents, Caveats and Trademarks. Established in 1860. Their long experience as journalists and large practice as patent attorneys enables them to offer Pacific Coast inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS, No. 202 Sansome St., San Francisco.



## Seedsmen.

## SEEDS!

Thomas A. Cox &amp; Co.,

Importers and Dealers in

Vegetable, Flower, Field, Grass  
and Tree Seeds.We wish to announce to country merchants and the  
trade generally that we are ready to supply all descrip-  
tions of Seeds of the New Crop of 1879.

Special prices on application.

Vegetable and Flower Seeds put up in small packets for  
the retail trade.

## FRESH AND TRUE TO NAME.

We will send the following Seeds, postpaid, on receipt  
of price. Remit by P. O. Order or postage stamps:

Beets, per oz.....10c	Parsnips, per oz.....10c
Carrots, per oz.....10c	Radish, per oz.....10c
Cabbage, per oz.....25c	Spinach, per oz.....10c
Lettuce, per oz.....15c	Turnip, per oz.....10c
Onion, per oz.....15c	Tomato, per oz.....25c

We will mail to any address a collection of 20 packets of  
choice Flower or Garden Seeds for \$1.

Fruit and Ornamental Trees at Nursery Prices.

THOMAS A. COX &amp; CO.,

409 Sansome Street, San Francisco.

J. P. SWEENEY &amp; CO.'S

## SEED WAREHOUSE,

409 &amp; 411 Davis St., San Francisco.

ESTABLISHED IN 1853.

Keep constantly on hand the largest stock of FIELD,  
GARDEN, CONIFER, or

## CALIFORNIA TREE SEEDS,

On the Pacific Coast. Seeds all FRESH and GENUINE.  
Our Stock is large, especially of the following varieties:

## ALFALFA, BLUE GRASS,

Red and White Clover, Red Top, Timothy.

Australian Rye Grass, Mesquit Grass,

Lawn Grass and Millet Seeds

Of different varieties. Field Seeds, Mangel Wurzel and  
Sugar Beets, Rutabagas, Carrot Seeds of all varieties,  
Peas, Beans, etc. Our assortment of GARDEN and  
FLOWER SEEDS are full and complete. Also, FRUIT  
and ORNAMENTAL TREES at Nursery Prices.

Trees For Sale at Lowest Market Rates.

For Catalogue, Price Lists, etc., apply as above.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY  
BLUE GRASS, RED TOP TIMOTHY, SWEET  
VERNAL, MEZQUITE and other Grasses.  
RED CLOVER, FRENCH WHITE  
CLOVER, CHOICE CALIFOR-  
NIA ALFALFA, Etc.Also, a Complete Assortment of HOLLAND FLOW-  
ERING BULBS, JAPAN LILIES, FRESH AUS-  
TRALIAN BLUE GUM, or "FEVER TREE"  
SEED; together with all kinds of FRUIT,  
FOREST and ORNAMENTAL TREES,  
and everything in the Seed line,  
at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.

EXOTIC  
GARDENS.F. A. MILLER & CO., Mission St.,  
opposite Woodward's Gardens. Send  
for Catalogue and Price List.

## HEALD'S

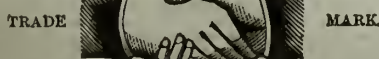
BUSINESS  
COLLEGE,  
24 Post Street.  
Near Kearny,  
San Francisco, Cal.The largest and best Business College in America. Its  
teachers are competent and experienced. Its pupils are  
from the best class of young men in the State. It makes  
Business Education a specialty; yet its instruction is not  
confined to Book-keeping and Arithmetic merely, but gives  
such broad culture as the times demand. Thorough in-  
struction is given in all the branches of an English educa-  
tion, and Modern Languages are practically taught. The  
discipline is excellent, and its system of Actual Business  
Practice is unsurpassed.LADIES' DEPARTMENT.—Ladies will be admitted for in-  
struction in all the Departments of the College.TELEGRAPHIC DEPARTMENT.—In this Department young  
men and young ladies are practically and thoroughly fit-  
ted for operators, both by sound and paper.For further particulars call at the College, 24 Post  
street, or address for circulars, E. P. HEALD,  
President Business College, San Francisco, Cal.

## ROOMS TO RENT.

Elegantly Furnished, and with Gas and  
Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

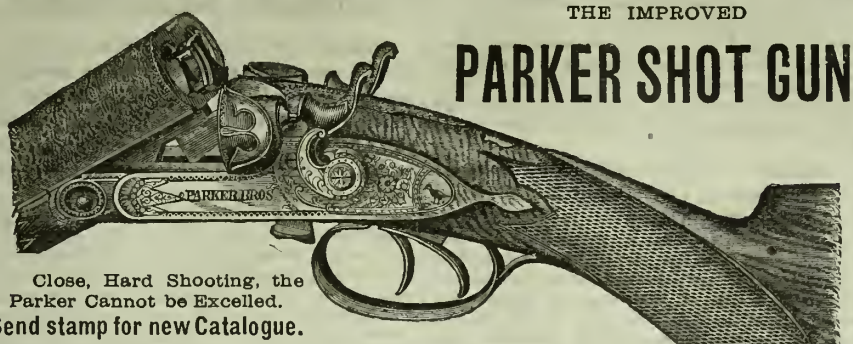
At 1031 Market St., San Francisco.



## LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant.  
Price, \$2 per gallon. For directions and testimonials,  
apply to FALKNER, BELL & CO.  
Sole Agents, 430 California Street, S. F.

## The New Beekeepers' Text Book.

By N. H. and H. A. KING. The latest work on the  
Apiculture, embodying accounts of all the newest methods  
and appliances. Fully illustrated. Sent by mail, post-  
paid, for \$1. DEWEY & CO., 202 Sansome Street, S. F.Close, Hard Shooting, the  
Parker Cannot be Excelled.  
Send stamp for new Catalogue.

MUZZLE and BREECH-LOADING SHOT-GUNS and RIFLES and AMMUNITION.

The new Burgess Repeating Rifles—45 cal., 70 grains; Whitney and Phenix  
Rifles, Muskets and Carbines; Phenix Single-Barrel Breech-Loading Shot Gun;  
Allen Rifles, 22, 32, 38 and 44 caliber, rim fire, very cheap; Lovell & Sons Revolvers, the best and the cheapest.

E. T. ALLEN, Agent for Pacific Coast,

NO. 515 MARKET STREET, - - - - - SAN FRANCISCO, CAL.

Secure Patents and  
TRADEMARKS.Through  
Dewey & Co.'s Scientific Press Patent Agency.OUR U. S. AND FOREIGN PATENT AGENCY pre-  
sents many and important advantages as a Home  
Agency over all others, by reason of long estab-  
lishment, great experience, thorough system, in-  
timate acquaintance with the subjects of inven-  
tions in our own community, and our most  
extensive law and reference library containing  
official American and foreign reports, files of  
scientific and mechanical publications, etc. All  
worthy inventions patented through our Agency  
will have the benefit of an illustration or a  
description in the MINING AND SCIENTIFIC  
PRESS. We transact every branch of Patent  
business, and obtain Patents in all countries  
which grant protection to inventors. The  
large majority of U. S. and Foreign Patents  
issued to inventors on the Pacific Coast have  
been obtained through our Agency. We can  
give the best and most reliable advice as to the  
patentability of new inventions. Our prices are  
as low as any first-class agencies in the Eastern  
States, while our advantages for Pacific Coast  
inventors are far superior. Advice and Circu-  
lars free. DEWEY & CO., PATENT AGENTS.

A. T. DEWEY. W. B. EWER. GEO. H. STROH

## Lands for Sale and to Let.

## FARMS FOR SALE.

IN THE FERTILE AND HEALTHFUL

San Pasqual Valley,

San Diego County, Cal.

## TITLES PERFECT.

The owner (an architect) having recovered his health  
by a residence of four years in this Valley, is desirous of  
returning to the city, and so offers the following farms  
for sale

## At a Great Sacrifice:

The Home Farm of 200 acres is well fenced and subdi-  
vided. There is beside 600 yards of movable panels,  
50 Acres in Alfalfa.Yielding five and six crops a year. There is an abundance  
of water on the place for stock, besides running water for  
garden, orchard, etc., and a one-sixth interest in the S.  
P. V. Ditch Co. House 28x36, enclosed in a lot 200x180,  
barn and stable, 54x35, two sheds 24x14 and 18x14, smoke-  
house, 20x14, with an adobe cellar under it, and every  
convenience as regards large tanks, etc., for making bac-  
con. The implements are of the best, nearly all new, and  
in good order. They consist of two farm wagons, 10-foot  
header, header beds, hay rack, mower, gang plow, single  
do, harrow, 10-foot seeder and cultivator, small do, sulky  
rake, two sets of strong harness, together with a lot of  
other tools, hay, grain seed, etc.Price for the whole, \$4,000; one-half cash, balance on  
time at 1 per cent.

## For Sale Also,

A farm under cultivation of 116 acres, adjoining the  
above, suitable for grain, corn or alfalfa, with a one-sixth  
interest in the Ditch Co., and about one and one-quarter  
miles of fencing, no other improvements. Price, \$1,200;  
one-third cash, balance on easy terms.

## For Sale Also,

A farm of 120 acres, one-quarter mile from the above  
ranches, mostly damp land, suitable for a nursery, alfalfa,  
corn, etc. There is a small house, etc., and a ditch run-  
ning along its upper side. Price, \$900; one-third cash;  
balance on easy terms.The neighborhood is exceedingly healthful and grow-  
ing. Two schools are in the valley, one within one-quarter  
mile, and the postoffice within one mile, neighbors with  
families are all round.My stock consists of superior brood mares, colts, hogs  
etc., and they may be taken at a valuation if wanted.For particulars apply to W. B. STEWART,  
San Pasqual Valley, San Diego Co., Cal.

## FARMING LAND

For Sale in large or small tracts, on easy terms, in  
the best parts of the State.

McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

THE IMPROVED

## PARKER SHOT GUN.

## Nurserymen.

## Berries and Small Fruits.

The most certain and best paying Market Berries and  
well tried sorts.

## Monarch of the West

STRAWBERRIES,

Most Productive, Largest Berries and Healthiest Grower.

English Red Antwerp, Naomi &amp; Hersteine

## RASPBERRIES,

Best paying for market, and are perpetual bearers when  
irrigated.

## KITTATINNY BLACKBERRY,

The most prolific, largest and most popular sort.

I offer also a large assortment of new and old varieties of

## STRAWBERRY, RASPBERRY,

Blackberry, Gooseberry and Currants.

For full Price List send for a Catalogue.

To secure a crop of Berries the first season it is impor-  
tant to plant very early.

JOHN ROCK,

San Jose, Cal.

1,000,000

Strawberry, Raspberry, Blackberry and  
Cranberry Plants.STRAWBERRY PLANTS.—The Essex Beauty, Crescent,  
Cinderella, Forest Rose, Glendale, Jucunda, Monarch of  
West, Langforth Prolific, Triomphe d' Gand, Wilson Al-  
bany.RASPBERRY PLANTS.—Cuthbert Early, Early Prolific, Re-  
liance, Pride of the Hudson, Brandywine, Herstine, Phila-  
delphia Red, Clark, Henrietta, Hornet, Belle de Fontenay,  
Delaware Bristol.BLACKBERRY PLANTS.—Deering Seedling. Early and  
the most productive of all. I will give satisfactory proof  
that these Berries have realized \$750 per acre. It paid more  
than twice as much as the old varieties; also the Early Clus-  
ter, the Vina Seedling, Kittatinny, the Mammoth Cluster,  
Missouri Mammoth, Dorchester and Lawton.CRANBERRY PLANTS.—The Cherry Cranberry Vines at  
\$10 per 1,000, by mail 64 cents more.I will sell to responsible parties on time, part cash, 10-acre  
field of Cranberry vines under cultivation. Can be seen at  
the place. Send for Catalogue.

H NYLAND,

Boulder Island, San Joaquin River.

## Phylloxera-Resisting Vines.

Vineyard proprietors desiring to plant American Grape  
Vines, which resist the attacks of the Phylloxera,  
either as Grafting Stock, or for direct production, which  
proves to be the only salvation and means of reconstruct-  
ing the destroyed Vineyards of France, will do well to  
address

BUSH &amp; SON &amp; MEISSNER,

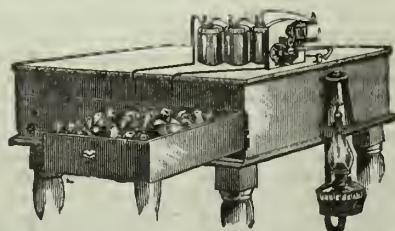
Bushberg, Jefferson Co., Mo.

## PEPPER'S NURSERIES.

(Established 1858.)

For sale at reduced prices, a general assortment of  
Fruit Trees and Small Fruits; also choice Ornamental  
Shrubs, Roses, etc. A limited supply of Cook's Seedling  
Apple, one and two years old. Catalogue and list of prices  
furnished on application. AddressW. H. PEPPER,  
Petaluma, Sonoma Co., Cal.

## MONEY in CHICKENS



## If You Want to Make Money

By raising any number of Chickens at any season of  
the year without setting hens, procure an

## ECLIPSE INCUBATOR

(E. A. SAMUEL'S Patent).

In both public and private trials on this coast as else-  
where, the "ECLIPSE" has proved itself a perfect and  
successful Egg Hatcher. It may be examined and its  
merits proven to customers before they make purchases.  
Write for particulars and circulars toG. G. WICKSON, 319 Market Street, S. F.  
Agent for the Pacific Coast.

## KEATING'S COUGH LOZENGES!

The Great British Remedy. There is unquestio-  
nably no other remedy so certain in its effects. ASTH-  
MA, WINTER COUGH, BRONCHITIS and DIS-  
ORDERS of the THROAT alike yield to its influ-  
ence. The highest medical testimony states no  
better cure for these complaints exist (now proved  
by over a half a century's experience.) They contain no  
opium, morphia, or any violent drug. KEATING'S COUGH  
LOZENGES prepared by THOMAS KEATING, London,  
Britain, are sold by all Druggists.60 Chromo, perfumed, Snowflake & Lace cards, name on all  
10c. Game Authors, 15c. Lyman & Co., Clintonville, Ct

Engraving done at this office.



## PATENTS AND INVENTIONS.

### List of U. S. Patents and Trademarks for Pacific Coast Inventors.

[From Official Reports for the "Mining and Scientific Press," Dewey & Co., Publishers and U. S. and Foreign Patent Agents.]

FOR THE WEEK ENDING NOVEMBER 4TH, 1879.

221,285.—TAP FOR TIN-CANS, ETC.—J. T. Cooper and J. Wagner, Silver Reef, Utah.  
221,220.—VALVE MECHANISM—Geo. E. Dow, S. F.  
221,224.—STRAK ENGINE—A. Ehret, S. F.  
221,226.—FASTENING WHIP LASHES—J. J. Fowler, Ukiah.  
221,305.—WREATH—W. A. Heath, Healdsburg, Cal.  
221,325.—CAN FOR HERMETICALLY-SEALED GOODS—C. C. Lane, New Westminster, B. C.  
221,173.—EAR-RING—W. A. L. Miller, S. F.  
221,340.—ATTACHMENT FOR INVALID BEDS—R. O'Donnell, San Francisco.  
221,186.—MECHANICAL CALCULATOR—S. Petty, Volcano, California.  
7,706.—CHEESE—Trademark—F. Korbel & Bros., S. F.  
NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

### Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

CAN FOR HERMETICALLY SEALED GOODS.—Chas. C. Lane, New Westminster, British Columbia. The ordinary form of cans in which salmon and other fish are hermetically sealed, necessitates the cutting of the fish into pieces of small size, and its appearance when prepared for the table is not satisfactory. To obviate this, large, fish-shaped cans have been made by stamping out two pieces of tin, each forming the entire length of the fish. Besides necessitating the use of a large and expensive size of tin, which will cut to waste a great deal, these cans can never be finished until the fish has been placed in them, and a longitudinal seam of double the length of the fish must be soldered by hand, as the mechanical bath cannot be depended upon to make a tight joint without blowholes after such a can has been filled. Besides this, each can must fit its fish closely enough to prevent movement to preserve the fish, and no adjustment being possible, the time taken to select cans to fit fish render this method too slow, costly and impracticable. This invention consists in the formation of a can in two parts, the parts, respectively, being approximately of the shape of the head and tail half of a fish divided transversely to its length, and this two-part can is so fitted that it may be adjusted longitudinally to fit the length of the fish. By this construction, a fish-shaped can may be formed from sheets of metal of ordinary size without undue waste, and by reason of the adjustability of the parts, the halves can be manufactured in quantity and by the aid of the mechanical bath, so as to have the requisite number of cans on hand when the canning season commences, and from the peculiar construction of the can, the amount of soldering to be done when the fish is placed in the can is reduced to a minimum.

FASTENING LASHES TO WHIPS.—John J. Fowler, Ukiah, Cal. Patent No. 221,226. Dated, Nov. 4th, 1879. Whip-lashes are usually secured to the stocks by means of a loop on the end of the lash and one on the end of the stock. The loop on the end of the stock is generally lashed on with waxed thread or twine, and very frequently slips off. It is a troublesome job to secure the loop to the smooth end of the stock, so that it will remain securely, and when it comes off, as it often does, must be replaced before the stock can be again used. This invention is designed to secure this loop to which the lash is fastened firmly to the whip-stock, and have it at the same time easily removable in case it should break. The improvement consists in slipping over the loop on the end of the stock a clamp with a threaded exterior, over which screws a thimble which presses the split parts together against the tapering end of the whip-stock, so as to firmly secure the loop to which the whip-lash is fastened. In this way the loop may be securely fastened to whip-stocks so that there is no danger of losing lashes by the loop slipping off.

HINGE FOR DOUBLE DOORS.—Joseph Decombe, S. F. Patent No. 220,965. Dated Oct. 28th, 1879. This invention relates to certain improvements in hinges, which are especially applicable to double doors; and it consists in a peculiar and novel construction in which two leaves of the hinge, one for each of the two doors, are supported upon the same hinge-pin, the latter being projected out from the point at which the hinge is secured the thickness of the doors, thus enabling the doors to be hung so that the post is reduced to a minimum, and is entirely concealed from the front when the doors are closed. When opened only the thickness of the two doors as they stand front to front will be exposed.

TUYERES.—Thomas McCaffery, S. F. Patent 220,766, dated October 21st, 1879. With this invention either one of the various styles of blast openings may be used according to the work on hand. The improvement consists in providing a flat metal plate having perforations

of different sizes and shapes, said plate having rack-bars on its lower edges, so that a rack-wheel operated by a crank may move said plate back and forth in a case provided for it enabling the workmen to bring either one of the perforations under the hole in an upper plate through which the air passes from the bellows to the fire.

WINDMILL.—Z. and F. M. Cottle, Oakdale, Stanislaus county, Cal. Patent 220,751, dated Oct. 21st, 1879. This wheel is intended for pumping water in such localities as have prevailing winds from one direction for a length of time. In the great valleys of California the prevailing winds of the summer months are westerly and the windmill is set up so as to face the westward. Occasionally, however, the wind will blow from an opposite direction for a short time and the motion of the wheel would then be reversed. In order, however, not to have the shaft also reverse, a supplemental pinion is placed between the spur-wheel and a large pinion so as to change the motion.

### Sugar Beet Pulp as Stock Feed.

As the beet-sugar industry is being agitated, it is well to put on record all points of its belongings. One of these, which is now attracting attention in New England, is the value of the refuse from the presses as food for stock. We are not fully aware what disposition is now made of the pulp at the Alvarado and Soquel factories in this State, but we know that at the former there was talk of contracts to sheep feeders. The Maine beet-sugar factory, we learn by this week's Boston papers, has made an arrangement with a Boston firm to sell the pulp to farmers, the pulp to be shipped by rail to anyone desiring it. In urging stock breeders and dairymen to make a trial of this substance, the following statements are made concerning the feeding value of the material:

In Germany, in every contract entered into by the farmer for raising sugar beets it is stipulated that the pulp shall be returned to him. There the feeding value of this pulp has been determined through the actual practical experience of years. In pressing the beets in the sugar factory about 10% of the sugar is removed, leaving from 3% to 5% still in the pulp, which is a far greater percentage of sugar than ordinary beets contain, and in fact, a percentage as large as is profitable to feed. Practical experiments have proven that the excess of sugar in cattle food is fed to waste, and that a feeding material containing 5% sugar is equally as valuable for cattle as one holding 10% or 12%.

Again, in this pressed pulp, so much water is extracted that it takes five tons of raw beets to make one ton of beet pulp; hence it becomes a highly concentrated food. The vast weight of water removed is displaced by a weight of nutritious feeding material. European farmers assert that cattle eat the pulp greedily, and that it produces a flow of milk equal to grass or fresh corn fodder. In Germany it is fed to milk cows in the proportion of 25 pounds pulp, 15 pounds chopped straw and 1½ pounds oil cake. To beef cattle, which it is said to fatten rapidly, it is fed at the rate of 40 pounds pulp, 30 pounds chopped straw and 3 pounds oil meal. In parts of Europe the pulp is preserved through the winter in silos or pits in the ground. It will keep well in cool sheds or cellars; or better still, in trenches lightly covered with straw and boards or other covering material.

### Explanation of the Course of the Wheat Cable.

It seems from English advices by mail that the sport in wheat during the last week in October was the result of excited speculation, and that the dullness and decline of the cable quotation since then has been the result of reaction. The London *Farmer* says that "had speculation let the wheat trade alone we might have had a steady, gradual improvement in currencies through autumn. Instead of this satisfactory course of legitimate trade we have had needless excitement, exhausting the upward movement in three weeks, and ending by imposing on holders the defence of existing rates through a period when normal influences are dead against them. It is as yet too early to say whether there will be a decided fall or whether merchants will succeed in maintaining present advanced quotations. The English wheat crop is a very bad one in quality as well as in quantity, and this is a misfortune which cannot be thrown upon the future. Had we seven million quarters of good milling home-grown wheat we might, with normal imports, go straight on up to May without troubling ourselves very seriously about supplies. But when the grain samples brought to market are of such a character that men who take a pride in 'high' farming apologize for them, then the demand for foreign wheat is immediately increased to a material extent, and value is enhanced to an even greater degree." This would indicate that the general condition of supplies abroad is not different from what we have claimed since harvest. The dullness and decline in the English market comes just at a time when the high price of ocean freights places our holders at a disadvantage in shipping. If in the future there should come advanced wheat prices, and some competition among ship owners for cargoes—then it would be our turn to laugh.

### Nordenskjold's Northwest Passage.

Although the world no longer takes such an intense interest in the northwest or northeast passages as was felt in earlier days, when it was believed that if such a route if found practicable would be a short cut from Europe to the Indies, yet Prof. Nordenskjold's feat represents the solution of a highly interesting geographical problem. This distinguished savant all the more deserves his laurels since from early manhood he has devoted himself to explorations in Spitzbergen, Greenland and the north of Europe. The joyful news lately brought was that Nordenskjold had at last got free from the ice which, since September 28th, 1878, had bonnd his ship, the *Vega*, off Koljutchin shore, almost within sight of open water, and had arrived with all his crew safe and sound at Yokohama, Japan. During their enforced imprisonment, the Professor and his companions unintermittingly pursued their scientific labors, and have reaped a rich harvest of spoils.

The details of the expedition are as follows: Leaving Gothenburg early in July, 1878, the *Vega* spent some days in the Kara sea, and on August 19th doubled Cape Severo or Tehelyuskin, the most northerly point of Asia, and which hitherto had never been rounded by man. Mountains rise south of the cape, and animal and vegetable life abound. The *Vega* coasted over a smooth sea, marked on the charts as dry land, to the mouth of the river Lena, and after a glance at the Siberian islands, where the ice prevented any lengthy exploration, turned southward toward Behring's strait, and was finally forced to settle for the winter, on September 28th, at Kolintchin, a short distance beyond Cook's furthest point, Cape Vankar-ema. Here the expedition were ice-bound for 264 days; but game—bears, reindeer, foxes and wild fowl—was plentiful, and occupations were many. Human society, too, was not absolutely wanting, as only a mile off was land, the Tschutschi peninsula, where there were villages of some 4,000 Tchik-tchi, pleasant, friendly people. The cold was intense; but the expedition enjoyed excellent health and spirits, and not a single case of scurvy occurred. The shortest day experienced lasted only three hours, when the upper limb of the sun alone was visible. On July 18th the *Vega* started again, passing Cape East two days later, and reached Japan without further accident than slight damage from a gale. Prof. Nordenskjold believes that with a little further experience the voyage will be perfectly safe, and considers that no difficulties await skillful sailors between Japan and the Lena, where, as the Lena taps Central Siberia, there is a large prospective trade.—*London Graphic*.

NEVADA BORAX.—In our issue of Nov. 15th, we published an item concerning the use of "Borax for salting Butter." The article recommended the use of borax for that purpose, and the hope was expressed that its preservative qualities might create a demand which would aid in the development of the borax industries of Nevada. We have received a communication on the subject from Messrs. Smith Bros., of Peel's Marsh (Marietta, Esmeralda county), Nevada, which says that borax has sustained a great depression in price for the last seven years, owing to the embarrassed condition of the iron and pottery interests in England, whence comes the principal demand, in consequence, whereof, nearly all of the American producers have succumbed to the low prices, Messrs. Smith Bros. being the only producers now in Nevada. These gentlemen say they have been long and earnest advocates of the antiseptic and preservative properties of this simple and harmless salt, and believe that on account of its virtues it is beginning to meet with a more general recognition in the household economy. As a significant fact the writers have recently sold and shipped to a large meat-packing firm of Chicago 20,000 pounds of pulverized borax, which it is understood is to be used in packing and canning corned beef. With reference to other matters in the communication we will say that we are always glad to publish whatever will be of benefit to our growing industries on the Pacific slope. It is indeed one of our aims to increase them by every means in our power.

A TREE CARNATION.—J. Sager writes to the *Rural New Yorker* about an aged carnation plant as follows: It was started from a small slip procured in Elmira in March, 1868, so that it is now considerably more than 11 years old. The stem only lacks one-eighth of an inch in being four inches in circumference. The body and principal branches are wrinkled and gnarled like an old oak tree. Its production the past year of only a fraction less than 500 flowers, I am sorry to say came very near destroying it. Taken from the cellar in the spring, it seemed to be constantly going back instead of ahead; finally I concluded, that to save it, it would be necessary to cut the head entirely off. In time new buds began to make their appearance in all directions, and now it is one grand and magnificent bush of bright green stems. I shall not permit it to flower any this year, and so shall give it an opportunity to prepare for a good time next year.

A COMPANY has been organized at Salem, Or., to rebuild the woolen mills which were burned two years ago.

PRESIDENT HAYES formally opened the Grand Fair at New York Nov. 17th.

### A Library for Inventors.

We have at our patent offices, No. 202 Sansome street, corner Pine, a complete set of Patent Office reports, containing engravings and claims of EVERY PATENT ever issued in the United States.

We have also a complete set of the MONTHLY VOLUMES issued by the Department, with full detailed description and large drawings of all the patents issued since the time when these volumes were first published.

A set of all the LAW BOOKS ON PATENTS is also on our shelves ready for reference. We have also the British Commissioners reports, Canadian Patent Office reports for all British North America, full files of MINING AND SCIENTIFIC PRESS, PACIFIC RURAL PRESS, Scientific American, Scientific American supplement, American Artisan and other American and foreign scientific and mechanical journals, as well as mechanical dictionaries, chemistries, encyclopedias, and other works of reference.

Inventors and patentees are WELCOME to EXAMINE at their leisure any of the books in the above sets, and we shall be glad to give them any assistance in hunting up what they want.

Our library is the most complete of its kind on the Pacific Coast in every respect, and we are continually adding to it as occasion demands. DEWEY & CO., Patent Agents and Publishers,

No. 202 Sansome street, corner Pine, San Francisco

EVERY new subscriber who does not receive the paper, and every old subscriber not credited on the label, within two weeks after paying for this paper, should write personally to the publishers without delay, to secure proper credit. This is necessary to protect ourselves and subscribers against the acts and mistakes of others.

### OUR AGENTS.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. L. THARP—San Francisco.  
E. W. CROWELL—California.  
A. C. KNOX—Pacific Coast.  
S. V. BLANKENHORN—California.  
G. W. McGREW—Santa Clara county.  
J. B. BACHLEDER—Shasta County, Cal.  
JAMES ROBERTS—Oregon and Washington Ter.  
THOS. H. MANNING—Nevada, Idaho and Montana Ter.  
CAPT. W. H. SEAMENS—Arizona.  
M. P. OWEN—Santa Cruz County.  
H. E. HALLITT—Los Angeles County.

### Books on Agriculture, Etc.

The following among other books will be sent post-paid on receipt of publishers' price, annexed:—Tobacco, its culture, manufacture and use, 500 pages, \$3.50.—The Patrons of Husbandry, 500 pages, \$3.75.—The Women of the Bible, 77 engravings, \$4.—Wells' Every Man His Own Lawyer, 612 pages, \$2.75.—American Husbandry, 2 vol., \$1.50.—Gray's Agricultural Essays, \$1.—Langstroth's Honey Bee, \$1.50.—Randall's Sheep Husbandry, \$1.50.—Agricultural Engineering, \$1.50.—New Bee-Keepers' Text Book, \$1.—Pacific Rural Handbook, \$1.—Rupp's Easy Calculator, \$1.—U. S. Land Law, 50 Cts.—Woodward's Grapes, Etc., \$1.—Sugar from Melons, 25 Cts.—Strawberry Culture, 50 Cts.—Laynes' Helle Lettres, \$1.—Holt's Map of California and Nevada, to subscribers, \$1.—Back Volumes PACIFIC RURAL PRESS (bound) \$5; unbound, \$9.—Picturesque Arizona, \$2. Address DEWEY & CO., Publishers, 202 Sansome St., S. F.

PACIFIC RURAL HANDBOOK.—The little work before us could not have been treated of by a more competent authority. The book manifests throughout the author's ardent love for the beautiful in nature, and is well calculated to inflame and stimulate the same sentiment in its readers.—*Rural New Yorker*.

THE book is written in a very pleasing manner by one who thoroughly understands his subject. In laying out private grounds or gardens, or in the cultivation of flowers and plants, to one who is inexperienced in such matters, a copy of this book will be found valuable.—*San Jose Mercury*.

THE "PACIFIC RURAL HANDBOOK," written by Chas. H. Shinn for the publishers of the PACIFIC RURAL PRESS, will be sent, post-paid, in substantial cloth binding for \$1; in full leather, \$1.50; in cloth, interleaved with fine ruled paper for memoranda, \$1.50. Address DEWEY & CO., PUBLISHERS, No. 202 Sansome Street, San Francisco.

THE RIVERSIDE HOUSE is pleasantly located in the center of the town in Riverside Colony, San Bernardino Co. It is a new two-story brick building, containing some 40 rooms. Health-seekers and other visitors to this most favored climate will find good boarding accommodations at favorable rates. For further information address the proprietors, CUNNINGHAM & MOODY, Riverside, San Bernardino Co., Cal.

THE CZAR REVOLVER.—This is said to be the greatest bargain ever offered in fire-arms, and is described as the most "beautiful weapon in the world." The advertisers are represented to us as reliable and able to back up every statement with unimpeachable testimonials.

HOW TO STOP THIS PAPER.—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate the copy sent.

We would call attention to the swine and poultry advertisements of Wm. Niles, Los Angeles, Cal, which appears twice a month.

EXTRA COPIES can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.

THOMAS DUNDON will oblige us by sending his P. O. address to this office.



etc., to the publishers of this paper.



If you want a nice article of Toilet Soap and something that is beneficial to the skin, buy PHOSPHATE SOAP.







## Commission Merchants.

DAVIS &amp; SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger &amp; Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk &amp; Co., San Francisco, Cal.

CHARLES NAUMAN.

FRANK NAUMAN.

C. &amp; F. NAUMAN &amp; CO.,

Wholesale Commission Merchants

— AND DEALERS IN —

GRAIN, POTATOES, FRUIT, BUTTER, POULTRY, EGGS, GAME, ETC.

227 &amp; 229 Washington St., San Francisco.

Consignments Solicited.



## The Christmas Cabinet.

FIVE NEW ARTICLES AT ONE-HALF THEIR VALUE.

[48 cts.] USEFUL, AMUSING, AND INSTRUCTIVE. [48 cts.]

No. 1.—Japanese Magnetic Fish.—Five varieties, complete in neat box of Japanese wood, with jointed bamboo rod, silk line, and magnetic hook. The fish seize the hook, and the lucky fisherman draws them out of the water. A quaint and curious toy.

No. 2.—No Plus Ultra Pocket Knife.—Warranted best quality cast steel; the spring cannot get clogged nor wear the pocket. Blades are entirely concealed within the handle, which is one solid piece; latest invention in cutlery, elegantly finished, first-class every way.

No. 3.—Pocket Comb.—Made of finest bone, tough and durable, in a neat case; cannot soil the pocket. Suitable for ladies or gentlemen. A handy, useful article.

No. 4.—Pinnafare Card Game.—Two games in one, the latest out. Funniest, jolliest, and most original ever published. Capable of endless changes, for any number of players; has no equal as a social pastime. The 108 cards including Question, Answer, and Forget Cards, will keep the latest parties and social gatherings in hours of laughter for an entire evening.

No. 5.—Japanese Crepe Pictures.—Representing elegantly dressed Japanese ladies, beautiful landscapes, and artistically drawn figures, transferred in indelible colors to Japanese Crepe of the finest texture. They make beautiful and brilliant tidies for backs of chairs and lamprequis, centrepieces for table covers, etc.; are very fashionable, and will be admired and favorably commented upon by your friends.

Our illustrations show but four of the articles in Cabinet, and these on a greatly reduced scale. (Crepe Pictures not shown being difficult to illustrate.) We furnish the entire lot of 5 articles in all, in a strong case, by mail, post-paid, for only 48 cents, or 13 three-cent postage stamps. This offer is made for the purpose of introducing our goods in new localities, and to procure new names for our Holiday Catalogues. We will send 3 Cabinets for \$1.25. No further reduction. Send us clean postage stamps of any denomination, as we prefer them to silver. Don't send pennies or nickels. Address all orders to

Enreka Trick and Novelty Co.,  
P. O. Box 4614, 39 Ann St., New York.



This advertisement will not appear again.

## THOS. MEHERIN,

516 Battery St., San Francisco.

## Seeds, Trees and Plants.

We offer for sale the present season the largest and best collection of Fruit and Ornamental Trees ever offered on the Pacific Coast, at REDUCED PRICES. Also,

Vegetable and Flower Seeds,

KENTUCKY, AUSTRALIAN and ITALIAN RYE GRASS, RED and WHITE CLOVER, Etc.

Agent for the

Nurseries of B. S. Fox.

Send for Price List. 516 Battery Street, San Francisco

TO LET.

THE CELEBRATED

## BARTON VINEYARD,

Situated at Old San Bernardino, in San Bernardino Co., Cal., consisting of eighty (80) acres of Mission Grapes, together with two (2) cellars, one brick and one adobe, a small lot of tubs, vats and pipes, distillery and brick dwelling house. Location good and crop sure. Would prefer to let for a number of years on easy terms. For particulars address H. M. BARTON, P. O. Box 88, San Bernardino, Cal.

## Engraving.

Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the MINING AND SCIENTIFIC PRESS, San Francisco, at favorable rates.

## PURDY'S RECORDER

Best paper on fruit and flowers. Specimen free. Send for it. Address PURDY, of Albany, N. Y.

## THE PLANTING SEASON!

THE RAINS CALL TO THE GARDEN!

Timely Hints May be Found in the

## PACIFIC RURAL HANDBOOK.

Containing a series of brief and practical Essays and Notes on the Culture of Trees, Shrubs, Vegetables and Flowers, adapted to the Pacific Coast. Also, Hints on Farm and Household Economy.

Embracing One Hundred and Twenty Original Pages—Written in Plain and Pleasing Style.

By CHAS. H. SHINN,

An able author, and practical California Nurseryman and Cultivator. Prepared especially for the publishers of the PACIFIC RURAL PRESS. It is purely a California book, fresh and interesting to rural readers at home and abroad.

Sold in substantial cloth binding (post paid) for \$1.00.

DEWEY &amp; CO., Publishers,

"Pacific Rural Press" Office (No. 202 Sansome St.) San Francisco

## Geo. F. Silvester,

IMPORTER, WHOLESALE AND RETAIL DEALER IN

## SEEDS,

Fruit and Evergreen Trees, Plants, Etc.

ALFALFA, GRASS AND CLOVER SEEDS

In large Quantities and offered in Lots to suit Purchasers.

GREAT REDUCTION IN PRICES.

Seed Warehouse, 317 Washington Street, San Francisco.

## Improved Short Nose, Dish-Faced Berkshires.

A portion of my stock were purchased at great expense of

H. M. Queen Victoria,

Having been BRED and RAISED at the Prince Consort's Show Farm, Windsor, England. "The improved Berkshire is a natural grass hog; is the most prolific and most docile of any breed."

My Berkshires are recorded in the American Berkshire Record—the authority for the United States on thoroughbred Berkshires. Also,

MAGIE POLAND-CHINA PIGS,

Bred from Stock imported direct from the MAGIE COMPANY. All animals sold are guaranteed as represented. Crating or boxing, and feed for shipping, FREE. Prices for Pigs, very low. I mean that every animal sold shall be a standing advertisement for my stock. Orders solicited, and satisfaction guaranteed.

THOROUGHbred POULTRY—all of the Leading Varieties.

WM. NILES, Importer and Breeder,

LOS ANGELES, CAL.

In consequence of spurious imitations of

## LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature thus,

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS &amp; CO., San Francisco.

Baling  
Fencing  
Telegraph  
Telephone  
Galvanized

WIRE

## Barbed Fence Wire.

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the  
Trademark.

A. S. HALLIDIE

Wire Mills.

Office, No. 6 California St.  
SAN FRANCISCO.

## WIRE ROPE and CORDAGE

Of every kind on hand or Made to Order.

## R. J. TRUMBULL &amp; CO.,

SUCCESSORS TO

R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail  
Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock

EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

\*"Guide to the Vegetable and Flower Garden" will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL &amp; CO.,

419 and 421 Sansome Street, S. F.

Sawing off a Log,  
Easy and Fast.



Our latest improved sawing machine cuts off a 2-foot log in 2 minutes. A \$100 PRESENT will be given to two men who can saw as much in the old way, as one man can with this machine. Circulars sent free. W. GILES, 741 W. Lake St., Chicago, Ill.

CAUTION.—We are stopping all infringements upon our Patent, and have sued W. W. Bostwick and Farmers' Manufacturing Co. for making machines like ours. We have also sued W. H. Clark, of Star City, Ind., for using and selling said machines.

P. SAXE, 520 Bush street, General Agent for Pacific Coast.

## CHEAPER YET!

## Tension Sewing Machines!

A large number of nearly new genuine SINGER, WHEELER & WILSON, HOWE, WEEB, WILSON, GROVER & BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

NO TENSION MACHINE.

Wilcox &amp; Gibbs' S. M. Co.,

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.

## GOOD CROPS EVERY SEASON.

Productive farms for sale on easy terms in Santa Cruz and adjoining counties. State requirements and obtain suitable particulars from the Real Estate

EXCHANGE &amp; MART,

Santa Cruz, Cal

METRICK &amp; Co., Insurance and Money Brokers and Agents

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 120 Sutter St., S. F.



# PACIFIC RURAL PRESS

Volume XVIII.]

SAN FRANCISCO, SATURDAY, NOVEMBER 29, 1879.

Number 22.

## Some New or Little Known Pears.—No. 1.

One of the most diligent searchers for the new and interesting in plant growth is L. B. Case, of Richmond, Ind., and his modest monthly, the *Botanical Index*, is always read with much interest. During the last few months Mr. Case has been looking up the history and habits of a number of new or little known pears, and he has consented to let our readers have the benefit of the interesting points he has collected.

The first group of these pears is described by Mr. E. Y. Teas, of Dunreith, Ind., and his reasons for bringing them forward are as follows: "I have long believed that a satisfactory substitute for quinces may be found in some varieties of the pear, which though not of the best quality as dessert fruits, are nevertheless unsurpassed for canning and preserving; varieties uniting these desirable qualities with great productiveness, and almost absolute hardness and health of tree. In pursuance of this subject, my attention has been called from time to time to a race or races of pears not at all new, but which have not received the attention from cultivators that their importance demands; because I am convinced we may reasonably expect to obtain seedlings from these, rivaling the Bartlett and Anjou in quality, and at the same time exempt from blight or other disease. I refer to the Chinese and Japanese pears, of which several varieties are now in cultivation." The especial reason that Eastern horticulturists are looking up substitutes for the quince, is because the quince tree with them is yielding so rapidly to the attacks of blights and insects that the crop cannot be relied upon. This trouble does not exist in this State, at least to any great extent, for we can grow the quince to perfection in many situations. The horticultural points advanced concerning the Japanese and Chinese pears will be, however, of interest to our readers.

One of the most notable fruits brought forward by Mr. Case and his correspondents is the "Sha-lea," or the "Chinese Sand pear." The shape of this pear may be learned from the outline engraving on page 345; the outline marked No. 2, being the "Sha-lea." It is a pear of peculiar style, and the fact that, in northern situations, it never ripens or becomes mellow, has given it a hard name among many who have seen it. As nearly all created things have their uses, if we could but discern them, so the "Sha-lea" has a mission to perform, for, since the pear has been used for culinary purposes, its reputation has become quite fragrant. It is said to be, when cooked, better than any other pear in similar situation. The flesh becomes more fine and tender than a quince and has a quince-like flavor.

But the Sha-lea fruit seems to have a greener reputation in the Southern States, and the description given of the beauties of the tree is quite enrapturing. Mr. H. H. Sanford, of Thomasville, Georgia, writes to Mr. Case that the tree was introduced to that locality about 25 years ago by Major Le Compte, and it is there known as the Le Compte pear. Mr. Sanford writes: "This tree grows from cuttings or slips, cut off about 15 inches long, and stuck in the ground like quinces, etc. It also grows well from grafting on budding; I had a number of them to grow 10 feet high, in one season, and one inch through. This pear tree comes into bearing, usually, in four or five years from cuttings, sometimes in three. The habit of the tree is to grow very tall, and looks very much, at a distance, like the Lombardy poplar. The leaves are a very deep green, glossy, and look as if they were varnished. This tree has never shown any signs of decay of any kind. It is first to take on foliage, and last to drop it off in the fall; and in this section, it always gives two crops of fruit the same year. We consider the fruit very good indeed, and we obtain good prices for it in Boston and New York markets. I can see but little difference between this and the Bartlett, raised in this section, and I think it much better than the Duches, Louis B. D. Y., and many others of the leading varieties. This fruit is not very large; it will average eight ounces. It is very smooth, no blemishes, has a

little blush on the sun-side, and ripens here about the 20th of July."

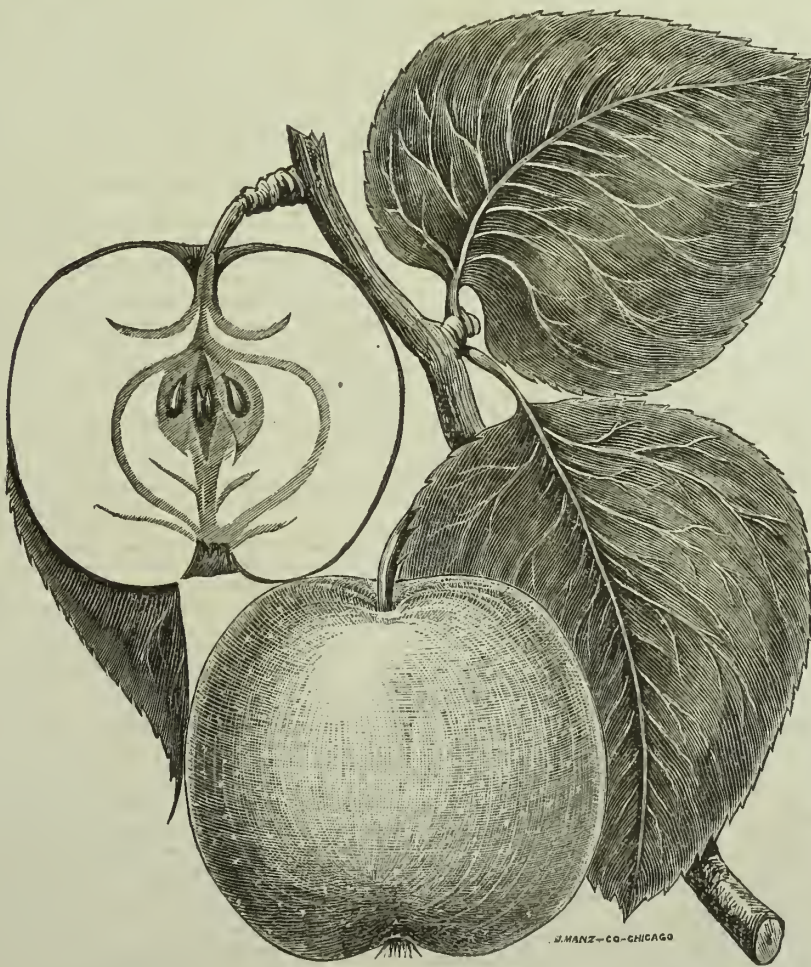
Another grower of the "Sha-lea," Mr. Garber of Pennsylvania, says his trees have produced cartloads of splendid fruit, as large and golden as large oranges, without ever an appearance of disease, defect or work of insect on tree or fruit, qualities alone which entitle the tree to a place among our choicest ornamentals. The trees when laden with their ripe fruit, are said to equal in beauty the orange tree.

The engraving on this page shows what is called in Ohio, the "Sandwich Island pear." Its origin and traits are thus described by Mr. Teas: "About twenty years ago, a lady from near Cincinnati, Ohio, visiting in San Francisco, bought at a fruit stand in that city a "Sandwich Island apple." This fruit was so very fine that the seeds were saved and sent to friends in Ohio. Only one seed grew, and it

portionate vigor until checked by early and abundant fruitfulness. From their healthy growth and entire exemption from blight, the seedlings are believed to be of value as stocks to work other varieties of the pear upon.

At another time we expect to give an engraving of a hybrid between the Sha-lea and the Bartlett, and outlines of two native Japanese pears.

THE AMERICAN VINE IN FRANCE.—In our Vineyard department will be found a very interesting translation from a French journal, made for the Press by Isidor Bush of the well-known firm of American vine propagators, Messrs. Bush, Son & Meissner, of Bushberg, Missouri. We applied to Mr. Bush to describe for us the position of American vines with reference to the phylloxera, and he sends first the translation



THE SANDWICH ISLAND PEAR.

produced what has been called the "Sandwich Island pear," a fruit resembling both the apple and pear, but distinct from either. The foliage and habit of growth is almost identical with the "Sha-lea," differing in having broader and deeply serrated foliage, and light green bark. The fruit is generally near the shape of a Rambo apple, though larger; occasionally quite oblong flattened; in color a beautiful yellow, with often a fine blush on the sunny side. The outline of the "Sandwich Island pear" may be seen at No. 1, in the engraving on page 345.

Another pear, believed to be a regular Japanese pear or a seedling therefrom, is shown in outline at No. 3, on page 345. It is grown in Ohio and is called the "Ciucincis pear," having been introduced originally from the south of France. This tree has fruited for over 15 years, producing quite large, more quince than pear-shaped specimens, of a beautiful orange color, ripening in September, and keeping in good condition a month or more after coming from the tree. For canning or preserving, this fruit is considered superior to any other of its season. The growth of the tree is very vigorous, foliage of enormous size. The seedlings often attain four to six feet high the first year, and grow with pro-

which we print this week, which shows clearly the way in which the American vine is triumphing over the sulpho-carbonates which have been forced upon the vinters as an insecticide. The style in which the French writer dresses the points he would make in favor of our native vines is most entertaining. We trust that Mr. Bush will pursue the subject by such translations or original articles as he thinks important.

HUASCO GRAPES.—The *Anaheim Gazette* says: "There is grown at Huasco, Peru, a seedless grape which, after being dried, is known as the Huasco raisin, and is esteemed a great delicacy; and suggest that it ought to be introduced here, as such a raisin would undoubtedly be much sought after in this market." In this connection we may remark that the University of California has just succeeded in getting a few Huasco cuttings from Chile, through the persistent efforts of Secretary R. E. C. Stearns, aided by the United States Consular officers at Valpariso. We understand that the Huasco grape owes its excellence chiefly to the peerless conditions which prevail in its Chilean home, but there may be places adapted to its well being in this State as well.

## Life in Lemons.

Perhaps those Southern Californians who are laboring to secure a perfect lemon are building far more wisely than they know. The lemon which shall contain the greatest amount of pure citric acid and the least bitterness has seemed to them a very desirable thing to attain; a very comfortable thing as well, because such a fruit will win market honors. And beyond mere luster of lucre, there has been a thought of mild public service to incite lemon improvers, for if the perfect lemon could but regulate the national bile on land and sea would it not be a blessing to the nation? We doubt if our lemon propagators have dared to dream of greater deeds than these for their favorite seedlings, and yet, if ideas which have just been promulgated in Germany have but one per cent. of truth in them, the history of the lemon will be regarded as one of the grandest instances of human blindness and misunderstanding. For has not Dr. Wilhelm Schmoele, professor of pathology, just published a voluminous treatise, entitled "Makrobiotik und Eubavik," which bears the imprint of the University of Bonn printing office, which has for its central idea the claims of the lemon as the "elixir of life," which the old alchemists sought for centuries, and gave their lives as the price of failure in their search. This Prof. Schmoele, if newspaper reports of his writings be true, goes as much beyond the common idea of the healthfulness and sanitary benefits of lemon-eating as can be well imagined. He declares that the eating of a certain number of lemons each day would ensure longevity, and his book contains very careful elaboration of this idea, with rules for the application of the lemon treatment to the conditions of particular individuals. To ladies over forty and under fifty, commencing the citronian system, he prescribes two lemons per diem, whilst gentlemen between those ages must "assimilate" at least three lemons daily. Between fifty and sixty, the dose for ladies is set down at three, for gentlemen, at four lemons a day. One lemon more per diem is ordained to each sex for every additional decade, so that centenarians must consume, if women, their eight lemons daily—if men, no fewer than nine. We do not propose to approve this claim nor to dispute it, nor can we advise any one to neglect preparations for dissolution so long as lemons are abundant. If we should doubt what we hear, it would be partly because we should think the centenarian appetite would cloy at the rate of nine lemons every day in the year, and wonder whether death would not be considered a restful release from such an amount of acid, or whether friends would not be forced to slip a dose of morphine into such a specimen of senile sourness to rid themselves of such a brake upon their comfort. Suppose the claim were true would not the life-giving lemon rise to the kingship in fruits, and the old favorites, the apple and the orange, quick sink to subordinate rank. Supposing, however, that there is a grain of truth in the lemon, and there generally is a modicum of that article in most claims, the practical lesson would be that the lemon has even a higher place in the phenomena of animal economy than is already accorded it. If this should be generally recognized and the matter tested by judicious lemon-eating by all persons, this would be a boon to our experimenters and propagators from the greatly increased demand for their products. Therefore we are willing to believe that there is something in the German professor's claim, and urge our producers to hestir themselves to develop their lemon resources. It would be a fine thing to have a market opened for lemon and lime juice which would call for this liquid as liberally as it does for cider. The wide publication which the German savant's ideas are receiving must certainly awaken the immediate demand for the fruit, just as the "blue glass" doctrines promulgated a few years ago stimulated the demand for azure silicates, until the manufacturers found themselves unable to supply it. It is to be hoped, however, that there is more in lemons than in blue glass, and that the impetus to acquaintance with its virtues which will be now incited, may result in a permanent appreciation of lemons for the good effects which the fruit certainly has when wisely used.



## THE VINEYARD.

### The American Grapevine in France.

EDITORS PRESS:—The following letter, by Aime' Champin, farmer and member of the General Assembly, was published about two months ago in the *Paris Journal of Agriculture*. The writer is one of the most eminent viticulturists, member of the "Conseil General" of the Drome, and his letter is written in that elegant, interesting style which distinguishes the French scientist. It well represents the position of the American vine in France, and will be found interesting; more so, perhaps, than anything we here might write on the question of fighting the phylloxera.—ISIDOR BUSH, St. Louis, Mo.

Letter of the American Vine to the Chief of Insecticides (the Sulpho-Carbonate).

Dear Brother Companion:—I take the liberty of addressing you thus, as we are co-laborers in the defense of viticulture, though we do it in different ways: You destroy many phylloxeras, they say, and I pay you my compliments for it; I live in peace with them, but for my doing so, you heap many little miseries upon me. You wanted to compel me to travel only in well-soldered collins, knowing that I would have thus died of suffocation. Failing in this, you force me to be enclosed in screwed boxes; a mere malice of yours, as you are well aware that your famous screws incommode me only, but not the phylloxera. You have me confined, as if I were pestilential, to some few arrondissements which are, however, delighted to receive me, are taking good care of me, and in return I reward and enrich them. If I attempt to leave them, you have me seized by your constablers and burnt without mercy. You accuse me of bringing the phylloxera with me. I defy you and all your friends to discover a single one, in winter, on my cuttings; and if perchance some are found on my roots, nothing would be easier, if we may believe you, than to destroy them all in a moment. But, Oh no, instead of acting with me, as a good comrade, you deliver me to the furnace or to your famous cousin, the petroleum. Thus you hinder me from coming to the aid of my poor sisters of France, who are extending their arms toward me to call me to their aid.

Let me tell you, my unbrotherly brother, the French vines have rather to do with me, notwithstanding all the evil you have told them of myself, than with you. Your manners towards them cannot be considered gallant or polite, and they will never accustom themselves to the repeated use of your unwonted proceedings. You introduce yourself violently between their roots and burr them up under the pretext of freeing them from their parasites. I lend them my own strong and invaluable roots, and resting on them, intimately united with me, they feel themselves exalted above their enemies, and stretch their rampant tendrils with their golden or purple clusters joyously toward heaven.

We are as necessary to each other as the blind to the lame; and when you and the phylloxera have cut off their legs, they have but one hope, but one salvation, namely, that I lend them mine. And I am always ready to render them this service, even though I could spread to the sun my own grapes of sweet juice and incomparable rich color, for I am neither ambitious nor jealous. I am satisfied to furnish to my French sister the necessary sap which I draw from the soil, and which she transforms into her perfumed fruits and delicious wines. I am ever ready thus to come to aid those who want me, but I do not pretend to save the people against their wishes or to force myself on them. I am a good girl, and to prove it to you, I will give you some excellent advice. It is very disinterested, for you descend and I rise, and I could let you sink into the same oblivion into which your twin brother fell, whom you now supplant, after he had proudly supplanted 500 or 600 other brother insecticides, which, perhaps, were worth just as much as you are. It is pure kindness if I try to tender you a staff; but it is also, I confess, of interest to me, for you are a precious *avant garde* for me; you prepare the vines and the vintners so that they are glad to receive me—were it only to get rid of you.

I have just been listening to a grape-grower, resting under my shade, as he was reading a paper signed by Mr. Demole, one of your old friends, whom I shall soon make mine, as follows:

"The situation is becoming still more aggravated by the treatment of the phylloxera-infested vines. In consequence of a temporary (?) check of vegetation, which is the natural (?) consequence of the treatment with sulphide of carbon, the farmers of St. Joire and Boissette oppose the continuance of the treatment of their vines. To manifest their resistance, they have thrown the contents of the barrels of sulpho-carbonate into the creek, and have even broken to pieces one or two of those iron-bound barrels. The workmen have thus become intimidated, and the commander at Chambéry, called upon for soldiers in their place, but not being authorized to grant them, has referred it to the minister of war. It is hoped that we shall be enabled to continue with the troops."

Is it possible, most august fellow companion, that you are reduced to such extremes, after all that has been done for you? You have been grandly advertised as an infallible cure; to engage the farmer in your favor, he has been told—loudly told, well knowing that he is shy of expense and holds tight to his pocket, that, to all

your wonderful qualities, you unite that most wonderful one of not costing him anything. Everybody knows that the government has decided to become (nobody knows why) the viticultural apothecary, and has selected you, and you only, to become the official and gratis syringe of all sick vines.

You come to him with trumpet sound, as formerly the heroes did, with an escort of great personages, scientists, chemists, geometers, investigators and agents of all kinds, armed with quite an arsenal of mysterious engines, and you establish yourself in their vineyards as a conquering master. You are at once the authority which the Savoyard farmer highly respects, the power which he fears, the gratuity which he loves; and, yet, he throws you into the river. And, you, instead of taking it philosophically you get angry, and call for the patrol to guard you.

See here, my over-heated fellow, try to be reasonable; leave the soldiers to the defence of the country, and do not try to disguise them in doctors against their will. If you desire to go on killing the phylloxeras peaceably, without being obliged to aim on their proprietors, take my advice and follow the example I give you. When your estimable father, the pure sulphur, wanted to prove that he destroyed the oidium, what did he do? He simply and modestly destroyed the oidium, and whosoever wanted to try it could convince himself of it, and soon everybody employed him to destroy the oidium; but I never heard that any *gendarme* took a farmer by the collar to force him to have his vines sulphurized.

When I wanted to prove that I resist the phylloxera, I commenced, poor thing as I am, simply by resisting the insect; and I waited patiently several years, growing in vigor, while my poor sisters of Franco disappeared from the attacks of their subterranean foe. Then I invited the grape growers to come and look at me. I said: If you think that I am good for something take me; I am young, strong and quite willing to serve you, be it for direct production, if you judge me worthy thereof, or as grafting stocks for my French sisters, which are older, more prolific, finer and richer than I am, and I should be happy to be their humble servant-maid and to save them.

The farmers and grape growers came and saw me, and told others what they had seen, and there you have it why they, who throw you into the river—you, who cost them nothing—are anxious to have me come yet this next season, me, poor proscribed thing, though it cost a good deal.

You will tell me that the farmer is a stingy, stupid and obstinate animal, who does not know his true interest, but that you, by your chemical, academical, scientific, bureaucratic, and may be, even theocratical authority, have the right to act as *pater familias*, to use force as with a child, to make him swallow the medicine which he refuses, if you think it good to administer it to him. You will show me your parchments, law of July, ministerial ordinance and police regulations of December, January, March, April and June.

Stop! my too paternal fellow, the farmer, especially the Savoyard, is by no means what you say. He is not stingy, as he refuses your gifts; nor is he stupid, he is only diffident. He has quietly observed your manners and allurements and murmurs between his teeth somewhat like *Timeo Danaos*. He fears you, Sir Sulpho-Carbonatist, and fear, you know, is the beginning of wisdom. You want to force him to submit his beloved vines to a treatment which, as you admit, commences quite naturally by giving them the colic, of which he is not sure but it may prove mortal. You want to treat him like a child—be it so, but treat him, at least, like a big child whom you may persuade to swallow the drug, and not like a suckling baby. Show him that his cousin vines have been cured by you of a similar disease, and, as he is more a doubting Thomas than baby, lead him to the vineyards of his cousins which you have restored. This is what I have done, and I would like to know why you should not do as I do. In the midst of the devastated places, you have certainly some portions, some fortunate spots among so many, or perhaps large vineyards, which were rejuvenated by you, which are to-day flourishing, green and loaded with grapes, promising a sufficient crop to remunerate for your expenses and the rich manuring, which you had prudently made them apply after yourself, and to which evil-disposed tongues might ascribe, perhaps, the few good results of which you pride yourself. Why don't you invite, as I do, all the grape growers to some grand convention, in the midst of these fortunate regions of which the mere sight would add new and convincing glories to your high repute?

If your modesty or some other thing prohibit you for the moment to enjoy such complete triumph, there remains but one other way. It is this: Choose in each contaminated village three or four of the most distrustful farmers, and have them transported (at Government's expense of course) to the paradise which you have created, we do not know where; make them see with their eyes and feel with their hands the marvelous cures which you have accomplished, and then bring them back (always at our expense) converted and convinced. As soon as they come back home, your visitors will relate, each one, what extraordinary things you have shown, and then you would see those very men, who now throw you into the river, loudly call for you, open their arms and welcome you with all their heart. May you then not forget in your triumph that you have been saved from the watery grave

by the very ones which you wanted to throw into the fire.

But if, perchance, the farmers remain incredulous, you must submit; for they are masters of their own vineyards, and you had better try, with prudence and excellent manures, to keep those in good health to which the pest has not yet come, and do not make yourself odious besides, after having been ridiculously powerless.

You were more fortunate than all other insecticides of your family, than all other pretenders for the crown of 300,000 francs, and the Savoyard farmers (who add the syllable *par* to your name, to remember it more easily, calling it the sulpho-carbonatiste instead of the "sulpho-carbonatiste insecticide") charge me to leave you to yourself, that you may leave them in peace, to take care of their vines as they please, and to plant whenever they want and as much as they desire.—Your very humble servant, the

"AMERICAN VINE."

## HORTICULTURE.

### Best Fruits to Cultivate.—No. 4.

EDITORS PRESS:—"Why don't you practice what you preach?" asked a man the other day, while looking at my young orchard. "I see your practice is to plant a good many cherry trees more than any other kind of fruit trees. What does that mean; have you made a mistake in the kinds of fruit most profitable to cultivate? or why do you plant cherries and tell others to plant late-keeping apples and pears?"

Just this: we are favored with a good home market, at good prices, for such fruit, because everybody likes cherries, while in a company of ten, there will be five divisions on other fruits, and where you depend on shipping to market, you had better grow late-keeping, hardy fruit, that will go into market, when fruit is scarce, and there is but little choice. Such fruit is not perishable like cherries; and if you can't sell this week to suit you, you can wait until next week, or week after. With summer fruit you cannot wait. If you can grow large, finely colored Hungarian or Fellenberg pears, you can find a good market, green or dried, to ship East, and where they do well they pay better than apples or pears, but a good many are in favor of the *petite d'agen*, as it is a hardy, a great bearer, and a favorite dried prune; but all such fruit requires more attention than most people like to give to fruit. So, to all such, I say plant Newtown apples and Nelis or Easter Beurre pears, where they will do well, and if you have 2,000 or 3,000 boxes, you can sell without trouble, at good prices.

A man went into his orchard a few days ago, where some boys were picking quite a variety of apples on shares, and said to them: "Boys, I want you to divide each kind, according to the quantity of that kind." "Why," said the boys, "because I want my full share of Newtowns," said the man. You will see it invariably among fruit buyers that they want to know how many "Newtowns" you have in your orchard, when they are going to buy the lot. So if you want to grow fruit for market, consider your market, and the nature of your soil, before setting trees, and if you are satisfied that your situation is suitable for growing a good marketable variety of late apples or pears, you will find them less liable to waste, suffer less depredations from birds and animals, and give less trouble in marketing. But in this, like other business, you must give it sufficient attention to produce a good article, or it will be a "failure." But when we consider what a wide field we have for a market (nearly all over the continent and the islands of the Pacific), and the great variety of choice fruits that will grow all over the State, there will be no trouble in finding suitable situations, to grow fruit profitably, if we give it sufficient attention. So ascertain what you can grow to the best advantage, and what your market demands, and select your fruit to suit the circumstances. M. P. O.

Soquel, November 16th.

### What is a "Crab-Apple"?

T. H. Hopkins writes to *Land and Home* as follows: Some writers seem to be somewhat "mixed" on this subject. This, perhaps, is due to forgetfulness of the fact that the word "crah" as commonly used has no definite meaning. Botanically, a crab-apple is a wild apple. Of these there are several species, the best known of which are

1. The European crab, *Pyrus malus*.
2. The Siberian crab, *Pyrus baccata*.
3. The American crab, *Pyrus coronaria*.
4. The narrow-leaved crab, *Pyrus angustifolia*.

The last two named are both American crabs, No. 3 being the common wild apple of the Northern States and Canada, and the last belonging to the South. *P. coronaria* is, however, found south as well as north. *P. malus* is the wild form of our common apple. These are the crabs, botanically speaking; but pomology recognizes as a crab any small apple suited for cider making, such as Hughes' Virginia Crab, and others of a like character.

There has lately arisen a third use of the word, which may be called the nurseryman's, orchardist's and fruit-dealer's definition. The Siberian and American crabs having come into

cultivation chiefly as ornamental trees, there has sprung from them (chiefly from the former) a class of apples differing from all others, and varying considerably among themselves. It is well understood that when wild fruits are subjected to cultivation they show a tendency to "sport," that is, to change their size, color, flavor, etc., frequently for the better. Sometimes this sporting occurs only on a single limb. It is then called "bud variation," and may be perpetuated by budding or grafting from that limb. But usually sporting occurs from the seed, and the product, if better than the original wild fruit, is called an improved sort, and if from a crab-apple, an "improved crab."

THE CHINESE SUMAC.—Samuel Parsons, Jr. has the following note on the Chinese sumac (*Rhus Osbecki*) in the *Rural New Yorker*: This Chinese sumac differs in several ways from other forms of the *Rhus* species with which I am familiar. It grows larger and more like a tree than its relatives, for one thing, and for another, its leaves are broad and massive and specially distinguished by a marked extension of the leaf half an inch wide along the entire midrib. This peculiarity is visible at a considerable distance. But the crowning charm and fitness for ornamenting the lawn possessed by *Rhus Osbecki* is its wonderful fall coloring. All *Rhus* are fine in the fall, and everywhere on our hill-sides common sumacs glow at that season with the most vivid scarlet and dark-red tints. The great advantage, however, pertaining to *Rhus Osbecki* is, considering the species, the extraordinary size of the leaf as well as the tree. On these leaves, under strong sun-light, burn in the most effective manner broad masses of scarlet, shading into blood red and brown; or on the other hand, into brilliant yellow, curiously mottled or solid, as the case may be. The flower itself is decidedly attractive. Mingled with common and cut-leaved sumac, *Rhus Osbecki* would be equally effective on the outskirts or in the middle of the group. An isolated position, however, accords better with its rare and showy merits. In general behavior *R. Osbecki* much resembles its American relatives. I should also note that its employment on any lawn in America is very recent.

## THE STOCK YARD.

### Notes on Feeding.

We recently gave an article on the food value of the potato. We notice that the subject is handled in another way by Conrad Wilson in an essay before the New York Farmers' club, but similar conclusions are reached. Mr. Wilson says: How to convert potatoes, with the best economy and with the largest profit, into other forms of food—into milk, butter and meat—is a problem not yet fully solved. Various estimates have been made by practical men as to the effective value of the potato in the production of beef, mutton and milk; and, though opinions still differ, the proportion of other food staples that potatoes are capable of yielding is nearly indicated in the following statement:

A bushel of potatoes, when judiciously fed to animals of a good breed, will produce:

	Pounds.
Of beef, from.....	2 to 3
Of mutton, from.....	4 to 5
Of pork, from.....	4 to 5
Of milk, from.....	35 to 40
Of butter, from.....	2 to 2½

It is, of course, not supposed that potatoes are fed exclusively in producing these results; but in suitable combination with other kinds of feed. These results, of course, depend in part on the above estimate of the feeding value of potatoes. On this point there is room for some difference of opinion; but it would be easy to show that when potatoes are combined with other well-selected elements and fed in the right proportion to animals of good breed and good capacity the estimate given is not far out of the way.

The common experience that it is poor economy to feed poor hay to a horse, and that other animals can make much better use, is explained in the *Tribune*, by Prof. Caldwell, as follows: In same recent experiments by E. Wolf and others on the digestibility of chopped straw, mixed with the oats and hay, it appeared that the horse extracted comparatively little nutriment from the straw, except when the ration contained but little hay and a large proportion of oats. In respect to the mixed ration as a whole, the digestion of the albuminoids and non-nitrogenous extractive matters (carbohydrates, etc.), was as complete by the horse as by the sheep; but the fat and crude fiber were digested to a much smaller extent by the horse. Only a few digestion experiments have been made with the horse, as compared with the work that has been done with the other domestic animals, and no very safe conclusions can be drawn from the results thus far obtained; but it appears to be shown that so far as concentrated fodder, roots, good hay or green fodder are concerned, the digestive capacity of this animal is equally as great as that of ruminants, but that with respect to straw or other coarse fodder, and especially the more difficultly digestible portion of such materials—the crude fiber—its assimilative power is less; hence it would not be good economy to put much straw or poor hay into the ration of the horse, provided that there are other farm animals to consume it.



## THE FIELD.

## Comparative Tests of Varieties of Wheat.

EDITORS PRESS:—On the 21st of December, 1878, I planted in my garden twenty-seven varieties of wheat for the purpose of ascertaining by experiment, on a small scale, the comparative yield of each variety, and further, to try my luck at hybridizing, as well as to note the effect of rust on each variety, should the season be such as to cause rust again as was the case the year before. I first selected one hundred good, sound, plump, well-filled grains from each variety, being very careful that each grain was as near perfect as it was possible to get it by observation with the naked eye. I then, with a hoe, spade, rake and small roller, prepared the bed for the seed by spading to a depth of about six or seven inches and afterwards rolling, raking, etc., thoroughly pulverized the dry soil (as our rains had not yet set in) to the depth of the spade. When the bed was ready, I laid it off in furrows, with the point of my Warren hoe, about two and a half inches deep and furrows twelve inches apart. The bed is now 25 feet wide and 55 feet long, with the furrows running across it. I then planted the wheat by dropping one grain in a place every six inches in the furrow, making 50 grains in a row and two rows of each variety. After setting a stake to designate the different kinds, the furrows were filled up level and afterwards the whole bed raked over, and there left to await the rains to sprout it. The first rain in sufficient quantity to start the grain came from the 22d to 26th of January, at the breaking up of a long spell of cold frosty weather. The first spears appeared above ground on January 26th. On February 25th, a crust having formed on the surface, which prevented some from getting through, I rolled it with a 20-inch garden roller, weighted to nearly 250 pounds, running lengthwise with the rows, and afterwards raked over the whole surface with a fine-tooth steel garden rake. The rolling and raking made sad work with the blades of wheat which were above ground from three to six inches, laying all flat on the ground and riddled by the rake. I feared that the whole crop was ruined, but four days after it was all righted up again and grew rapidly. About fifteen days after I repeated the rolling and raking, and then hoed the soil between the rows, cutting up all weeds and thoroughly pulverizing it to the depth of about three inches, after which it was thoroughly rolled again and left. It soon began to tiller, and in a short time the rows could be distinguished only by the height of the different varieties.

Nos. 14 and 15 lay flat on the ground, and continued so until near the season for sending out the head, when they raised and would have made something but for a hot north wind, which came just in time to dry them up. This wind affected all varieties more or less, and caused them to ripen prematurely, leaving much of the grain very much shrunken. None of them were affected by rust sufficiently to injure the grain, though the blades of all showed rust slightly. My success at hybridizing is as yet unknown. By noticing the table below, you will see the names of the varieties on which my attempts were made: No. 16 on 20; No. 20 on 21; No. 22 on 25; No. 13 on 19; No. 1 on 4; No. 4 on 1; No. 20 on 1; No. 1 on 20; No. 20 on 23; No. 23 on 20; No. 1 on 20; No. 16 on 1. The first number given in each case is the male, the other the female, and means that at a certain stage in the flower's growth, the male portion of the flower of a single grain (take the first instance No. 16 on 20) of No. 20 was removed before the pollen was shed, and the pollen from No. 16 was introduced. The operation is a tedious one and must be done at just the right time. But one grain in each instance was fertilized, and that particular grain operated upon had to be marked with a tag to distinguish it from others when ripe. Some of the tags with which mine were marked were blown off by the wind or picked off by birds, and the grains were lost. The few grains I saved I shall plant in a box, and when they have tillered or stooled sufficiently, shall take the plant up and separate it into as many parts as possible and transplant to the ground, and if the weather is favorable, I shall take up and separate again and transplant, thus getting the greatest possible results from each seed.

I submit the following to show from whence I obtained the seed:

- No. 1. From Tulare Co., Cal.
- No. 2. From Ohio.
- No. 3. From a neighbor in Yolo Co., Cal.
- No. 4. Bliss & Sons, New York.
- No. 5. Seed raised in Yolo Co., Cal.
- No. 6. Burper & Co., Phila., imported from Australia.
- No. 7. Seed raised in Yolo Co., Cal.
- No. 8. Seed raised in Yolo Co., Cal.
- No. 9. Durbin & Smith, Oregon, imported from France.
- No. 10. Heads found near Cache creek, Yolo Co., Cal.
- No. 11. Bliss & Sons, N. Y., hybrid by Pringle.
- No. 12. Seed raised in Yolo Co., Cal.
- No. 13. From Tehama Co., Cal.
- No. 14. Com. of Agr., originated in Kent Co., Eng.
- No. 15. From Paris, Ontario—Hybridized by Arnold.
- No. 16. From Tennessee.
- No. 17. From Cache Creek canyon, Yolo Co., Cal.
- No. 18. Found mixed with No. 16, from Tenn.
- No. 19. Same as No. 1, from Tulare Co., Cal.
- No. 20. From San Joaquin valley.
- No. 21. From Butte Co., Cal.
- No. 22. Seed raised in Yolo Co., originally from Eng. (?)
- No. 23. From Yolo Co., Cal.
- No. 24. From northern Ohio.
- No. 25. From Prof. Sanders, Fresno Co., Cal.
- No. 26. From Wisconsin.
- No. 27. From Chicago, Ill.

Having promised you a report of my exper-

## SUMMARY OF MR. BURKE'S WHEAT EXPERIMENTS.

No.	Name of variety.	No. grains germinated Yield in ounces.	Yield in grains by ac- tual count.	Average yield for every grain planted.	Average yield for every grain that germinated.	Remarks.
1	White Sonora.....	87 5	5,700	57 for 1	65 for 1	Cattle reached over fence and destroyed all the best heads.
2	Clawson.....	84				Failed to fill.
3	White Club.....	89 27	25,920	259 for 1	291 for 1	11 Grain shrunken very much.
4	Defiance C.H.....	90 13	19,710	197 "	219 "	10 Berry not very well filled.
5	Prop or Proper.....	95 35	30,030	300 "	316 "	15 Plump and well filled.
6	Royal Australian.....	49 16	16,415	164 "	235 "	151 Grain of medium quality and fair size.
7	White Chile.....	93 18	18,870	189 "	203 "	17 Fair size grain but much shrunken.
8	Little Club.....	82 19	17,912	179 "	218 "	118 Grain fairly filled.
9	Hungarian.....	70 3	4,380	44 "	62 "	130 Very much shrunken and light.
10	Black Bearded.....	97 22	21,120	211 "	218 "	13 Shrunken very much.
11	Defiance L.H.....	96 2	2,950	29 "	31 "	14 Very light and shrunken.
12	Red Sonora.....	96 21	29,820	298 "	300 "	14 Well filled and plump grain.
13	Red Chaff.....	91 5	6,785	67 "	75 "	19 Very plump grain, well filled.
14	Mold's Red Winter.....	81				19 Dried up before the head appeared.
15	Arnold's Victor.....	86				14 This, like No. 14, died before the head appeared.
16	Diamond.....	76 14	11,505	115 for 1	151 for 1	124 Fairly filled but gathered before quite ripe.
17	White Sonora.....	69 19	24,490	244 "	355 "	131 Very good grain, though a little pinched.
18	Nameless.....	95 9	10,915	109 "	115 "	15 Somewhat pinched but of fair quality grain.
19	White Sonora.....	80 2	2,700	27 "	34 "	120 Very much shrunken.
20	Snowflake.....	85 13	15,400	154 "	181 "	115 Very fair, though a little pinched.
21	Pride of Butte.....	91				9 Failed to secure a head of the few that appeared.
22	Archer's Prolific.....	71 26	25,680	256 for 1	362 for 1	123 Badly shriveled, on account of having been cut green.
23	White Tonselle.....	68 6	6,875	68 "	101 "	132 Berry of fair size but shrunken.
24	Clawson.....	92 7	10,585	105 "	115 "	18 Very light grain, badly shriveled.
25	Early Sherman.....	85 29	33,640	336 "	396 "	115 Very fairly filled but small grains.
26	White Russian.....	60				40 Died before heads appeared.
27	Eldorado.....	68				32 Died soon after heads appeared, never filled.

iment with wheat the past season, I submit the above for what it is worth.

CLAUDE V. BURKE.

Yolo, Yolo Co., Cal.

## SHEEP AND WOOL.

## A Breeder's Notes on Breeding.

Mr. William Ball, a Michigan breeder of Merino sheep, writes the following comments upon methods and policies in breeding thoroughbred sheep: Almost any man who will take good care of his flock and buy, when needed, a good male, can raise a good, profitable flock of sheep, for wool and mutton, but the same plans will not meet with the same general good results in the thoroughbred. Improvement is the watchword, and it is a much harder task to improve upon that which is already very good than upon that which is not so good. With a strong-bred flock of ewes it requires a much stronger bred male to make the coveted improvement. And right here is one of the great difficulties, the scarcity of strong-bred males, those which have great prepotency or power of transmission of desirable qualities. No man who invests his means in thoroughbred sheep should for a moment think his task done when he has secured his flock. He is just getting into trouble, and to extricate himself and make his investment profitable and honorable, he should inform himself upon the history of his flock, their general character, how they have been bred, and what is needed to produce the desirable improvement, and then secure it, if possible, either by purchase or hire. If a mechanic or inventor wishes to construct a steam engine, he must first have in his mind a model perfect in all its parts, must see it in motion, know just where a cylinder should be placed, where a wheel should be located, a burr fastened, how much steam it will bear, what its capacity should be, and then go to work and apply the means to secure his object. Just so with the breeder of sheep. He should have in his mind his model, such a sheep as suits him, and then try and breed it. If he fails once or a dozen times, he is only repeating the experience of all those who have tried the same thing; and he has this to comfort him, he is all the time learning, by his mistakes as well as his successes, and, with perseverance and good judgment, he will in time succeed. And right here this thought presents itself, that in sheep breeding, as in many other pursuits, fashion has something to do with our models.

If the demand is for the largest amount of wool to the least weight of carcass, some will work in that direction, and in fact, not many years since such, to quite an extent, was the practice. But as wool was obtained at the expense of constitution, size and physical power, the practice was discontinued, and now it would seem to be, how much size, constitution, wool and other desirable qualities can be combined in one sheep. A very good idea, I think, as one strong trait of the Yankee is to see, at the end of all breeding or working, the coveted reward in dollars and cents as well as honor and renown.

To-day, if the demand is for long, light fleeced wool, and some of the solons engaged in buying our wool say it is, many are striving to satisfy the call, and to some extent, the demand is for a long, dry, white staple of wool in stock rams, and some breeders are trying to comply with such demand, knowing that they do so at the expense of thickness of fleece, shortness of legs and the stylish form of a true Merino, and many other qualities which go to make a good sheep. The purchaser of such stock sheep can, in a few years, get what he sought after, but he has secured it by the loss of a pound or two of wool per head, besides injuring his flock in many other directions.

One of the first requisites in a stock ram

should be pedigree. There should be no mistake about this, and hence the necessity of dealing with men whose honor is well established rather than believe the stories of a class of sheep peddlers who infest our State yearly with a fixed up lot of pedigrees, and sheep which, when bought, sheared and kept here never again present so good an appearance as when purchased. Buyers have no remedy. The peddlers are gone, and even should they be here not many are responsible. Were I to describe a desirable ram it would be something as follows: First pedigree. Should want him so bred and his character so firmly established by type or line breeding that he should be able to impart and stamp his good qualities surely on his offspring. 2d. He should be of good size, weighing when matured and in good condition, from 130 to 150 pounds. He should have a short, broad, clear-colored nose, with a large wrinkle or more crossing it above the nostrils, which should be open and large, thick, small velvety ears, free from tan marks, a smooth, fine, well-turned horn, the head well covered with wool, and I do not care if the face is also covered. Short neck with heavy folds, especially on the under side, supported by a strong broad pair of shoulders, legs large boned, short and well covered, a good, broad, strong loin, smoothly connected with a broad pair of hips, a little sloping perhaps, broad, heavy tail, with heavy wrinkles, heavy flank, with a straight hindleg. The body should be compact, deep and round, with a few heavy folds extending towards the belly, well filled behind the forward leg, also inside the hind leg, couplings good, the whole body covered with a very strong, dense fleece of wool two and one-half inches long, the tinge rather tending to the buff color. If some jars appear on the folds would not object, but would prefer not to have them upon the body. The fleece at a year's growth should weigh in the dirt 25 pounds or upwards. I do not in a ram's fleece like too much of the white appearance, as my experience has satisfied me that the tendency is toward fineness and thinness. With such a stock ram breeders need have little fear of the ewe.

It is said by some that the Merino ewe is not a good breeder. This is a mistake, if she be properly handled and fed. Breeding ewes need a change of food, with plenty of exercise. Wheat straw, cornstalks, marsh hay and clover hay, all in turn are good for them, and a small amount of grain should be given if needed. Good clear water is also a necessity.

Every flock of breeding ewes should be driven a certain distance every day, and particularly so, shortly before lambing. One theory of the cause of goiter in lambs is from a lack of exercise of their dams. The experience of some breeders is that a large percentage of lambs which are troubled with this malady (and it agrees with my own experience) are those which are dropped in the latter part of the lambing season, attributing it to a less amount of exercise at this time of the year than preceding it.

THE WOOL MARKET.—Walter Brown & Co.'s Monthly Wool Circular for November, contains the following: Most of the wools have passed from the growers' hands, and are now held either by Eastern dealers or local operators, who have every confidence in the future, and are able to carry their wools until their expectations are realized; and with the large increase in manufacturing over recent previous years, there is every probability that all the fine wool will be wanted. We consider that the future value of domestic fine fleeces for the remainder of the season, depends largely upon the prices of the staple abroad. With a limited supply at home, and perhaps a deficiency, we can reasonably expect quotations to keep up to the importing cost of competing wools from Australia and South America. Large orders have already gone out to these points, but as the wool cannot arrive before February, manufacturers, in the meantime, will have to depend upon the assortment of our home product, as there is not, at present, in England, any large amount of fine wools suitable for the American markets.

## FLORICULTURE.

## Mignonette in Shrub Form.

Patience Goodwin gives the *New England Farmer* her observations on growing mignonette in shrub form. The method described (by potting, etc.) is not needed in most parts of this State, but we give it for the hint contained therein. We quote: "Robert had thinned them unsparingly in early summer, so each plant had ample room and verge enough to spread itself. From time to time he had thinned off the lower sprays, and when the plants were four inches high had tied each to a slender stalk. Thus they had grown erect and symmetrical. Now there were several, over a foot in height, with a stout center stalk, from which branches hung with blossoms spread on all sides. 'Why! you have started the trees yourself,' I exclaimed.

'Have I?' he asked in astonishment. 'I couldn't bear to see the poor plants drooping, and their branches with the lovely flowers lying on the ground, so I thought I would tie them to a support, and trim them neatly. I like to see things looking nice and orderly,—that's why I did it.'

"That is just the best way to manage—with other things as well as flowers. Now we'll just take three—three will be enough for home culture—give them fresh soil, in a new pot, trim up the branches a little more closely, and cut back the head of each about two inches. Keep the pot in the shade for a few days in a cool room.

"Mother keeps her plants a fortnight in the tool-room before she has them taken to the parlor for the winter.

"An excellent method. Set your three pots with them. They will need very little water for the first week. After that give it more freely. Continue to trim the plants through the winter as you have during the summer. Next spring give them again new soil, in larger pots, and sink the pots in the flower-plot. By autumn you will have large shrubs covered with blossoms. They will need close trimming at that time. The center stalk having become stout, strong wood will need no support. With good care these trees will continue in healthful growth many years."

## Edible Ferns.

An attempt is being made in France to popularize the use of ferns as an article of diet. Most of the common ferns found in our woods and forests contain more or less starch, and when properly prepared are extremely palatable. The stem as it lies buried in the ground is of very unpleasant taste and smell, and it would be impossible to use it in this state. So, too, are the young shoots of asparagus altogether unfit to eat before they have protruded through the soil of the beds on which they are grown. But, like them, the fern when exposed to air and sunlight becomes fleshy, white, tender, and of remarkable delicate flavor. One of the most famous landscape painters of France is said to pride himself more on his invention of an "omelette aux pointes de fougere," than on any of his highly successful artistic productions. His speciality is prepared from the commonest variety of all, the ordinary brake fern. As yet the use of ferns for food in France is very restricted, and the authors of the crusade in its favor are seeking to gain converts to their doctrine by pointing to the example of other countries. In Japan, for instance, the inhabitants of the lofty clay hill-lands almost live on the fern all the year round. In spring they eat the tender young leaves called "Warabi," and later in the season on the starch which they extract from the roots. This is prepared by washing the roots, bruising them with a mallet, and stirring the crushed pieces in vessels of water, at the bottom of which the starch is deposited. The vessels used are generally made from the hollowed trunks of trees. As much as 15% by weight is often obtained from the roots thus treated. Every hamlet in Japan has a special place set apart for this process, the heaps of residue around which indicate the great extent to which it is carried on. To ensure a rich growth of ferns the natives are accustomed to burn down the herbage and brushwood under the oak and chestnut trees every second or third year.

A MAMMOTH.—A short time ago, says the *Marysville Appeal*, parties employed on levee work about one mile above Yuba City, and near the west bank of the Feather river, discovered portions of the remains of some huge animal, supposed by the laborers to be the bones of another mastodon. Parties subsequently examining the same conclude the fragments of bones exhumed were once those of an elephant. The bones were found imbedded in hard-pan, and about three feet below the soil removed. The animal was imbedded in a standing position. The parts exhumed include two large teeth, weighing 4½ pounds each; the upper joint of one of the hind legs, measuring four feet six inches; a portion of the skull and a socket of a limb joint. The formation of the teeth classify the animal among the elephant class. It is expected that the entire frame will be exhumed, but considerably broken.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### The Insurance Company Matter.

**Editors Press:**—By request of a few interested members of our Grange I write you for information in regard to the "California Farmers' Mutual Fire Insurance Association." Do you know if they have brought any suits lately for assessments? If so, was judgment rendered in their favor?—J. S. C., Temescal Grange.

We are informed by Fox & Kellogg, the lawyers who have in charge the Carter case against the company, that the company has secured judgments against parties who did not appear to defend the suits brought against them. That is, the company has won several suits by default. They say that no case has yet been tried which tests the merits of the issue between the company and its patrons. There is a case now coming to trial, it may come up this week, which will probably show what there is in it. Fox & Kellogg are sure that their side is impregnable, but until the case is tried, that remains to be proved. The Carter case against the company still stands *in statu quo*, being postponed from week to week. This is all the information we can secure at present.

There has been a disposition in some quarters to make the PRESS responsible for the unhappy experiences which have resulted through the operations of this company. Such an opinion is altogether incorrect. The company was never a favorite of ours and we were never a favorite of the managers of the company. Although having the highest respect which we still maintain for some of the gentlemen who have figured in the directory of the company, we have never been on intimate terms with the immediate managers of the business, and our publications concerning their work were confined to the official statements and endorsements which they obtained at the sessions of the State Grange, and from Grange officials. Had the institution had our entire confidence, or had we known the exact state of its affairs our references to it would have been different. We had no positive knowledge of its condition, nor can we be blamed for not fore-knowing what the courts have not yet decided.

We find in the Roseville correspondence of the Placerville *Argus* the following statements, which so far as we know, have not been officially published. We quote: Mr. Mertes, who was a representative to the State Grange, introduced a resolution of very much importance to the subordinate Granges, in regard to the California Fire Insurance Association, which was passed by a large majority, but for some reason it has not yet appeared in print. The following is a synopsis of the resolution:

**WHEREAS**, The California Farmers' Mutual Fire Insurance Association has unexpectedly decided to withdraw from business, and levied an assessment of 1¢ in addition to the former one of 2¢, which was considered enough to carry the five-year risks; therefore be it

**Resolved**, That we deem a full explanation necessary, giving the causes leading to such unlooked-for and disastrous result of a company from which our farmers derived so much benefit, and hoped for more.

**Resolved**, That we deem such assessment for back expenses, without previous notification from the Secretary, to be a plain violation of an important By-law of the company, and that such violation makes the additional assessment illegal.

**Resolved**, That the Directors of said company be requested, by the State Grange, to give, at their next session, or as soon as they can, a full report of the condition of the association, and the causes that led to so disappointing and injurious a result.

### Neighborhood Social Life.

Neighborhood life—we mean neighborhood life in the country—is far different from what it was twenty, or even a dozen years ago. The village is not as far from the farm; the farm has more attractions for the village resident, especially during the summer months, and the reciprocal intercourse and social relations of country and village residents are on a far different basis—one which recognizes the rights and privileges and advantages of each to a greater extent than formerly. The light social polish which contact with village life gives, is enjoyed by the young people of the old farms; whereas, only a few years ago there was an impassable barrier set up between young people who lived in town and country—a barrier which made almost as great a distinction between the two classes as the gold dollar makes in the society of older persons, and we all know that barrier is impregnable. But good has resulted from the breaking down of this distinction between town and country residents, which has left marks of social elevation in almost every country home.

Furthermore, in another direction, a great change for the better is observable in the social and practical relation of farmers themselves. We remember, and it is not so very long ago, when a farmer who dropped into a neighbor's house of an evening, and inquired about his plans for the coming season, and what crops he was going to plant, and so on, was thought to be meddling with matters that were not his, and ten to one if he wasn't "made fun of." It is not so now. We know of excellent farmers' club meetings that have been held by quiet firesides, in the barn floors or the dooryards of neighbors, where farmers have met for an hour, or stopped to talk over matters of the farm as they were passing to the village or their work. Jealousies seem to have been done away, and instead is a feeling of hearty, open familiarity,

and a high-minded and gentlemanly rivalry to do the best things and covet the best gifts.

It is not too much to say that this desirable change in neighborhood life is due in great measure to the influence of the Grange, the farmers' club, the reading society, the evening lecture, the library, and all those good agencies now employed all over the land for the elevation and improvement of the people. When their full work is accomplished there will be no class distinctions in American society founded on gold dollars; and no contention among any class of citizens but that noble contention, or rather emulation, as to who can best work and best agree.—*American Cultivator*.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### ALAMEDA.

**ALVARADO SUGARIE.**—*Reporter*: The Alvarado sugar works are running through about 50 tons of beets a day. Their sugar is first-class and stands high in the market.

**GRAIN AT PLEASANTON.**—*San Jose Mercury*: I met at the town of Pleasanton, H. O. Weller, who, for the last four years, has been engaged in grain-buying at that place. He assured me that the shipments of grain from Pleasanton, of the present crop, would amount to fully 10,000 tons, about one-third of which is barley.

#### COLUSA.

**THOROUGH WORK.**—*Sun*, Nov. 22: The rain has greatly encouraged the farmers in their work. The ground is loose and mellow. The Houx brothers and Mr. Laugenour, around College City, have certainly got in their grain in as fine order as any of the farmers in Colusa county. Their land having been plowed twice last spring, and now harrowed two or three times, it is beautiful to look upon.

#### KERN.

**RUNNING WATER.**—*Courier*: The last storm raised Kern river higher than it has been since July. The bed of the river a short distance from Bakersfield has been dry for three months, a distance of 12 miles. The water now flows the whole way to Buena Vista slough.

**RAISING ALFALFA SEED.**—*Mr. V. Barker* raised this year 30,000 pounds of alfalfa seed, being at the rate of over 300 pounds per acre. He sold \$1,000 worth at the rate of 7 cents per pound, and now can well afford to hold the rest for a better price. Even at this low price Mr. Barker considers the crop the most profitable of anything in the country, there being no plowing and sowing each year. Beside this, two crops of hay were cut from the same field, which amply paid for all the labor, leaving a clear profit of nearly \$24 per acre.

#### LOS ANGELES.

**WIND STORM.**—*Orange Cor. Anaheim Gazette*, Nov. 22: It commenced blowing on Saturday evening and continued unabated until Tuesday, doing considerable damage to a number of our oldest orange orchards. Mr. Chas. Harris had fifteen of his largest trees, which were loaded with fruit, blown down; and in nearly all the old orchards, a great amount of fruit was blown off. The lemon trees have suffered from the breaking off of limbs and mutilation of the top far worse than the orange, it being a more rapid grower, and the woody fiber tenderer and softer than the latter. The effect of these winds teaches two important lessons which it is to be hoped will be heeded by fruit growers. The first is that all fruit trees should be dwarfed and allowed to form top low, with a trunk not more than two feet from the ground. The second is that every ten acres should be surrounded by a suitable windbreak. As to the best trees for this purpose there is difference of opinion. I would prefer the pepper to all others as it is less easily uprooted, is a rapid grower, is a clean evergreen and exhales a pleasant aromatic fragrance. It is objected to the eucalyptus that it absorbs too much moisture, thereby depriving the first tree-row of its needed supply. I can see but little force to the argument, and would reply, better lose a tree root than the fruit of the whole orchard. As an absorbent of malarial and noxious vapors, it is of inestimable value, promoting and perpetuating health by antidoting and neutralizing the elements of disease. It is also a clean tree and evergreen, and although not as symmetrical and beautiful in form as the pepper, yet it sends up its top to a much greater height, which for a windbreak, is a quality in its favor. If but one row is planted around the border, they should be set not to exceed ten feet apart. It is to be hoped that the experience of the last few days will induce every ranch owner in Orange to at once surround every ten acres with a row or two of trees suitable for windbreaks. I notice that quite a number have set out the orange as a quasidee tree, and so far as ornamentation is concerned, it does very well, but as a windbreak it is worthless and should give place to some other tree of forest growth.

**THE BEET-SUGAR ENTERPRISE.**—*E. T. Genert*, in *Express*: The farmers and business men appear to be unanimous in their opinion that, to have sugar manufactured from beets in this county, if on ever so small a scale in the beginning, is by far preferable to the shipment of the raw material to San Francisco, even on a very large scale. This opinion finds ready expression in the willingness to enter into arrangements to produce the beets and have them worked up on shares, and thus inaugurate the

co-operative principle to its fullest extent between the farmer and the manufacturer. Several gentlemen have declared their readiness to supply any shortage of beets the farmers might not raise, but so many farmers have already engaged for raising beets that the limited quantity which the factory will be able to convert into sugar, could be doubled or trebled. There will be, therefore, no longer any question of the enterprise to be carried on, and no doubt that the sugar factory will be ready for work by the first day of July next. The locality will be in Los Angeles county, but the exact place will only be selected after a close examination of all the advantages and disadvantages. Many localities offer all the requisites to carry on a beet-sugar factory successfully, and when the first one has worked profitably for the first season, it will no doubt be duplicated in more than one place in this county and the adjoining ones. The system of extracting sugar which will be adopted in this miniature sugar factory will be the diffusion process of dried beets; no other but dried beets will be worked. The most important part of the machinery has been already ordered in Germany, while the less important parts will be made here. Fifty cents of the genuine sugar-beet seed have been ordered and will arrive here early in December, while another invoice of 50 cents will arrive in January next. This will not only supply all the farmers who contract for the delivery of beets with the seed, but leave a large surplus with which farmers will be supplied who wish to give sugar-beet culture a trial in order to know what to do another season.

#### LAKE.

**AGRICULTURAL SOCIETY.**—*Lower Lake Bulletin*, Nov. 22: Citizens from various parts of Lake county met at Tucker's Hall, in Kelseyville, Nov. 20th. Geo. A. Lyon, Esq., was called to the chair and H. Winchester, Secretary. After remarks by several endorsing the movement, the following resolution was introduced by R. K. Nichols, read and unanimously adopted:

**Resolved**, That it is the sense of this meeting that a society be formed in Lake county, to be known as the Lake County Agricultural Fair Society, and that its objects shall be the stimulation and improvement of agriculture, arboriculture, horticulture, mechanics, manufacturers and stock-raising in Lake county. And that this society shall not intend or subserve anything of a political, sectarian or sectional character.

On motion the following gentlemen were selected as incorporators: R. K. Nichols, J. B. Robinson, J. S. Mendenhall, D. M. Hanson, J. M. Hamilton. The following were appointed a committee to draft an address to the people of Lake county in reference to the objects of the organization of the society, to wit, H. Winchester, Geo. A. Lyon, W. C. Goldsmith, J. H. Jamison, H. J. Crumpton, A. E. Noel, D. P. Shattuck. The meeting then adjourned to meet in Kelseyville, Dec. 20th, 1879, to hear report of committee, and to transact such other business as may come before it.

#### MODOC.

**ITEMS.**—*Independent*: Threshing in Round and Big valley is completed, and the machines are put away to wait another crop. The yield in Round valley is better than has been known for years. It is also of a superior quality. The crops in Big valley are only average. Farmers in the vicinity of Adin have all been busy plowing since the late rains. More plowing is being done at the present time has ever been known in that vicinity.

#### NAPA.

**AT WORK.**—*Reporter*, Nov. 21: The rains of last week were just such as the farmer likes. Falling gently as they did, not a drop was allowed to go to waste, and the parched and thirsty earth drank in all the moisture. Already plowing has commenced in this valley, principally on the low lands.

**ARGOLS.**—*Register*: Henry Hogan yesterday returned from a two days' trip through the valley in company with a gentleman from San Francisco, during which time every wine cellar in the valley was visited. Henry's companion intends to start a tartaric acid manufactory in San Francisco, and came here to purchase of wine men the crude tartar that forms on the inside of casks in which wine has been stored.

**CLOSE OF THE WINE SEASON.**—The wine making season is about over, and the crushing of grapes at cellars in this part of the valley has ceased. Owing to the late spring frosts and to heavy blighting north winds when grapes were in bloom, the crop is not as large as expected, and in consequence of a short supply less wine was made this season than last. The total amount of wine made in the valley this year is estimated at over a million and a half gallons.

#### SAN BERNARDINO.

**PURCHASING SHEEP FOR MONTANA.**—*Index*, Nov. 21: Mr. Flowers, a large stock-raiser of Helena, Montana, arrived here this week on a visit to friends. Mr. F. is quite enthusiastic over the future of Montana. He thinks Montana is the paradise of stock raisers, and says stock can be driven through good pasture the entire distance from Helena to Omaha, Neb. During his stay here Mr. F. intends to purchase 50,000 sheep, if they can be bought at a satisfactory price, and will drive them to Montana.

#### SAN DIEGO.

**WORK.**—We imagine that most of our farmers will avail themselves of the rain, and do some very fine work in the way of plowing, and that they will be at it in all sections. The rain was so fine that it will enable them to do so. In Spring valley, and in the Cajon, we hear of

goodly work, and hope that other sections are as busy, and that the crop may be a large one. Last Sunday there was a good deal of heavy wind accompanied by rain, but we have heard of no damage. It rained so easy, that we had no idea the ground was so thoroughly soaked till we crossed one of the stubble fields on horseback. A great deal of grain has been sown about here, which will now sprout up in a hurry, and spuds are in nearly everywhere in the valley. Already in many places the ground is putting on a greenish hue, very agreeable to the vision. New impetus is given by the rain to farming, none are idle.

#### SAN MATEO.

**LA HONDA.**—*Cor. Journal*: The heavy rains have stopped all teaming, probably for the season. Already the farmers are preparing for putting in their crops; soon every side-hill and mountain top will be the scene of activity; countless mold-boards preparing the soil for the coming harvest. Considerable talk is heard about flax, many proposing to raise it the coming season.

#### SOLANO.

**SUIT AGAINST TRESPASSERS.**—*Republican*: Last Monday the first suit for trespass occurred before Judge Hubbard. The case was against Sam Priest, who had been charged with trespassing and hunting upon the premises of Mr. Cunningham. It was a jury trial, the District Attorney appearing for the prosecution and A. J. Dobbins for the defense. There were technical reasons why Priest should not be punished, but we think the trial demonstrated the fact that it is doubtful if ever a jury can be found to convict trespassers. The law is plain, and a farmer or landlord certainly should have control of his land and prohibit hunting, if he chooses, but it looks as though juries will never enforce the law. This is a sorry state of affairs but it is true, nevertheless. In this case the jury returned with a verdict of acquittal after a short deliberation.

**DEATH OF A STALLION.**—*Dixon Tribune*: We are informed that Mr. Miles, who lives near Elmira, lost his fine imported Percheron-Norman stallion on the 14th inst. His death was caused by a hurt in his foot, supposed to have been done by something being driven into it. There was an ugly wound in the back part of his fore foot, where the hoof and hair come together, but nothing could be found in it. The loss of him is a pretty heavy one to Mr. Miles, as he paid \$1,500 for him last spring.

**HILLSIDE FARMING.**—*Editors Press*: I have not had very good luck hill climbing, as I got tipped over on one of my hills while sowing two weeks since, and have not been able to do anything, because of a sprained ankle; but it is getting on finely, so that I shall be on the hillside again in a few days. Work is being pushed in this part of the valley, the ground on loose soil being wet down to a depth of from four to six inches. The summer-fallow is beginning to show, but I doubt whether there has been enough rain to sprout it all yet. I notice that the sandy spots are getting green, but the adobe is backward.—A. A. DICKIE, Suisun.

#### SONOMA.

**DORNING UP.**—*Santa Rosa Times*, Nov. 20: Fred Fick has an apple tree that has borne fruit twice this year; also several tobacco plants that have seeded twice during the same time.

**ADVANCE IN LUMBER PRODUCTS.**—*Petaluma Argus*, Nov. 21: Tan-bark, one of the staple products of the Fisherman's Bay section, has taken a boom and boomed up from \$7 to \$12 per cord, on the landing, which will make times lively and noisier many a *hombre* that got gripped up last year by that unrelenting old fellow, Mr. Decline In Price. Posts, ties, fir and oak wood have advanced a little, so that the future for the woodman is looking bright. A good business is done here in getting out sugar pine bolts for the San Francisco market, where they are made into staves; the timber being more plentiful here and of better quality than in any other section of the State.

**A FRUIT GARDEN.**—*Santa Rosa Democrat*, Nov. 22: On Thursday we paid a visit to E. H. Smyth's nursery and fruit garden in Morgan's addition in this city. He has upwards of 10,000 trees of every kind and variety needed by our farmers. His cherry and pear trees deserve special mention, especially the latter, as he has demonstrated that it is one of the best paying fruits there is. He has in his home orchard Winter Nelis and Bartlett's, planted in 1875, that bore a box apiece this season, which was worth \$2 in the market. As a hundred of these trees can be planted to the acre, an orchard can be made a paying investment in four years' time. There are hundreds of acres of our foothills that yield indifferent crops of grain that would pay well if planted in pear or cherry orchards. Mr. Smyth has also about 300 apple trees of the Orange pippin variety, one that was developed from a seedling in this county.

#### STANISLAUS.

**RE-PLOWING.**—*News*, Nov. 22: Many farmers had to re-plow and harrow their wheat fields after the last hard beating rain. Especially was this the case where the grain had not yet come through the ground. In some soils the shower had the effect of forming a crust, so that the young grain could not get through.

#### TULARE.

**ITEMS.**—*Delta*: Several parties are engaged in digging ditches and preparing to set out small orchards and gardens on the mountain sides along the Mineral King road. Parties visiting the mines in April last found alfalfa



sixteen inches high at Redwood canyon, in the upper edge of the redwood belt. A number of farmers who had their land summer-fallowed, and did not seed it for fear of another dry season, are now sowing their grain as rapidly as possible. A farmer in Mussel Slough, this year seeded his place to wheat, five acres of which he cut for hay. He paid \$1 per acre for water for irrigating, and after paying expenses of cutting this five acres, baling and hauling to Lemoore, netted from it \$12 per acre. Besides, he now has a crop of Egyptian corn, of the brown variety, growing on the same land, and which bids fair to yield well. This shows what can be done by industry. Twelve dollars per acre, net income (and a second crop for "pin money"), is a greater profit than can be made at almost any other business. A gentleman from Mineral King informs us that the best syrup that has been offered for sale there was some that was made in Mussel Slough. It is said to be much better than the syrup brought here from San Francisco, and at the mines sells for \$1.50 per gallon.

**THE SQUIRREL LAW.**—The Supreme Court of this State has decided that the squirrel law for Alameda and Contra Costa counties, passed in 1874, is unconstitutional. Several other counties have had laws passed for providing means to get rid of these troublesome animals, and the question of an enforcement of the law has been agitated in this county. Most of the agricultural counties in the State have squirrel laws based on the Alameda and Contra Costa law, and this decision of the Supreme Court makes all unconstitutional. The decision has caused considerable indignation among farmers in sections where squirrels are numerous. Hundreds of thousands of dollars worth of grain is destroyed by these little pests annually, and there seems to be no effective way of getting rid of them. The decision is virtually a triumph for the large land-holders, who hold land only for a rise, and is almost death to the small holder who desires to cultivate the soil and provide a home for his family.

#### YOLBA.

**EGYPTIAN CORN.**—Knight's Lauding Cor. Mail: Egyptian corn is a good and sure crop. There are two varieties raised here—the red and white. The white ripens some weeks earlier than the red, and is far heavier, both in grain and heads; but people here will not plant it any more, as it is taken by the blackbirds from the time it is in the milk on through its different stages of ripeness till no more is left to eat. The red they do not show any fondness for.

#### YUBA.

**BITTEN BY A WILD HOG.**—Wheatland Record: Saturday last, E. S. Berry, of Nicolaus, came to town for medical treatment of an injured hand. Dr. L. Melton, who attended him, informs us that he was engaged in looking after a drove of hogs in the foothills, and that a wild boar had got among them. He had been attempting to separate it from the tame hogs, with the assistance of a couple of dogs. The dogs were getting the worst of the fight, and in running to their assistance Mr. Berry lost his footing and fell, and the hog ran upon him and grabbed him by the hand, lacerating it in a fearful manner.

#### A Swindling Land Scheme.

A dispatch from Denver brings the information that Sidney A. Grant and A. F. Wilson were arrested in Denver a few days since for conducting a fraudulent scheme through the mails under the name of the "Denver Land Company." This scheme was advertised in the RURAL of November 15th. A glowing description was given by the advertisers of the desirability of certain lands which are represented to be in the city of Denver. The truth of the matter as it comes in the dispatches is as follows: "The scheme was planned in Cincinnati. Stereotype plates were prepared, and have already been inserted in over 800 first-class newspapers and periodicals in the Northern, Eastern and Middle States. Grant came to Denver to secure land for the purpose, and bought nearly a thousand acres in the sand-hills, 40 miles north of Denver, in another county, which was platted and recorded as North Denver. Although known here but eight days, a perfect avalanche of mail was coming for S. A. Grant and the Denver Land Company. The fraud was denounced by the local newspapers, and bitterly condemned by the citizens. The postmaster reported to the Department, and last night received orders to deliver no registered letters and pay no money-orders to Grant. The arrest was made by Special Agent H. Hall. Special Agent Furay is also here, and asks the Department to order the withholding of ordinary letters."

The movers of this swindle were promptly arrested by the Government officers, and being without bail, they were jailed for trial. The result of the swindle affords a good illustration of the "hiter hitten."

The rumors of an impending outbreak between China and Japan continue. Both countries are well prepared for war. They only want a master mind fit to organize plans and take supreme command. It is openly said that China and Russia, have made a compact with each other in special view of war at an early date.

#### The Farmer as a Citizen.

The farmer's world, though principally on his farm, is not circumscribed by the boundary lines of his land. We recognize that he is a citizen of a free country—that he has rights and duties connected with the due organization and operation of governmental and social forces. Having made the student a thinker, by the training specially required for a farmer, we propose to make him a correct reasoner, and to give him the power of elegant and forcible expression. He must not only have the power to investigate, but to weigh and determine; and, having reached a conclusion, he must be able to state not only what it is, but the process by which he reached it. We do not expect, nor do we desire to bestow, the fatal gift of that eloquence which equally subjugates the reason of its possessor, and captivates but does not convince its hearers. We do not desire to make men the abject slaves of this power of facile and elegant expression, nor to add to the list of the demented by aiding in the subjugation of the brain to the tongue, and of thought to speech. This disease is now too common, and may be denominated glossomania—lingual insanity—word madness.

I think the influence of agriculturists (including in this term all who, by mechanics or otherwise, contribute in any way to the development of the agricultural wealth of the State) ought to be increased in public affairs. I think there ought to be a larger participation by them in the discharge of duties which relate to the due management of the affairs of the State and counties. I think that influence would be good. That it should be good and good only, it must needs proceed from the men who have an intelligent conception of the public wants, and of the means to provide for these wants. I have no sympathy with the senseless clamor sometimes heard, which would exclude from all participation in public offices men, however well qualified and however patriotic, merely because they are not connected directly with agriculture; and I have as little for that equal folly which demands the selection of an officer merely upon the ground that he is a farmer or mechanic, without reference to his qualifications.

In a free government—the true emanation of the popular will—the laws and politics should be the average interests, and average thought and average aspirations of the people. In the formation of this average and common opinion, in giving it voice and force in the government, the agriculturists of the State, constituting four-fifths of the people, should exercise a potential influence. They are usually conservative. The methods by which they acquire pecuniary independence are prudence, patience, energy and economy. As a rule they are opposed to a wasteful and extravagant administration; as tax-payers and not tax receivers, their influence would be to cut down expenditures to the lowest possible limit consistent with administrative efficiency. Unskilled in political and party machinery, they would be against all jobs and rings—all bounties to favorites, all expenditures not for the public good.

I would not like to see a Legislature composed exclusively of farmers and mechanics, nor would it be for the public good that there should be no representatives of these interests in that body. There should be in every Legislature men skilled in the laws of the State, competent to put in appropriate language the statutes which are to be enacted, and to determine how far a new statute will trench upon the provisions of existing laws. There ought also to be there an influential body of men connected with the leading industries of the State—familiar with the wants and wishes of the great mass of the people—sharing equally with them the burdens and disasters and successes of life. If they should draft no laws, if they should inaugurate no new and untried policies, still there would be that in the very atmosphere in which such a body of men move which will influence beneficially the action of the Legislature.—Judge George, Starkville, Miss.

**PERSIMMONS FRUITING.**—Rev. Henry Loomis brings us ocular evidence of the coming crop of Japan persimmons. He has three clusters grown on Col. Hollister's place at Santa Barbara, one containing seven, another six and another five persimmons growing as closely together as they "could stick." We measured one of them and it showed a circumference of 8½ inches. The trees at San Rafael are fruiting quite generally. Messrs. O'Conner, Judge Darwin, Morse, Cook and Mr. Kent, of Ross valley, all have bearing trees this year of Mr. Loomis' importation. Mr. Loomis shows a specimen grown in his own yard at San Rafael, which shows a belt measure of nine inches. It is of the "Mikado" variety and very handsome. This year should furnish considerable evidence as to character of the tree in this State, and the experience of all readers with it is solicited. Since writing the above we learn from the Solano Republican that Robert Parke, of Vacaville, had 150 persimmons on a tree only two years from the bud. He sent some of them to the San Francisco market, and, unless some one knows otherwise, to Mr. Parke must be awarded the credit of first marketing the Japanese persimmons. We are not informed how the fruit sold.

THE insurgents in the province of Santa Clara, Cuba, have been defeated by the Spaniards.

#### Living Manfully.

How common suicide has become! The papers are reporting, almost every day, that somebody has killed himself. Now it is a man who has met with business reverses, then a wife or a husband unhappy in family relations; again, the sense of having committed serious error, or of being lonely and friendless, impels some to despair; or it may be that ill health and a feeling that one is useless and expensive in the world seem an intolerable burden; and just now we have an account of a little boy, but 14 years of age, hanging himself in chagrin.

For those who, for whatever cause, have thus flung themselves out of existence, our sympathy and counsel are too late. But what does this readiness to throw life away betoken? It is sad and pitiful—what is it owing to? We would have compassion on the suffering weakness which has thus died—would speak no word nor think a thought of censure. At the same time we should recognize the moral feebleness and lack of tone betrayed by so wretched and fatal a breakdown, and fortify the points most exposed and vulnerable.

It evinces want of pluck, of stamina, to murder oneself. If we have failed once, we should try again. The failure was part of the training needed to ensure a final triumph. Life is a school; our blunders and humiliations are part of the discipline required to make us wise and strong, manly and womanly. It is childish to sulk and despair and throw away the hook of life, because we cannot learn the lesson at our first attempt, or at our twentieth. Let us be above that, and yet be ready to cheer and direct one another when any of us feels faint and ready to perish. We all need help continually, and we can have it by turning to the source within us—to God in the depths of our own souls. But until we have learned to do this habitually, we must look for help to our brothers and sisters; and when we have learned ourselves, we must still succor those who have not done so, and teach them the way to that strength—

"Inward, impregnable, found soon as sought,  
Not cognizable of sense, o'er sense supreme."

This is to be relied upon when outside sympathy and human companionship are denied us for a season.

A preacher and editor—formerly of note in San Francisco; but now called to a distant field of labor—tells how a man once came to him, excited, trembling, with a gleam of wildness in his eyes, saying: "I must speak to somebody. I have heard you preach, and felt I could approach you. I am in great trouble and danger, and must speak to some one." Well born and liberally educated, he had come to California with honorable purposes and high ambition, but had fallen under evil influences, committed great follies, gambled away his savings, and now, feeling his life a failure, had bought a pistol with which to shoot himself. "I have concluded," he said, "that there is no hope for so weak a fool as I. Now, sir, candidly, don't you think the best thing I can do is to blow out my brains?" "I should think," cried the minister, "that whatever may have been your follies, and however dark the future you have to face, you have too much manhood to sneak out of life by the back door!" That cry brought the man to his senses. The light struck him; he saw suicide as a cowardly and not an heroic act. The romance and glamour of it was gone, the self-murderer a poor creature, weak as well as wicked. "You should be ashamed of yourself," continued his new-found but faithful friend. "The knowledge gained by your very mistakes should be a guarantee against their repetition. A brave man never gives up!" He was saved, and has been for years a prosperous and useful citizen.

The lesson is for everyone of us, in the hour of defeat and gloom—"I will not seek my grave, please God, before I have earned it." Horace Mann said: "Be ashamed to die until you have won some victory for humanity." And, let us add, he too manly and self-respecting to fly to drink or drugs to deaden sensibilities, but rather learn to suffer and be strong, as the athlete endures hardships while training for a contest. Let us accept no defeat as final, but resolve, with somewhat of Grant's immortal grit, to fight it out, charging or flanking the enemy as may best serve. If our path lies through the Wilderness, let us nerve ourselves anew to the toilsome tramping, and not forget to speak comfort and inspiration to one another as we go marching on. If it be more than a six-days walk, it is but one day at a time. We cannot always go as we please, but we can, by patient trust and courage, make it a march to victory.

Kings unto God, we may not doubt our power;  
We may not languish when He says, "Be strong";  
We must move on through every adverse hour,  
And take possession as we pass along.  
O ye that faint and die, arise and live!  
Sing, ye that all things have a charge to bless:  
If He is faithful who has sworn to give,  
Then be ye also faithful to possess.

B.

THE agricultural lands of the Northern Pacific railroad west of the Missouri river, to Puget sound, are to be offered for sale to actual settlers at the Government prices, \$2.50 cash per acre, with an addition thereto of 10 cents per acre to be paid to the company to reimburse it for the cost of selecting, surveying and conveying such land.

#### News in Brief.

THE Czar of Russia is in Berlin.  
THE Sheffield iron trade continues to improve.  
HORSE THIEVES are infesting Ventura county.  
GENERAL GRANT has arrived home in Galena.  
CALIFORNIA wheat in Liverpool 10s. 7d. @ 11s. 5d.

THE Irish agitation is assuming a serious aspect.

WALKING match rage has reached Portland, Oregon.

THE disorders in Cahul are attributed to Russian intrigue.

THE Ute Commission is regarded as a failure by military men.

THE question of reforms in Cuba is causing trouble in Spain.

THE revolutionists are besieging the capital of San Domingo.

THE Countess De Montiga, mother of ex-Empress Eugenie, is dead.

THE town of Farmington, Minnesota, has been nearly obliterated by fire.

THE Indians have disappeared from the vicinity of the White River Agency.

GLADSTONE has received a tremendous reception from the Liberals at Edinburgh.

CHOLERA in Japan is virtually at an end. It has proved to be an awful visitation.

FRESH troubles are reported as occurring on the El Sobrante ranch, in Tisis valley.

IN London, United States bonds are selling as follows: 5's, 105½; 4's, 106½; 4½'s, 108½. Consols, 98½.

SPECIAL dispatches from Cape Town report that the attitude of the Boers is very threatening.

THE merchandise exports of the past week at San Francisco were valued at \$676,464, a decrease of \$154,006 on those of the previous week.

THE ship *Columbus*, 1,853 tons, has been chartered to load at New York for San Francisco in Simonson & Howes' line, to follow the *Glory of the Seas*.

THE complaint of the Government, re-echoed by the Japanese press, is that imports exceed exports so largely that foreign trade is really injurious to the country.

THE official copy of the constitution of the State of Kentucky has been lost or mislaid, and important decisions have been rendered by a court constituted under a bogus one.

A WASHINGTON special revives the rumor that Ramsey, of Minnesota, will be appointed Secretary of War, and states that McCrary will be appointed to the bench, at his own request.

At the opening of the London wool sales the attendance was large and the bidding very spirited. The sales show an advance of 10% on Merinos, and 17% on cross-bred wools.

REED & SONS, of Chicago, representatives of several Eastern music houses, are reported as having failed. Their liabilities are said to be \$134,000, and assets \$167,000, chiefly in real estate.

ONE of the mines of the Pennsylvania coal company at Pittston, Pa., has caved in. The damage will be considerable, and will throw a large number of men out of employment for some time.

GENERAL GRANT has written to Admiral Ammen that he will meet parties interested in an inter-oceanic canal December 17th, in Philadelphia, and decide the question of the acceptance of the Presidency.

THE police of Copenhagen have arrested a student upon a charge of writing to the Queen of Sweden, demanding 2,000 crowns, and threatening in case of refusal to assassinate the Crown Prince of Sweden.

DR. COLLYER, the chemist of the Agricultural Department, says Illinois can supply the United States with sugar by raising sorghum, the secret of the crystallization of that plant lying simply in the time to gather the crop.

DISTURBANCES occurred among the students of the St. Petersburg University, resulting in several arrests and in the closing of the library by order of the Governor-General. Statements in regard to the origin of disturbances are conflicting.

IN consequence of recent developments, the directors of one Bremen steamship company have decided to refuse transportation of their vessels to the class of heavy French silks which are so weighty with chemicals and oils as to cause danger of spontaneous combustion.

THE Governor has commissioned Thomas W. Younger as First Lieutenant, and T. W. Stevens as Second Lieutenant, of the City Guard of Sacramento. Also E. E. White, Notary, Tuolumne county; W. H. Grant, Notary, Yolo county, and A. J. Kasten, Notary, Solano county.

A PRIVATE letter from a well-informed person at St. Petersburg states that intelligence has been received in official circles at St. Petersburg to the effect that the British government intends to occupy Herat next spring, in alliance with Persia. The writer adds that the news is generally credited.

#### The Free Labor Exchange.

Established by voluntary donations, for the special object of providing work for the needy and destitute, free of charge to all, continues its benevolent designs and operations. Employers of all classes of help, male or female, are earnestly requested to patronize this institution, and send their orders to the Free Labor Exchange, 33 O'Farrell St., S. F.

G. W. SCHROEDER, Manager.





### Bringing Our Sheaves with Us.

The time for toil has past, and night has come—  
The last and saddest of the harvest eves:  
Worn out with labor, long and wearisome,  
Drooping and faint, the reapers hasten home,  
Each laden with his sheaves.

Last of the laborers, thy feet I gain,  
Lord of the harvest! and my spirit grieves  
That I am burdened not so much with grain,  
As with the heaviness of heart and brain:  
Master, behold my sheaves.

Few light and worthless, yet their trifling weight  
Through all my frame a weary aching leaves;  
For long I struggled with my hapless fate,  
And stayed and toiled till it was dark and late,  
Yet these are all my sheaves.

Full well I know I have more tares than wheat,  
Brambles and flowers, dry stalks and withered leaves—  
Wherefore I blush and weep at thy feet—  
I kneel down reverently and repeat:  
Master, behold my sheaves!

I know these blossoms, clustering heavily,  
With evening dew upon their folded leaves,  
Can claim no value or utility.  
Therefore shall fragrance and beauty be,  
The glory of my sheaves.

So do I gather strength and hope anew,  
For well I know thy patient love perceives  
Not what I did, but what I strove to do—  
And though the full ripe ears be sadly few,  
Thou wilt accept my sheaves.

—Elizabeth Akers.

### Borrowers not Wanted Here.

Mr. Podgers is one of our well-to-do farmers, who, by dint of hard knocks and carefulness, has secured a good degree of independence.

Four persons make up the family, Susie Hannah, the industrious wife, John Henry, the only son, and Mable Gay, a fair miss of 16.

One day, a few months since, Mr. Podgers came in from the field a little earlier than usual, threw himself thoughtfully into the rocker, and commenced putting that useful piece of furniture into rapid rocking motion; a habit which he had when some momentous matter was pressing upon his brain.

"What now, Mr. Podgers?" said Susie Hannah, as she noticed the movement of the husband.

"Why," said he, "Susie Hannah, I tell you what I have been thinking about. I have made up my mind that I have been working long enough and hard enough for any one man. And there is John Henry—I don't want him to have it as I have had it. The schoolmaster says he has the head of a statesman, and I am sure he will make a No. 1 doctor, lawyer, or professional man of some sort, if it is selling lightning-rods, and Jim Tapley wants to rent the place, and Bill Phillips wants to rent his house and lot at Cantelope Corners, and it is a nice place with currants, and grapes and cherries, and all such in the yard, and John Henry can go to the high school at the Corners, and Mable Gay can take music lessons on the piano fort, and I am sure we will like it better and it will be better for us all."

"Mebbe," said Susie Hannah, in a short, sententious way she had of replying to Mr. Podgers' suggestions.

"Yes," continued Mr. Podgers, "and there is another thing—I am just sick and tired of the everlasting borrowing that people keep up here. I don't see why people can't get their own things, and not be always borrowing of somebody else. There's the old man Close; there ain't a week, but it is something or other. It is either the loan of a plow, or a harrow, or a wagon to haul an extra load, or a horse, or saddle, or something. And it is never brought back. Whenever I want it, it is there, and like enough broke at that. And the Mulicks and Gads and Tom Smith's and Bill Donnell's are just as bad. It's enough to keep one hand and a horse at work half the time to hunt up lent things. I heard Preacher Goodun readin' one day from the Bible a thing about borrower being servant to the lender; but I think it t'other end foremost, for, ef I ain't been servant to the borrowers I don't know anything about it. Now, when we get into the Corners, that'll all be done with, and we shan't be vexed that way no more."

"Mebbe," responded Susie Hannah. And so, for Mr. Podgers had a way of doing things to suit himself, the change was made. The stock, except a couple of favorite cows, a span of nice young horses, and some pigs and chickens, were disposed of; the implements, except a wagon and buggy, sold; and on a pleasant day the truck was hauled to the new home in Cantelope Corners.

The event of the new arrival was, of course, a matter of interest at the Corners. It had been discussed at the postoffice and the two town stores, and as the procession of the movers was on its way down Main street, groups of observers at the windows and on the sidewalk carefully noted everything.

Mr. Podgers was busy with his bands unloading and moving the articles from the wagons to the house, when he was saluted in a familiar manner with:

"Good day. How do you do?"

Turning to notice the person by whom he was addressed, he found standing before him a man whose every expression indicated that he was in for business.

"Good day," replied Mr. Podgers.

"Expect to be done soon?" said the visitor.

"Well," replied Mr. Podgers, "We have to send the teams right back for some more goods."

"Oh!" said the man, "could I get one of your teams just about half an hour to haul a little jog of a load from down at the store up to my house?"

"Not to-day," replied the astonished and confounded Podgers, and as the man retreated, Mr. Podgers said to himself: "Well, don't that heat you?"

Scarcely had he time to collect his thoughts before was startled by another call.

"Ho, neighbor," said the speaker, a stout, short built man, dressed roughly, with one pant leg stuffed in the top of his boot, his hat setting carelessly one side his head, and sucking violently at a five-center, "Ho! neighbor, will you get through moving to-day?"

"Don't know," said Mr. Podgers.

"That is a likely young team," said the man, "are they yours?"

"I don't know," said Podgers, "that they have any other owner."

"Yes," said the man, "a very likely team. If you would not be using them to-morrow morning, could I get them to drive five or six miles in the country to see a man I want to see?"

"No," said Mr. Podgers, "you can't; they don't know how to let anybody drive them but me."

Of course the man left, and Mr. Podgers, turning to his wife, who was standing by, said, "Well Susie Hannah, there is two I disposed of, I guess that'll be all. Darned ef I knew they borrowed in town like they do in country. I guess them fellows don't understand town ways."

"Mebbe," said Susie Hannah.

Turning to go into the house with an armful of things that she had taken from the wagon, Mrs. Podgers came near falling over a thin, weazy-looking girl of some 10 years old, who had slipped up so quietly that her presence was unobserved.

"Please ma'am," said the girl, "ma seed you moving up street with the wagons, and the cows and the chickens and the things. We live right over yonder in that two-roomed house, and ma has a baby; it has a cold in its head, and it's been teething some, an' it has a dreadful running off, you see, at the nose, and a bad cough, an' ma don't know whether it's the whooping cough or not, and she says she saw them purty cows, and that now she could get lot o' fresh milk for the baby, and she wants to know ef you can spare her a quart of milk a day till our cow comes in."

"I don't know," said Mrs. Podgers, "whether we will have any to spare or not."

"But I do," interrupted Mr. Podgers, "you tell your mother we brought these cows to town to furnish the milk and butter for the family."

Before the day was over, half a dozen additional calls were made for sundry articles used about the house. The ax, the flat irons, the coffee mill, "a little bit o' tea," some salt, the carving knife, the hatchet, and several other things were shown to be necessary in more places than one.

And Mr. Podgers retired worried with the labor of the day, vexed with the prospect of a continuance in town of the same kind of annoyance he had endured from his country neighbors.

Next morning there was lots to do in the way of fixing up things, and Mr. Podgers rose early and prepared himself for another busy day. Just as breakfast was over, he happened to look through the front window, and discovered a man standing on the sidewalk at the gate, through which a boy was entering towards the house. A few steps down the walk was a girl approaching carrying an empty tin, and across from the other direction, coming toward the house, also was a woman in a faded calico dress and a dirty sun-honnet.

The sight overcame Mr. Podgers. Nervously locking the door, and remarking to Susie Hannah, "they are going to take us by thunder," he picked up his hat, slipped out of the rear door, and down the alley, and hurried to a shop at which he had noticed the sign "Timothy Streakems, painter."

Entering the building and inquiring for the proprietor, he said, "Well now, Mr. Streakems, as sure as guns, I have not come to borrow anything."

"I suppose not," replied the painter.

"No," said Podgers, "but if you have got a bit of board that'll make a kind of a notice sign, I want you to paint it."

"Will this do?" said the painter, showing a piece of white painted board to Mr. Podgers.

"Excellently well," said Podgers.

"What shall I put on it?" asked the painter.

"Put on it," replied Podgers, "Borrowers NOT WANTED HERE, and do it quick."

Very soon the letters were shaped on the sign, and Podgers bore it triumphantly home and tacked it to the fence close by the front gate.

"That will fix 'em," said Mr. Podgers to Susie Hannah.

"Mebbe and mchby not," was the reply.

But fix them it did, and so great a reform did it work in Cantelope Corners, that now whenever a man wants a thing in that town, he either buys it or hires it.

### The Mission of Light.

[Written for the RURAL PRESS by Mrs. MARIA B. LANDER.]

One beautiful morning I hailed a bright sun beam as it lit upon a grass plot to drink the glittering dew-drops lying so cozily upon the green waving blades, and asked its mission to this dark and dreary world. I looked to the east, catching the first rosy blush of dawn, and in the first glory of the morning light saw the gray-streaked clouds one by one parting to the right and to the left, when Light, with her "golden fire hurst into being," saying, "I am a heaven-born artist, and the world is my revolving easel, which in the beginning was graced by a few delicate shadings. My mother, rosy Morn, led me out of the dark chamber, night, into the gray clouds which were fringed with crimson, red and purple hues; and here floated light blue cloudlets with flutings of gold and silver—again light fleecy ones with rose-tinted edges. From this empyrean height I longingly looked to a sphere destitute of that gift which had painted my high home in such glowing colors, and hesought my father, the Sun, to bestow upon this rayless world a New-year's gift, a dowry of Light; hence I and my fair companions came as heavenly messengers, with seven bright tints and many penciling rays to sketch, paint and perfect with delicate shadings the few bold outlines.

"My canvas is the world. Its barren as well as softly undulating green hills, rocky and rugged mountains, vast rolling prairies, deep billowy oceans, dark interminable forests, and the deep-tangled underwood, are hut different chambers in my picture gallery. The glancing sunshine on the hillside, and wavering shadows of woodland, are but the caprices of my fancy. I peep into dark canyons and into shady nooks, leaving 'wee speckled' huds, which beseechingly lift their tiny cups from among the tangled wildwood and turn their petite starry faces for another straggling ray of sunshine. I pass them by with light kisses, diving into rock-hound, earthy beds, raising from the hidden acorn a steady gnarled oak whose wide-spreading branches wave their myriad leafy ensigns, catching my floating zephyrs or thundering storm voice, only to mingle them with the low wailing sighs of a sister pine tree, which springs from a deadened mass and reaches heavenward till it alone is the forest spire, and extends its away over numberless forest children as their king. I pierce rocky crevices, seek their dark hidden fastnesses, and bring forth lichens and bright green mosses. I dive into the watery deep and woo its rocky bottom to bring forth buried life and riches; and behold the floating water-lily and green sea-weed live the conservatory of the little fishes, whose scaly backs absorb and reflect my tints till the gold and silver fish attract the maiden and the boy, while I with many merry pranks gladden their hearts, flush their cheeks with rosy tints, dye their proud lips with blushing red, bequeath to the one a mild blue eye of melting softness, to the other a dark flashing orb, sparkling anon with pleasure and with hatred. They, with child-like eagerness, catch the sunshine of the present, storing it away in the form of my memory gaily-tinted pictures, which, long years from now, when those jetty locks and auburn tresses are silvered o'er, will bring forth the sunshine of the past to battle with the frosts of age.

"I am busy all day long in my tireless march from tree-top to flower, and from flower back to infinite space; yet there is an hour when I and my brother's straggling rays are called to their high home in the west. Having thus swept the zenith of the heavens and given to earth the golden dust of day, I go to rest upon a couch whose curtains are bathed in gold, scarlet and purple, only to hide the face of fading day with the silvery sheen of my timid sister, the Moonbeam. In her train come numerous starry attendants, whose silver-dust makes to sparkle the darkness of night. These representative envoys, Moonlight and Starlight, gather the unbroken, unfinished links of the day's work, welding and molding them into beauty and perfection by their softening and mildly radiating beams. With noiseless feet and on wings of down is the sleeping world conducted through her many silent changes, leaving as a signet of touch a legacy of dew-drops peering from amid the tinted sepals of the folded calyx, or frost-crystals of snow-white down hanging upon the quivering leaf or blighted bud, to sparkle, even in death, 'neath my bland morning smile. From my high ethereal home I lower little 'golden huckets,' dipping these pearly dew-drops, shining crystals and morn's floating mists, pouring them into the regions of cloud-land, where every watery globe becomes a reflector, throwing a beautiful arch across the blue vault, whose seven prismatic tints record a promise of the great Creator to fallen man, which found a seat in heaven.

"My mission is not finished when I have transformed a dreary earth into a fairy land full of life and beauty, and changed the summer breeze into a sweeping hurricane. I am the source of all power, the spring which moves the animate world to a life of action, and the key unlocking the mysteries of the inanimate mass around me. Every object is but an image which absorbs and reflects my rays. I peep through drawn blinds and play amid the folds of silken curtains, touching lightly the sleeping child and drawing bright glowing, fancy sketches around the smiling, innocent face of childhood. I waken the babe whose rosy lips

are wreathed in smiles around and over the one or two ivory treasures just peeping its pearliness from a pink flesh-bed, and the tiny hands reach in all waudering earnestness after my sporting shadows. I strew the path of this child with fragrant flowers and angry thorns; lights and shades, clouds and sunshine alternate, leaving smiles and tears struggling for the mastery upon the open frank face of childhood; calm, grave sadness, blending with nobleness of humility upon manhood's brow; wrinkles and the sweet hopeful smile, chasing lines of contentment about the placid features of old age, are all but different lines and shadings left by my penciling rays upon the grand tableau of life.

Martinez, Nov. 21st, 1879.

### Women Voting.

[Written for RURAL PRESS by C. L. ANDERSON, M. D.]

"Beer rules him, and the infinite of balderdash; and except as a horse might vote for tares or hard beans, he had better till he grow wise again, hardly vote at all."—CARLYLE.

Some time ago, in this paper, I advocated the right and necessity of women being allowed to vote at elections for school officers and where school interests were to be decided by majorities. The article chanced to be read by a subscriber in my neighborhood. He had a grievance that should be abated. Some homeless, penniless, childless, desolate old bachelors had combined their votes in his school district to retain the services of a young lady who was not, as teacher, giving satisfaction to the people who had children in the school. He intimated that while I was in the business of advocating suffrages, I might bring some argument to bear towards disfranchisements. He concluded that voting should only be enjoyed by the person having a direct interest in the welfare of the subject voted on. That a whisky-drinking, tobacco-chewing, childless old curmudgeon could possibly have any good interest in a school election was out of the question. That horses and oxen could have an equal interest, and would be as justly entitled to the franchise.

For some time I have been thinking on this subject. By adverse argument I have been led to believe that the ballot should be in the hands of both men and women for the better safety of our nation. I say by adverse argument, for lately the essay of Francis Parkman in the *North American Review* for October, presents the most powerful arguments against female suffrage. I have read it, and am constrained to say that there is scarcely one of these arguments but would apply with equal force against male suffrage. They are chiefly based on physical and moral frailties, of which he leaves us to infer that woman has a larger share. Every evil that he supposes would result from the ballot in the hands of women, already results from the ballot in the hands of men. If women vote the evils would be doubled, and more too—because of a preponderance of evil on the female side.

Now I do not believe Mr. Parkman's assumption is correct, and I do not think the opinion of the civilized world would uphold him. It is true the amount of good healthy morality in each sex cannot be accurately measured so as to compare. But if there is not more genuine, unselfish good inherent to the female sex, then alas for humanity!

But Mr. Parkman says that "women can, if they will, creste and maintain higher standards of thought and purpose, raise the whole tone of national life, and give our civilization the fullness that it lacks, for if they raise themselves they will infallibly raise the men with them."

Why not, then give them every facility to raise men out of the "filthy pool of politics?" In order to do so they need not resort to the numerous means that men resort to at every election—the whisky shop, the noisy platform and defamation of character.

Whilst they are doubling the evil with the ballot, let us hope that the good will be trebled. And that our nation may have "higher standards of thought and purpose," let us ask our mothers, sisters, wives and daughters to come up with us to the palladium of our liberties and help to free us from the "Infinite Balderdash" that seems to surround our elections.

PROPER BURIALS.—*Good Company*, the excellent New England magazine, says that the clergy of one of the Eastern cities recently passed the following excellent resolutions: "1. That burial services be limited, so far as practicable, to Scripture reading, singing and prayer. 2. That we deprecate the appointment of funeral services for Sunday. 3. That we also deprecate the public exposure of remains. 4. That before the arrangements are made as to the time and place of the burial service, the convenience of the officiating clergyman should be consulted." All these recommendations, says *Good Company*, are wise; especially the first one. The extreme difficulty of making "remarks" at funerals which shall be at once acceptable, truthful, and profitable is often felt by every conscientious minister. If the deceased is not spoken of at all the omission is sometimes felt to be a disparagement; eulogy is seldom wise, and a discriminating estimate of the character can scarcely be uttered on such an occasion. It would be vastly better if the funeral services were uniformly limited, as the resolving ministers advise, to Scripture reading, singing and prayer. Above all, the horrible custom of exposing the face of the dead ought to be at once and forever abolished.



## Another Shakespeare's Wooing.

A Texas paper tells of M. C. Shakespeare, a farmer residing in the northwestern part of the county, and possibly a distant relative of the renowned bard of that name, who called on the Rev. J. H. Richey, of Waco, at two o'clock one afternoon and said:

"Parson, do you know all the ladies in Waco?"

"No," replied Mr. Richey, "I don't know half of them."

"Do you know a widow lady named Mrs. Ward who is employed in the family of Dr. McGregor?"

"I have not," said Mr. Richey, "the honor of her acquaintance; but why do you ask?"

"Well," said Mr. Shakespeare, "I don't know her either; never saw her in my life, but thinking as maybe you knew all about her, I thought I'd come and ask you. I'm thinking about marrying her."

"I should think," remarked Mr. Richey, "that you would refer the matter to the lady herself."

"I will, so I will, said Mr. S., but not until I have first seen Dr. McGregor," and so saying he turned and walked away.

About three-quarters of an hour later in the day Mr. Shakespeare stood in the presence of Mr. Richey.

"I've seen Dr. McGregor," said he, "and he's known the lady 16 years and she's all right." Then exacting from Mr. Richey a promise that he would wait in his office a "little while," Mr. S. walked off, saying he would "call on the lady."

And he did. "It's all right, parson," said he, on walking into Mr. Richey's office less than an hour afterwards. "I seen the lady and she says it's all right. Quick as I can get a pair of licenses I want you to go up and tie the knot."

At 4:20 o'clock M. C. Shakespeare was married to Mrs. Nancy Ward, Rev. J. H. Richey officiating, and the newly wedded pair left at once for their rural home. Mr. Shakespeare has a good farm and is well able to make his wife comfortable. Mrs. Shakespeare is a good housekeeper and is otherwise well qualified to make him a good wife. Two hours and twenty minutes, dating from the moment the would-be bride-groom's first inquiries were made, is the precise time occupied in the accomplishment of the alliance. The original Shakespeare never imagined anything half so expeditious, his nearest approach to it being—

She is fair and may be wooed,  
Woman, and may be won.

A BEAR AT A MUSICAL REHEARSAL.—Mr. G. H. Beach, of this place, on his return from Oregon a week ago, brought a five months' old cinnamon bear, weighing about 75 pounds, which has been of great attraction to young and old people. He has been under good training, and is full of pranks and play. Last evening about 8 o'clock, Mr. Beach returned with a fine deer after a day's hunt, and finding the St. Helena Musical Association in full blast in his parlor, he walked out to his bear pen, loosened his pet and led him directly into his house and parlor in the midst of a fine chorus of a dozen singers. A general stampede took place, some into corners, others behind the door, under the piano and out of the room. But when the ladies and gentlemen saw Mr. Beach holding him by his forepaws, walking him around on his hind feet, and then set him up on his hind parts, pointing out the hanging pictures on the wall to him, confidence was restored, and before he was allowed to bow his good night, he had sung his little song with the piano and shaken hands with every lady in the room. As he was about to take his exit, he discovered a bouquet in a vase on the center-table, and raising up he put one paw on the table and with the other took the bouquet from the vase, smelled it, then dropped it on the carpet and followed Mr. Beach out of the house to his pen. "Baby," as he is called, is really a bright and intelligent pet.—*St. Helena Star.*

THINK OF YOUR WIFE AND HER BURDENS.—Yes, think what a life of labor your wife has to lead, and try to lighten her cares by all means in your power. No doubt you do think of how hard she is working for your good and for the good of the family, but then you think of it in a general way, seldom having your thoughts to find expression in actual deeds of helpfulness. You come in out of the field at noon time, tired with your morning's work, and expect the dinner always to be ready on time. After you have satisfied your hunger, you take your "nooning" of a half hour or more, while she goes right to work again, and takes no nooning at all, except to continue her never ceasing round of arduous duties. After supper you take your rest, and she keeps on with some kind of work until bed time. And so on, from day to day, year in and year out; and is it any wonder that the bloom of youth so soon fades from your once fair bride, and that she soon becomes worn out? In the struggle for a competency, most young farmers do not think how important a part the wife plays in making success assured, and that she, often, really contributes more than half towards success. Give her more recreation, more help in the house, if you can possibly afford it; and give her a chance to ride out, on occasional evenings, to forget for a while her cares and trials, and it will do both you and your wife much good.

THE boys are shocked at the report that Edison has invented "a lightning rod for schools."

## Young Folks' Column.

## What Tommy Tinker Dreamed.

It was such a funny dream! The fact is that Tommy didn't do as his mother wanted him to do at the supper table. You see, there was gooseberry preserve, and Tommy, through a mistake, was helped twice; and although he knew perfectly well that he ought to have had one plateful only, he took the other. Now this other belonged to his sister May, who sat next to him—or rather, who did not sit next to him that evening, because she went to the store for some tissue paper with which to make balloons for Tommy. And yet he took her gooseberry sauce! To tell the truth, he was very sorry the minute he had eaten it.

It took some time for Tommy Tinker to go to sleep that night, and he never would have done it at all if May hadn't come and forgiven him for eating her gooseberry sauce.

Then he shut his eyes, and this is the dream he dreamed:

He thought that his mother told him to go to the store for tissue paper for balloons. Now, Mr. Gilkey's house (where the store was) was only just around the corner, but when Tommy turned into the next street, what do you think he saw? Not Mr. Gilkey's store—no, indeed; but a big, big mountain, so high that Tommy could only just see the top of it. When he came nearer he heard a voice say:

"Tommy Tinker, Tommy Tinker, I know you; come up here, please."

Tommy looked around very carefully, but couldn't see any one.

"I'm way up here," said the voice again, and Tommy saw there was a little girl up on top of the mountain.

"May I come up?" asked Tommy.

"You may if you can," replied the little girl.

"Of course I can," said Tommy, going back to take a run to start with.

But the very first step he took on the mountain side, he tumbled down and bumped his head, and then he saw for the first time that the mountain was made of glass!

Tommy sat up and rubbed his eyes with one hand and his head where he had bumped it with the other.

"Don't do that again," said the little girl, "because this is papa's only mountain, and he doesn't want it all broken to pieces."

"Can't you help me up?" called Tommy.

"In a minute," said the little girl, "after I've finished this gooseberry preserve."

"O save some for me," cried Tommy.

"All right, I'll keep just one spoonful," replied the little girl.

Then she got up and went into the house, and Tommy thought she would never come out again. By and by however she came back with a long rope and let one end of it slide down over the mountain to where Tommy sat.

"Tie it around your waist," called the little girl, and Tommy did so.

"Tell me when to pull?"

"Now," cried Tommy faintly, for he didn't at all like the idea of going up that way. What if she should let go when he was only half way up? Tommy trembled at the thought, and if it hadn't been for the gooseberry preserve, I think that he would have cut the rope with his jack-knife and run home. But the little girl pulled remarkably well for such a little girl, and up went Tommy to the very top.

"How do you do?" said Tommy, taking hold of the little girl's hand to shake it. "How do you do?"

But what was Tommy's astonishment when he shook the little arm square off! It was made of glass, you see, and Tommy never knew it!

"O dear, dear me!" cried the little girl, "what shall I do, what shall I do, for my papa said the next time that I broke my arm off it would have to stay off, because there isn't any more cement in the house." And the little girl sat down and began to cry a whole lot of glass tears, that rolled down the mountain side just like marbles.

"Can't you tie it on?" asked Tommy Tinker.

"No, I can't," replied the little girl.

"Well, you needn't be so cross about it; you've got a whole arm left," said Tommy Tinker, eyeing the preserve. "Is that my spoonful?"

"No, it isn't," said the little girl, which was very naughty, even for a glass little girl with her arm broken off. But it wasn't one-half or one-quarter so naughty as something that Tommy Tinker did just then. It was what he did once to his little sister Bess; he pushed the poor little glass girl because she wouldn't give him the gooseberry preserve, and smash she went all to pieces!

I don't suppose you were ever so frightened as Tommy was then, and when he remembered that there wasn't any more cement in the house he began to cry, and what was worse, his foot slipped and away he went, sliding down the mountain side—down, down, until it seemed as if he never would stop.

Bang!

"What's the matter, Tommy?" It was his mother's voice.

"I don't know, ma'am. I guess I tumbled out of bed," said Tommy, sitting on the floor and rubbing his eyes; "where's the little glass girl?"

"I think you must have been dreaming," said his mother, lifting him into bed again.

"That's so," replied Tommy, "I guess I have."

"Good night again, and pleasant dreams this time," and mamma went out and closed the door.

"Mother, mother!" called Tommy, and mother came back. "I'm very, very sorry I took May's gooseberry preserve."

"I know you are," said his mother, patting Tommy's curly head.

"And, mother," once more said the little boy sleepily, "I'm never going to be selfish, and I'm never going to push Bess again as long as I live."

"I know that, too," said mamma, with a kiss, and then she went out and shut the door.—*N. Y. Tribune.*

## GOOD HEALTH.

## Headache.

A lady asks for a few thoughts on the subject of the headache so common among her sex. Perhaps as common a form of headache is that known as migraine. It is supposed to have its origin in a tendency of certain tissues of the brain near the pons to take on by exciting causes slight inflammation, or severe congestion. These headaches generally come on after various gastric disturbances, the use of strong tea, or alcoholic drinks, overloading the stomach with indigestible food, especially hot biscuits or hot bread, over-fatigue, night work, nervous excitement, worry, etc. These, however, are only the exciting causes, the predisposing causes being the tendency of these tissues to take on a highly congested state, as before stated. If the sufferer will carefully avoid these habits which bring on the disease the attacks will be less frequent and less severe. In very many cases it may be cut short altogether or greatly mitigated in its severity by proper treatment. A hot foot and a leg bath continued for 30 minutes, while the head is manipulated by the hand of an attendant frequently dipped in cold water, will often alleviate or cure an attack. What is known as magnetizing the head will often cure the worst cases and send them to sleep. Both these methods are very simple and effective. Shampooing the head, as is done by a barber, is sometimes effective. To this ladies often object, as they do not like to wet their long hair. An instrument has been invented by which a lady's hair may be thoroughly shampooed without disturbing the clothing, and dried in a few minutes by steam; and if it could come into general use in cities it would be a boon to women.

Persons who are subject to headaches should wear as little hair as they can, and if they would wear it short, and thoroughly wet and rub their heads every day it would be very beneficial. Hot water applied to the back of the head and spine will often stimulate the vaso-motor nerves to contract the vessels of the brain and discharge their contents, thus relieving the congestion. A stream of hot water from a fine spray along the spine will do the same. As a rule, however, the latter means are inaccessible to most persons, and so the former will be more appropriate. It is very desirable to break up the habit so far as possible, so as to make it unnecessary to cure; and this is done by whatever permanently invigorates the system and equalizes the circulation. Bathing and friction to the skin, and a simple, healthful diet are of the first importance. Out-of-door exercise is equally necessary.

## Hot and Cold Baths.

The London *Lancet*, in a recent number, points out the difference between the effects of hot and cold baths. The effects of the cold bath, it says, being mainly due to impressions made upon the cutaneous nerves, the modifications of the cold bath largely depend on their power of increasing its stimulating action. The colder the water, the more violent the impression. The frequent change of water, such as is found in the sea or in running streams, increases the stimulating effect. Great force of impact, as when water falls from a height or comes forcibly through a hose upon the body; the division of the stream, as is seen in shower baths and needle baths, and the addition of acids or salt to the water, all act, it would seem, by increasing the stimulating power which the water exerts upon the cutaneous nerves. Warm baths produce an effect upon the skin directly contrary to that brought about by cold water. The cutaneous vessels dilate immediately under the influence of heat, and although this dilation is followed by a contraction of the vessels, this contraction is seldom excessive; and the ultimate result of a warm bath is to increase the cutaneous circulation. The pulse and respiration are both quickened as in the cold bath. The warm bath increases the temperature of the body, and, by lessening the necessity for the internal production of heat, increases the call made upon certain vital processes, and enables life to be maintained with a less expenditure of force. While a cold bath causes a certain stiffness of the muscles, if continued for too long a time, a warm bath relieves stiffness and fatigue. The ultimate results of hot and cold baths, if their temperature be moderate, are about the same, the difference being, to use the words of Braun, that "cold refreshes by stimulating the functions, heat by physically facilitating them; and in this lies the important practical difference between the cold-water and hot-water systems."

## DOMESTIC ECONOMY.

FISH PUDDING.—An American in Copenhagen writes: "I send you a recipe for a delicious specialty of the Danish cuisine. I made its acquaintance at the hospitable table of a country-woman, whose husband represents us at the Danish Court very efficiently, and with general acceptance and commendation, whose brother is the most distinguished American living, and were I to mention his name, every true republican would at once order my recipe for his dinner. It is for a fish pudding, to be served after soup as an entree. Three pounds of boiled fish, a large lump of butter, a tablespoonful of flour, two cups of fresh milk; when boiled it must cool a little; add to it the yolks of seven eggs, the whites beaten, and stir it around; then add salt, pepper and nutmeg. Put it in a buttered dish and cook for one hour in a pretty warm oven, then serve. Sauce—flour and butter, and a little broth and capers."

FINE BELL-FRITTERS.—One quart of water; while boiling put in a piece of butter the size of an egg. Draw it from the fire, and add enough flour to make a thick batter. When it cools beat in six eggs, each one separately, and until the batter is very light. Have ready a kettle of boiling lard; drop the batter in from a spoon. The fritters should be placed on a colander as they are lifted with a fork from the lard, which should be kept at a boiling heat all the time they are cooking. Serve either with a nice sauce, wine and sugar, or a fine quality of molasses made boiling hot. Lemon juice and sugar make an agreeable accompaniment.

EGGS A LA CREME.—Hard boil twelve eggs; slice them thin in rings. In the bottom of a large baking dish place a layer of grated bread crumbs, then one of eggs, cover with bits of butter and sprinkle with pepper and salt. Continue thus to blend these ingredients until the dish is full; be sure, though, that the crumbs cover the eggs upon top. Over the whole pour a large teacupful of sweet cream, and brown nicely in a moderately-heated oven.

CELERY PICKLES.—Take good-sized cucumbers; slice thin, cross grain, on a vegetable cutter, and let stand over night in a weak brine; drain; then take enough vinegar to cover them, put on the stove, and to a gallon of vinegar put a quarter of a pound of celery seed and a quarter of a pound of white mustard seed; boil half an hour, and pour over the pickles; put a weight on them.

FRENCH BREAD.—Make up a quart of flour, twelve hours before you wish to use it, with a large tablespoonful of sweet yeast, and milk and water enough to make the dough pliable and rather softer than for ordinary light bread. Work in a dessertspoonful of butter, and one well-beaten egg. Set it away to rise, and when well risen work it about ten minutes the second time. Make it into a loaf or rolls and bake as usual.

LEMON CATSUP.—One pound and a quarter of salt, one quarter of a pound of ground mustard, one ounce each of mace, nutmeg, cayenne and allspice, one gallon of cider vinegar, eight or nine garlic cloves, 15 large lemons. Slice the lemons; add the other ingredients; let simmer from 20 to 30 minutes; place in a covered jar; stir every day for seven or eight weeks, strain, then bottle, cork and seal.

MARYLAND BISCUITS.—Take three pints of flour in which put a teaspoonful of salt and a teaspoonful of lard, mix it thoroughly, then moisten it gradually with half a pint of water, then work it for half an hour until the dough becomes perfectly smooth; then mold it in balls as big as a walnut, flatten them with the rolling pin, pick with a fork, and bake in a quick oven about twenty minutes.

BUTTERED APPLES.—Peel a dozen apples, first taking out the cores with a tin scoop; butter the bottom of a nappy or tin dish thickly, place the apples in it, fill up the cores with powdered sugar, sift powdered cinnamon or grated lemon peel over them, pour a little melted butter over them and bake twenty minutes; serve with cream sauce.

TO SET COLORS.—Salt or beef's gall in water helps to set black. A tablespoonful of spirits of turpentine to a gallon of water sets most blues, and alum is a very effective agent where-with to set green. Black or very dark calicoes should be stiffened with gum-arabic; five cents' worth is enough for a dress.

INK ON CARPETS.—Take up as much of the freshly-spilt ink as possible, with a sponge, then wet with water and soak with a sponge, repeatedly; finally, rub the spot with a little wet oxalic acid, or salt or sorrel, wash off with cold water and rub with aqua ammonia.

BRAN BREAD.—Take a sponge of wheat flour, when it is light, add salt and a small quantity of molasses, stirring in bran flour with a spoon until it is quite stiff. Let it rise, and bake a little longer than the same size wheat loaf. This is a very wholesome food.





DEWEY &amp; CO., Publishers.

A. T. DEWEY. W. B. EWER.  
Office, 202 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES: 1 week 1 month 3 mos. 12 mos.  
Per line..... .25 .80 \$2.00 \$5.00  
Half inch (1 square)..... \$1.00 \$3.00 7.50 24.00  
One inch..... .200 6.00 14.00 40.00

The Scientific Press Patent Agency.  
DEWEY & CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. G. H. STRONG

SAN FRANCISCO:

Saturday, November 29, 1879.

## TABLE OF CONTENTS.

EDITORIALS.—Some New or Little known Pears—No. 1; The American Vine in France; Huasco Grapes; Life in Lemons, 337. Swindling Land Scheme; Living Manfully, 341. The Week; Statistics of California Agriculture, 344. Letters from Southern California—No. 6; Large Plows, 341.

ILLUSTRATIONS.—The Sandwich Island Pear, 337. Outlines of Rare Pears; Plow for Railroad Ditching Made by Deere & Co., Illinois, 345.

QUERIES AND REPLIES.—Pruning Vines; "Purple Damascus" and "Cornichon" Grapes; Mountain Tobacco; Eye Disease in Cattle; The Gape, Worm in Poultry; Artesian Well Boring; Cork Acorns; California Irrigating Appliances in Demand, 344.

THE VINEYARD.—The American Grapevine in France, 338.

HORTICULTURE.—Best Fruits to Cultivate—No. 4; What is a "Crab-Apple"? The Chinese Sumac, 338.

THE STOCK YARD.—Notes on Feeding, 338.

THE FIELD.—Comparative Tests of Varieties of Wheat, 339.

SHEEP AND WOOL.—A Breeder's Notes on Breeding; The Wool Market, 339.

FOURCULTURE.—Mignonette in Shrub Form; Edible Ferns, 339.

PATRONS OF HUSBANDRY.—The Insurance Company Matters; Neighborhood Social Life, 340.

AGRICULTURAL NOTES from the various counties of California, 340-341.

NEWS IN BRIEF on page 341 and other pages.

HOME CIRCLE.—Bringing Our Sheaves with Us (poetry); Borrowers not Wanted Here; The Mission of Light; Women Voting; Another Shakespeare's Wooling; Proper Burial; A Bear at a Musical Rehearsal; Think of Your Wife and Her Burden, 342-43.

YOUNG FOLKS' COLUMN.—What Tommy Tinker Dreamed, 343.

GOOD HEALTH.—Headache; Hot and Cold Baths, 343.

DOMESTIC ECONOMY.—Fish Pudding; Fine Bell-Fritters; Eggs a la Creme; Celery Pickles; French Bread; Lemon Catsup; Maryland Biscuit; Buttered Apples; To Set Colors; Ink on Carpets; Bran Bread, 343.

MISCELLANEOUS.—Seeders and Planters; Shipping Law of the United States; Continental Pacific Railroad; The Deepest Well in the World; The Microscope in the Witness Box, 346. The Farmer as a Citizen; Perseus' Fruiting, 341. A Strange Arctic Region, 348.

## Business Announcements.

The Calf Hair—American Dentophone Co. Cincinnati, O.  
Seeds—Sevin Vincent & Co., S. F.  
London and Lancashire Fire Insurance Co., S. F.  
Well Auzer—Wm. Giles, Chicago, Ill.  
Chas. Ryhner, Commission Merchant, S. F.  
Attorneys-at-Law—Gray & Haven, S. F.  
Broom Corn Wanted—Thos. McCowan, Ukiah, Cal.  
Carp—Levi Davis, Forestville, Sonoma Co., Cal.

## The Week.

The week has been marked by a succession of most glorious days—typical days of the dry side of a California winter. Days which seem to make one grow younger the more one has of them. Days which make the house air a burden, and pull so irresistibly upon the strings of the inclinations that one is forced to throw everything aside and rush from beneath a roof, which seems an insult to the gentle slanting sunbeams, into the open air—bracing, bright and beautiful. Happy is he who has out-door tasks in these peerless days. The soil seems to court the plow and the garden tool, and even the moody adobe, rocky when dry, and tough when wet, now mellow and welcomes the workers in those parts of the State where the clouds have just acted to its liking. It is true the early mornings are sharp and the frost lies thickly on the low plains, but the dash of cold but gives a greater purity to the air, and a brighter tinge to the countenance.

There is a vast amount of work now being done all over the State, and the general tone of the laborers is cheery and confident. We hear of improvements on every side, and of larger areas to be brought under cultivation. It is a glad fact too, that the direction which enterprise is now taking, seems more than ever in direction of small individual efforts, for the improvement of producing capacity and of products, rather than the launching of large schemes of most uncertain futures.

We go to press one day earlier this week, for Thanksgiving comes apace, and thus we prepare for a day of rest from toil. This we commend to all our readers, and should this issue reach them on the day of rejoicing, let the Press add its voice to the anthem of gratulation which will rise in many happy homes.

## Statistics of California Agriculture.

We have often expressed a belief that it must be counted unfortunate that our agricultural statistics do not more accurately represent the facts of our industrial growth and attainments than they do. It is unfortunate because the figures which are promulgated by State and National authority are generally accepted by foreign readers, either because there is nothing better attainable or because those outside of the State do not know that the figures are not full returns. The result is that our State gets a lower place in the foreign mind than it deserves.

We do not know exactly why our State reports are deficient. Whether the gathering of the figures by the assessors, carrying as they do the atmosphere of taxation, chills the communicative mind so that some figures never reach utterance, or whether the duties of these gentlemen are so engrossing that they do not have time to report all they hear, we do not know. It is quite probable that in some counties the work is done thoroughly and conscientiously and in others it is not. It is also a fact, as shown by the last report of the Surveyor-General, that some of our best counties are omitted altogether from the tables because no reports were received. These considerations must lead all to take the statistics with several grains of allowance. If any reader can tell us why the reports are not more true to the facts we should like to hear the reasons, not with an idea of finding fault with any man's work, but to show in what way improvement can be secured in the future. If we mistake not, the New Constitution opens the way for securing full industrial statistics. Perhaps the coming Legislature can do something for the public benefit in making our agricultural returns more complete.

Premising thus much we give below tables prepared from the last biennial report of the Surveyor-General as compared with the figures from the preceding biennial.

The area of land inclosed and those under cultivation, as reported during the last four years, is as follows:

Year.	Inclosed.	Under Cultivation.
1875.....	6,352,476	3,338,575
1876.....	6,319,864	3,576,336
1877.....	6,847,566	3,418,743
1878.....	6,012,525	3,713,638

The greatest interest in the report of the Surveyor-General, will center in the comparison of the years in special products. To show this we prepare the following table:

	1875.	1876.	1877.	1878.
Wheat (bush).....	32,341,603	35,385,579	17,451,181	28,643,318
Barley do.....	25,883,314	13,224,060	7,748,178	12,275,227
Oats do.....	2,315,113	1,958,737	1,372,107	1,612,586
Corn do.....	2,624,494	1,620,743	2,423,872	3,157,541
Rye do.....	67,038	201,638	95,137	514,245
Buckwheat do.....	14,574	45,010	11,415	13,751
Peas do.....	10,766	257,337	21,286	417,251
Peanuts (lbs).....	289,981	48,024	198,750	476,538
Beans (bush).....	150,494	142,333	163,705	352,933
Castor beans (lbs).....	192,000	255,000	263,000	290,000
Patatoes (tons).....	117,924	1,000,724	200,300	163,000
S. Potatoes do.....	67,440	11,129	3,572	24,81
Onions (bush).....	125,618	71,745	121,134	77,939
Hay (tons).....	754,628	1,432,593	842,823	777,054
Flax (lbs).....	719,105	308,070	1,174,970	15,129,334
Hops do.....	1,741,553	2,666,648	3,651,005	3,044,234
Tobacco do.....	953,127	201,300	195,000	225,000
Cotton do.....	.....	.....	100,000	163,000
S. beets do.....	.....	.....	29,403	40,458
Butter do.....	10,652,382	10,188,818	5,643,864	10,287,999
Cheese do.....	3,696,753	3,199,420	2,425,356	2,708,585
Wool do.....	20,274,691	24,031,047	15,431,928	17,106,824
Honey do.....	1,212,322	1,036,390	1,733,939	3,720,543
Wine (gal).....	8,200,939	6,191,292	6,222,802	7,790,365
Brandy do.....	225,310	237,435	283,602	254,305
Horseshoes.....	270,514	232,533	293,810	217,417
Mules.....	22,775	23,364	21,097	20,660
Horned cattle.....	942,944	679,268	525,565	595,933
Sheep.....	5,638,391	6,171,644	4,655,513	3,755,781
Angora goats.....	25,478	64,720	31,749	34,473
Hogs.....	314,559	363,844	372,142	322,850
Crab apples.....	143	155	143	139
Bbls flour made.....	1,627,625	1,961,880	1,456,533	1,522,014
Corn ground beh.....	381,994	437,512	438,605	376,078
Lumber sawed ft.....	361,045,383	492,263,130	352,430,805	307,127,000
Woolen mills.....	.....	11	9	8
Wool manuf lbs.....	3,382,716	3,003,000	835,000	870,000

This table shows that in all leading products the good year, 1876, was the crowning period. This is undoubtedly true in a general view of our agricultural interest. The drought of 1877, followed by the only partially favorable 1878, and succeeded by 1879, which has also been a year of small things as judged by the standard of 1876, have prevented our farmers from rolling up an aggregate like that of three years ago. Added to this there has been an era of low values, which has only recently shown signs of departing, and which has prevented our producers from realizing any compensation in price for their smaller amounts they had for the market. The result in part of these facts has been the hardship and scarcity of money which has been only too common in all our producing regions.

The following table shows the number of vines and fruit trees reported during the three years:

	1876.	1877.	1878.
Total value of fruit crop.....	\$4,454,914	\$2,535,216	\$3,065,930
No. bearing lemon trees.....	12,460	27,139	38,546
Do. orange.....	55,606	117,841	197,729
Do. olive.....	5,603	12,179	12,285
Acres of grapevines.....	82,661	41,423	77,738

The following table gives the facts of our general standing in assessed value of property and population:

	1876.	1877.	1878.
Real estate.....	\$317,330,063	\$183,567,037	\$181,629,295
Improvements.....	163,124,361	67,332,492	58,265,374
Personal property.....	126,240,281	55,183,338	53,091,244
Total valuation.....	506,694,705	296,082,867	292,985,933
Population.....	506,553	635,084	628,315
Registered voters.....	195,300	153,988	143,757

According to these figures our State has lost one-third of her population since 1876. We do not think such a thing can be possible; in fact we deny it as emphatically as one can without indisputable data for proof. We have doubtless lost many transient residents who were attracted by the florid literature concerning Cali-

fornia which was spread abroad at the East during 1875, but who can perceive the gap which would be left by the departure of one-third of the population of a State? There have been some deserted neighborhoods it is true, but how many more have been filled? But accepting the figures as true for the time being, it is an interesting fact that we have lost in percentage of voters more rapidly than in population. Thus in 1876, according to the above statistics, we had 1 voter to 4.1 in population; in 1878 we had one voter to 4.3 (nearly) in population. Thus it would appear that we had lost in bachelors or gained in maids or babies. We are not sure but either horn of the dilemma is silver tipped: a bachelor is usually counted dross and a baby pure gold.

In presenting these figures from the report of the Surveyor-General, we would again caution readers anywhere against accepting them as complete. It is to be hoped that the U. S. census of 1880 will do fuller justice to our State, even if the State herself does nothing to improve her system of statistical book-keeping.

## QUERIES AND REPLIES.

## Pruning Vines.

EDITORS PRESS:—I would be pleased to learn through some of your many subscribers the best time of the year to prune a vineyard. I have always pruned mine in January or February until last season, when I pruned in December. My crop was not as good this season as usual. Some of my neighbors laid it to pruning too early; others thought it made no difference.

I would like also to get some information in regard to pruning different varieties. Should all kinds of grapes be pruned the same? I have always pruned all my grapes the same, leaving from three to six stocks on a vine and three buds on each stock. My kinds are the White Muscat, Rose de Peru, Black Morocco, Flame Tokay, Black Hamburg, Purple Damascus, Black Ferrara and Emperor. —JAMES A. ELLIOTT, Newcastle, Placer Co., Cal.

'Purple Damascus' and 'Cornichon' Grapes.  
EDITORS PRESS:—Will you give descriptions of "Purple Damascus" and "Cornichon" grapes.—J. H. K., San Jose, Cal.

EDITORS PRESS:—The question of the proper time to prune grapevines depends altogether upon the locality. Those situated upon land subject to late frosts, will always find it better to prune late. To those who possess large vineyards upon land not particularly frosty in the spring, the same rule will not apply. Skillful pruners are not plenty, and as it is important that vines should be pruned in a uniform manner, it is usually profitable to commence earlier.

The season most to be dreaded by the vinticulturist in my neighborhood is from the 5th to the 15th of April; the young fruiting shoots are then just putting out. If they are cut off by frost at this season, most of the crop is killed, for although other shoots spring from the same eyes, they have no fruit upon them, and the only chance for a crop is from dormant eyes that may break.

The difference between early and late pruning is quite marked. The vine that is pruned early in December, will start at least a week earlier than the one that has been left until the latter part of February. This week, in a locality subject to frost, may be the cause of the loss of a crop. The bleeding which always follows late pruning, does not seem to weaken the vine as much as would be supposed; still it certainly is not beneficial. I have had only one failure in my crop during the past fifteen years, although the frost has injured it slightly several times. I usually commence pruning early in January, and finish about the first of March. I can see no difference in the crop between the early and late work except as I have said before, the April frosts.

I do not think the short crop which your correspondent mentioned is attributable to the pruning. Grapes, like other fruits, do not produce full crops every season. Sometimes a short crop will follow a very abundant one; sometimes high and cold winds may interfere with the setting of the fruit. This year has been a poor one for grapes all over the State. I think not more than two-thirds of a crop has been produced.

There is a great difference in the habits of the varieties of vines. Many kinds will not produce a crop by the usual short spur system of California. One of the most conspicuous among them is the Emperor, which, if pruned in the usual manner, is almost worthless, but if long canes are left, is a very abundant bearer. The proper way is to tie up two shoots during the summer for bearing wood for the next season; in the winter these are cut back to three or four feet and trained in a horizontal direction.

You ask me to give a description of the "Cornichon" and "Purple Damascus" grapes. Perhaps there are no two grapes whose habits differ so widely. The Purple Damascus is produced in perfection only in the hot valleys in the foothills of the Sierra Nevada. Those beautiful specimens which attract so much attention in San Francisco are grown by Mr. J. A. Goodwin, of Mountain Pass, Tuolumne county. This little warm valley with its abundant irrigation, seems to be just suited to it. The clusters are of enormous size, of a dark purple hue; it will compare favorably with the best hot-house fruit produced in the East. Upon my place it is much inferior in size, but still a fine grape.

The Cornichon, on the contrary, delights in the cooler climate of Napa valley, where it

produces fair, although not large crops. It is a very beautiful olive-shaped black grape, but of inferior quality. If it was more plentifully produced, I think it would not bring a high price. It may be of value as a shipping grape, and sells well at present in San Francisco markets. It is of no value on my place, not producing well enough to make it worth cultivating. There are three varieties usually in the French catalogues, the white, red and black.—W. B. WEST, Stockton, Cal.

## Mountain Tobacco.

EDITORS PRESS:—I take the liberty of forwarding to you a sample of tobacco raised on the Los Aguilas ranch in San Benito county. It was transplanted, or set out, on the 1st day of June, cut on the 17th day of September, and the sample sent you was dried in the stove. You comprehend well, that it would have had a better flavor if it had been put in a house, leaves stripped from the stalks and hung up with a gentle fire under it. Considering that it has been raised in the mountains, I consider that it will compare favorably with any that has been raised in California. When it will have six months' age, it will be far superior to its present state.—J. M. DE SAGEA, Tres Pinos, Cal.

For an amateur product treated as roughly as our correspondent describes, this seems to be a notable specimen. It has a very handsome and uniform color and a fine aroma. A friend of ours, who is a tobacco expert, has tried it thoroughly in his mouth, in his lungs and in his nostrils, and pronounces it excellent. Certainly the fragrance from the burning is very delightful, and even burned in an old pipe it exhaled the aroma of a choice cigar.

## Eye Disease in Cattle.

EDITORS PRESS:—I have several cattle with diseased eyes. The eye becomes glassy, with a bluish film over the entire ball, and a small white speck about the size of a pea upon it. This might denote an injury, but there are so many that I think it must be a disease. The eye is very weak, and weeps continually. Cattle in the corals have it, as well as those at pasture. In some cases only one eye is attacked, and in others both. Can you name the disease and give remedies?—STUBBINS, Downey, Los Angeles Co., Cal.

EDITORS PRESS:—It is impossible with the above description to give a decided opinion on the disease affecting "subscriber's" cattle, but I should think they are suffering from inflammation of the conjunctival membrane. This is called "Conjunctivitis." Try the effects of a solution of nitrate of silver, about five grains to the ounce of water applied with a camel's hair brush twice a day.

If "subscriber" will write again giving a fuller description, and answering the following questions, I will, perhaps, be able to arrive at a definite conclusion: Does the same animal have more than one attack? Do any of them go blind? Describe the appearance of the eye after the severity of the attack has passed away.—JOHN CASEWELL, M. R. C. V. S., Petaluma, Cal.

## The Gape Worm in Poultry.

There is promise now that we shall ere long know all about the worm which causes the disease known as "gapes" in poultry. Nature announces that the Council of the Entomological Society of London is authorized by Lord Walsingham and other gentlemen to offer to public competition the following prize: \$250 for the best and most complete life-history of *Sclerosoma syngamus*, Dies., supposed to produce the so-called "gapes" in poultry, game, and other birds. No life-history will be considered satisfactory unless the different stages of development are observed and recorded. The competition is open to naturalists of all nationalities. Essays in English, French or German, to be sent in on or before October 15th, 1882, addressed to the Secretary of the Society, 11 Chandos street, Cavendish square, W.

## Artesian Well Boring.

EDITORS PRESS:—We are about to test the artesian well question and desire to investigate the subject thoroughly before commencing. Can you place us in communication with one or more responsible parties who could give us information on the subject, or who would be likely to put in bids. We favor steam boring, but are not set in our way. If the test well is a success the party who bores it will probably have other contracts offered.—HENRY B. LOCKWOOD, for Committee on Artesian Well, Riverside, San Bernardino Co., Cal.

The best we can do for our Riverside friends is to publish the foregoing, that all well borers may have a chance to communicate with them, and thus give them a chance to choose between several proposals. We trust the enterprise may prove of advantage to all concerned.

## Cork Acorns.

EDITORS PRESS:—Will you or some of your readers do me the favor to tell me where I can procure 100 or 200 acorns of the cork oak?—L. I. FISH, Martinez, Contra Costa Co., Cal.

Last December, C. G. Hutchinson, of San Gabriel, Los Angeles county, sent us a few dozen, which we gave to the College of Agriculture for planting on the experimental grounds at Berkeley. We understood that Mr. Hutchinson had no acorns to spare last year, but he may have gathered quite a crop this year. We hope he or any other reader who can supply Mr. Fish's need will write to him.

## California Irrigating Appliances in Demand.

EDITORS PRESS:—I have read with much interest an article in your issue of the RURAL, of October 11th, on "Irrigation Appliances at Stockton Fair." I very much want to know more about the Norton pump, the Asbestine system of sub-irrigation and the Haas & Manning steam borer. I think we must irrigate here or leave this dry section.—FREDERICK GATES, Vineland, New Jersey.

We are pleased to have been the instrument of carrying the news of these California inventions into the uttermost parts of "Jarsey," and trust they may prove the salvation of the country. We cannot aid our correspondent than by requesting the inventors and manufacturers of the appliances alluded to, to write to Mr. Gates concerning them.



## Letters from Southern California—No. 5.

One of the largest, if not the very largest land-holder in southern California, at this time, is E. J. Baldwin, of San Francisco—better known there as "Lucky Baldwin." By direct purchase and by the foreclosure of mortgages, he is now or soon will be in possession of 45,700 acres of the best land in southern California, a large portion of which is already under cultivation by about 200 tenants.

The Santo Anita Rancho, embracing something like 8,000 acres, which was his first purchase, is probably the very best cultivated of any large ranch in California. It is located near the center of the San Gabriel valley, about three miles easterly from the old San Gabriel Mission, and the San Gabriel station on the Southern Pacific railroad.

It is all under fence of which there are about 50 miles. Upon it are vineyards varying in extent from 50 to 200 acres and over, and some 200 acres or more of orange trees. Large fields of alfalfa, corn, wheat and other agricultural products are also cultivated. The cultivation of this property gives employment to nearly 200 men, during most of the year, and fully half of that number all the year round. Mr. Baldwin is said to have expended already over a quarter of a million on this particular portion of his vast estate. His present residence is near the center of the property. It is an unpretending structure, embowered in flowers and semi-tropical trees and shrubbery, and near by is a lakelet, greatly enlarged and beautified by art, and well stocked with fish. The house is approached by a broad avenue of trees; while along the foreground, on either hand, are orange groves and vineyards. We understand that it is the intention of the proprietor to erect at an early day, in place of the present dwelling, a princely mansion, which shall excel anything of the kind yet seen on the Pacific coast. Mr. Baldwin's winery and wine cellars are said to be the most complete in the State—the latter having a storage capacity for 50,000 gallons. The dwellings for his superintendents and employees, as well as his barns and other farm buildings, are all models of architecture and convenience. Mr. Baldwin is not a careless farmer. Everything about his vast estate is managed in accordance with the most advanced ideas of modern cultivation, and with strict regard to economy. All his straw is stored, put under cover and utilized to its fullest extent. In this respect he is setting a most excellent example to his neighbors. As soon as the time for the redemption has passed for his purchase of the Temple and Workman estate, it is said that Mr. Baldwin will enter at once upon a grand and extensive system of improvements, such as will give employment to a vast number of laborers and mechanics, and which will tend to greatly enhance the value, not only of adjoining, but of all property in this great valley.

## Flourishing and Mammoth Pepper Trees.

The visitor in Los Angeles county, is particularly struck with the great number and vigorous growth of the pepper trees, which are largely utilized there for windbreaks, shade and ornamental purposes. The tree is beautiful in appearance, excellent for shade, a rapid grower, and requires but very little care or irrigation. When seen in flower, or gorgeous with its thickly clustering branches of purple fruit, it presents a most beautiful and picturesque appearance. But, with all its advantages, it is a most noxious tree for the cultivator of the soil. It throws out numerous roots to a great distance, which suck up the moisture and nutriment of the soil, much to the detriment of whatever else is growing in its near vicinity. In many places where this tree has been set out by the roadside, the owners of the land contiguous have dug deep ditches along the inner side of the trees to cut off its support in that direction. The tree grows here to mammoth proportions. We measured one upon the grounds of Mr. J. A. Cooper, near Lake Vineyard, which was nine feet in circumference, with a spread of branches of fully 75 feet, and 50 feet high. We subsequently came across another in the town of Anaheim, which measured 10.2 in circumference. The former is about 23 years old. Near by this tree, are two date palms, one of which, on measurement, proved to be seven feet in circumference, and about 40 feet high.

## Eaton Canyon.

No visit to the San Gabriel valley can be considered complete without a visit to some one of the romantic canyons along the slope of the Sierra Madre, or a climb to the top of one of the prominent peaks which, with their almost perpendicular sides, stand as grim sentinels thousands of feet high over the valley below. Our friend, Mr. Carter, accordingly made up a party of thirteen, five of whom were ladies, to visit Eaton canyon.

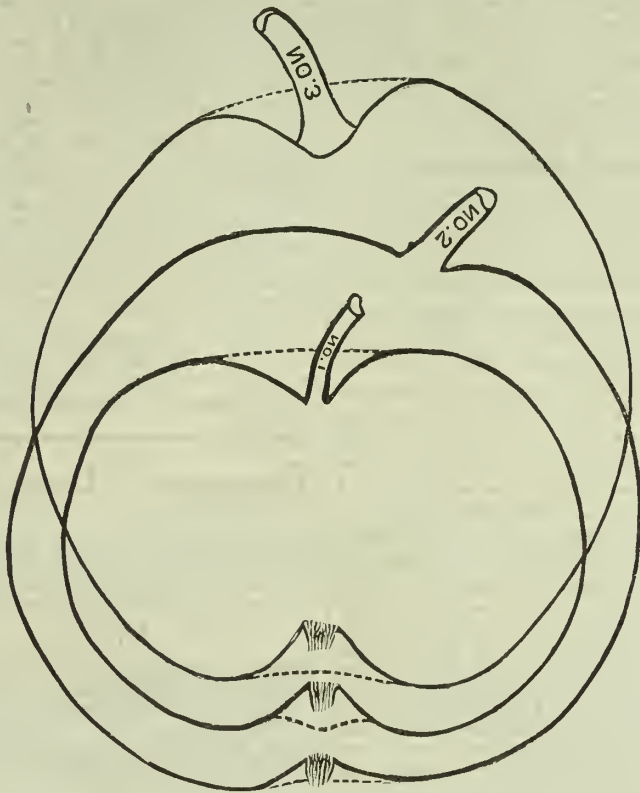
A drive of five or six miles, upon a bright and beautiful morning, brought us to the mouth of the canyon, which is entered by following, for quite a distance, a deep arroyo which has been cut through the mesa that everywhere skirts the foot of the mountain. Here we left our

horses and carriages and traveled on foot about two miles to the first falls. This is one of the prettiest and most romantic mountain canyons which we have ever visited. Now narrowing down to a space barely sufficient for a foot path, then again opening out into quite a wide area, with almost perpendicular walls several hundred feet high upon either side. Along the bed of the canyon runs a little stream of clear and sparkling water; now hurrying and jumping along over water-worn boulders, with here and there little miniature cascades; then again spreading out into wider dimensions over a smooth, sandy or pebbly bed, bordered by pretty ferns and wild flowers, among which we noticed the honeysuckle and larkspur abounded. Wherever there was sufficient soil and room, trees of various kinds, but of modest dimensions, gained root and grew. Far up the walls

reached by climbing the banks. This was as far as any of our party went; but we were assured that there are other falls beyond and approachable, the top of each of which has to be reached by ladders, which has been placed in position by the public-spirited generosity of Mr. J. F. Crank, who owns a large orange orchard and vineyard near the mouth of the canyon.

## Willow Dale.

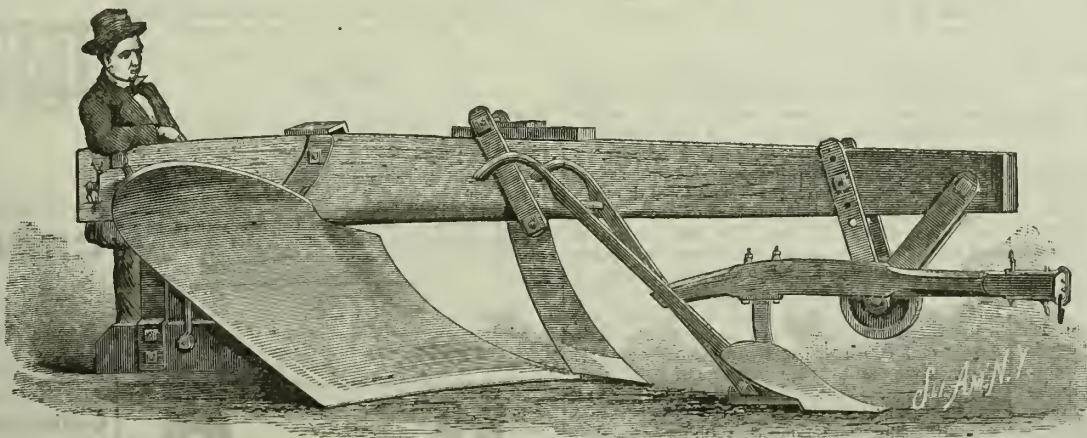
Before bidding adieu to the San Gabriel valley, we cannot refrain from extending our most hearty thanks to Mr. N. C. Carter and his estimable lady for their hospitality, and for the unmeasured degree of readiness and attention which they extended to the proprietors of the RURAL PRESS, in giving them every possible opportunity to see and to learn everything of interest connected with the charming valley which they have chosen for a home. The spot



OUTLINES OF RARE PEARS.—See Page 337.

upon either side, in crevices and upon little benches, yuccas grew in great profusion, and lower down trailing vines and hair ferns appeared. Sometimes ragged rocks and fallen trees obstructed the path, or the little stream was to be crossed and recrossed to keep the footway. These little hindrances afforded frequent opportunity for a show of gallantry in helping the ladies along, who, in turn amused themselves by weaving garlands of wild flowers about their own and the hats of their gentlemen escorts. It was thus with merry laugh and lively chat we pressed on until we reached the foot of the first cascade, where the canyon opened out into quite a wide and sandy area, a portion of which, at the foot of the fall, was covered with a broad sheet of as pure and sparkling water as ever gladdened a thirsty

selected for their residence is a beautiful rising piece of ground adjoining the extensive vineyard of Gen. Stoneman, overlooking the Alhambra and Lake Vineyard tracts, the old Mission of San Gabriel, and in fact almost the entire valley of that name. To this place he has given the pretty name of "Willow Dale." It is well watered by numerous springs, which Mr. Carter is utilizing, as he has need for the water in extending the area of his cultivation. His residence is surrounded with flowers and shrubbery, and trailing vines and ornamental trees. Among the latter is a castor-bean, which has been trained into a tree of large and beautiful proportions, with a trunk some 10 inches in diameter, and stands upwards of 20 feet high. This tree, with its large, many-pointed and serrated leaves of a bluish green tint, together



PLOW FOR RAILROAD DITCHING MADE BY DEERE &amp; CO., ILLINOIS.

traveler. This first fall has been most appropriately named

## La Belle Cascade,

And it is really one of the most beautiful "bits of nature" with which a traveler will meet in any part of the world. Here a bright fire was soon kindled; ready hands spread a snow-white cloth upon the sand, and soon covered the same with a great variety of eatables, which the thoughtful ones of our party had taken the precaution to provide. In the meantime the fumes of a big kettle of fragrant Mocha filled the canyon with its aroma. After a hearty lunch, for which our early ride and rough walk had given us a good appetite, all but two of the party ascended to the tops of the falls, the ascent to which was made by ladders securely and permanently placed against the rocks.

Once at the top of the first, we follow up the canyon about a mile further when we come to the second fall, the top of which may be

with its large reddish spikes of flowers and fruit, presents a highly ornamental appearance. Stretching away down the slope in front of the house is a beautiful vineyard, flanked upon the right with an orange orchard. In the rear, and extending along parallel with the hill, he proposes to extend an avenue of willows, pepper and other ornamental trees, interspersed here and there with the rich foliage of the olive, the orange, the lemon and the banana. A fine fish pond, well stocked with carp, forms a pleasant feature of Willow Dale.

## The Willow Dale Press

Is also another most useful as well as interesting feature of this model home. It is edited, printed and published by the daughter and son of Mr. and Mrs. Carter, aged respectively thirteen and ten. It is an amateur paper, well printed on a sheet 15x10 in size; and in its editorial management and general make-up, would be creditable even to adepts in the profession.

Mr. Carter has happily conceived and encouraged this publication as a means of instruction and a useful mental exercise for his children, who, at the same time, are learning a useful trade in their own home. A room in the house is appropriated mainly to the press and type necessary for the publication. The office was taken to Los Angeles and placed in the Pavilion, where it was operated by its juvenile publishers, and formed quite a feature of the late exhibition and fair in that city. W. B. E.

## Large Plows.

As an illustration of the immense in land-worrying machinery, we give on this page an engraving of a mammoth plow recently built by the well-known plow makers, Deere & Co., Moline, Ill., for a Missouri railway company. It is calculated to cut a ditch 30 inches wide and 2 feet deep, and is attached to a platform car of a construction train by means of timbers framed and extending out, so that the plow cuts its ditch a sufficient distance from the track. It requires the full power of the locomotive to draw it through the soil, which is a black muck surface and hard clay subsoil. Three furrows, of 8 inches in depth, are required to complete the ditch. One mile of ditch, 2 feet deep and 3 feet wide, is made every four hours. The plow weighs 1,700 pounds, and thus does the work of 1,000 men. The beam is made of swamp oak, the toughest kind of timber, and is 14 by 8 inches in its dimensions, and of proportionate length. No handles are used, the plow being regulated in the manner already named. The landside is a piece of bar iron 8 inches wide and 1½ inches thick. It is larger than merchant iron is made, and was especially forged for this job. The share is of the best cast steel, ½ inch thick by 9 inches in width. This is also of extra large size, and was rolled to order in Pittsburg. The top of the mold board stands 36 inches from the ground, or the base of the plow. It is made of the best cast steel, with iron lining securely bolted to the back. The plow is rigged out with an immense gauge wheel and standing cutter. It is said that its performance is entirely satisfactory to the railroad company.

The relative size of this plow can be judged by the common sized one, which stands near it in the engraving, and by the height of the stocky individual who seems to be in doubt whether the beam is quite true.

The facts about this great prairie plow are of course interesting, but we are sorry to see it claimed that this railroad plow is the "largest plow ever built." Nearly two years ago there was another large railroad plow constructed and it too was claimed to be the largest ever built, etc. The fact is that both these giants are less in size than a California plow, which we have described before, but which we allude to again in this connection. A few years ago a plow was built on the Livermore ranch in Kern county, according to the design and under the supervision of Mr. W. H. Souther, which, if it should meet this Iowa plow, it would serve it as a locomotive might a hand-car. It is called the "Great Western," and these are its weights and measurements: Beam, 13 feet long, 18 inches deep and 10 inches thick; landside, 17 feet long, 5 inches wide and 1½ inches thick; standard, 3 feet high; mold board, 12 feet long and 3 feet high. This plow weighs one ton and is swung by a heavily ironed wooden arch, between two wheels eight feet in diameter and with tires six inches wide. The attaching of the body of the plow to this arched axle of the wheels is accomplished by running two heavy fenders back from the arch, and fastening them to the back ends of the beam and mold board. A 14-foot lever runs from the mold board across the back end of the beam, and on this a man stands to adjust the plow as to depth of cut, etc. The "Great Western" cuts a furrow four feet wide and three feet deep, and is drawn by 80 oxen, yoked to a wire cable one inch thick. This cable weighs 1,140 pounds.

There follows the plow a A shaped scraper, drawn by a chain from its apex by 80 mules. It is 12 feet wide and 3 feet high at the open end. The sides are heavy iron. This, following the plow, shoves the furrow out 10 feet from the place it is left by the plow.

With the "Great Western" and its scraping follower, the Kern Island canal and many of its branches or sub-canals were built in one quarter the time that it could be done with and other machine now in use, and for a much less sum of money.

THE Nicaraguan Minister says he will meet Grant in Philadelphia early in December. Ammen has assurances that if \$20,000,000 of stock can be sold in the United States, the balance of the \$100,000,000 can be obtained in France without going to England for the money. French capitalists desire the control to be kept in that nation.

A PATENT was issued November 24th for El Rincon Rancho, comprising 4,431 acres in San Bernardino county, Bernardo Yerba confirmee.



## Seeders and Planters.

By permission of the Commissioner of Patents, Mr. James T. Allen has made a digest from the records of the Patent Office, of all the American patents on seeding machines and implements granted from A. D. 1800 to January, 1879. This volume is the only one ever published comprising this class, and has been prepared with great care and labor. It contains thirteen hundred and twenty-five pages, and embraces nearly four thousand patents. Each drawing is clearly and distinctly photographed, and can be as readily understood as the copies furnished by the office. It also comprises all the reissues and additional improvements granted during the above period, accompanied with the full claim, and also brief when found to be of service. Especial care has been bestowed on the arrangement of patents to simplify and facilitate examinations, and to this end the patents have been arranged chronologically under the official classification of thirty-four subdivisions.

In addition to this are complete and convenient indexes of each subdivision, whereby the drawing or claim of any patent may be found by name, number or date. There are also complete lists of models saved wholly from the fire of 1877, and of those reclaimed from the debris of the conflagration.

Inventors, manufacturers and attorneys will see the great advantage a work of this kind affords, particularly to those residing at a distance, enabling any one to make examinations nearly as quickly and thoroughly as if consulting the office records. The number of volumes of the Digest is limited to a few hundred, most of which has been taken by subscribers. The price has been fixed at the low rate of \$25 per copy, whereas the patents it contains could not be purchased for less than \$375 to \$400.

Those desiring copies of this exhaustive treatise are requested to send their orders at once, remitting by postal order, check or draft, or copies can be sent by express C. O. D. A liberal discount is made to libraries. Mr. Allen's address is room 116, Patent Office, or lock box 699, Washington, D. C. Reference is made, by permission, to the Patent Office officials.

## Shipping Laws of the United States.

Under the head of "The Miserable Shipping Laws of the United States," the New York *Mail* makes additional comments upon an article in the Philadelphia *Record*. It is difficult to conceive of any grave reason why this country should not become the mistress of the seas, at least so far as the carrying trade is concerned. Evidently the only obstacle in the way is our own Government. We cannot say that there is a lack of common sense in not investigating this matter, but we may say that there is a lack of attention to the demands of the country for legal provisions which will advance its welfare. There never was such an opportunity for the United States to arrive at a legitimate superiority in the shipping trade, and if no attention is paid to the matter now, a future generation will point to the "possibilities," the "might have been" of blundering statesmen. We speak of progress, and our progress is more in talk than in action. Many of our laws are wholly inadequate for the development of the country, and yet they remain unchanged to the detriment of our greatest interests.

Speaking of the laws which prevent Americans from becoming ship owners, the Philadelphia *Record* says:

"Thus have we presented the anomalous spectacle of a people languishing in the over-productions of their own industries, unable to build ships, forbidden to buy them, and compelled to await the coming and going of foreign fleets and foreign merchants to develop a foreign trade which, to a large extent, is 'second hand.'"

To fully understand the meaning of the *Record*, we must notice what some of the provisions of the laws governing American ships are: An American can buy a foreign ship, but cannot have it registered in the United States. If an American resides in a foreign country, his ships, though built in the United States, forfeit their registry during their owner's absence, unless he is a consul or is connected with some house composed entirely of Americans. An American cannot sell half his ship to a foreigner without the ship forfeiting its registry. An American cannot have a ship registered when it is built in this country if he has a foreign partner. If a naturalized citizen goes abroad two years, every ship in which he owns the smallest interest forfeits its registry. In the meantime, iron steamships have well-nigh driven wooden ships from the sea. Plenty of first-class iron steamers are for sale in English and Scottish ports which American merchants would like to purchase, but our laws will not permit. It is time all those laws were stricken out, and the same freedom given Americans who may wish to purchase foreign ships that is given those who wish to buy a horse or a suit of clothes abroad. The laws were framed when the United States among powers was one of the weakest; they do not apply any longer. Half the profits to be derived from the food crops of the United

States, when sent abroad, goes to the steamship companies which carry the freight to Europe. The *Record* estimates that a ship costing \$250,000 will earn, running between the United States and Europe with cargoes one way, \$2,224,000 in her natural lifetime of 20 years. This, too, only reckons freight at \$6.50 per ton. From these figures it is easy to see that foreign ship owners are making as much from our harvests as the men who till the soil on which the harvests are planted. Then all the foreign commerce of the United States except a trifle is carried in British and German ships. And this is the case, too, when foreign markets are the great need of American manufacturers. Still, those obsolete laws are kept in force though our shipyards are idle and the men who were sailors in the old days of wooden ships are seeking other occupations on shore. If Congress were to try to prevent a State from selling its products, the people would raze the capitol to the ground. Yet they keep in force, year after year, laws which in effect say, "Half the profits of all the products you desire to send abroad must be paid to foreign ship owners." Is it not time that such laws were wiped out?

## Continental Pacific Railroad.

We acknowledge the receipt of a pamphlet entitled *La Grandiosa Obra de todos los Siglos, El Ferrocarril Universal*, and also a copy of *El Comercio Periodico Mercantil*, both of which are devoted to a *Gran Proyecto Americano*—"a Continental Pacific railroad," which is to have its termini at San Francisco and Montevideo, crossing all the Central and South American republics. It is to be 6,000 miles long, and will cost the small sum of 325,880,000 "strong" dollars (*pesos fuertes*). The freight and passenger tariff has already been established. A branch line is to be built to Behring's straits, in order to explore the North Pole, thence passengers will be carried over a 13-mile bridge into Asia to Peking, Persia and across the Sahara desert. The object of this "grand continental railroad" is to enable the population of the earth to travel about and civilize the barbarous portions of the community, as also to solve many scientific and mechanical problems. A board of directors is to be established in every country through which the line passes, all, however, subject to the *Directorio General*, who is to locate in San Francisco. Any person can become a *Directorio General* for 25 shares of the stock, while a common to ordinary *Directorio* can get the position for 15 shares of stock. The stock is fixed at \$500 per share, a moderate amount when the enormous advantages of this railway are considered. Although the timetable has been arranged, and the freight and passenger tariff fixed at extremely low rates, tickets will not be issued nor freight received until the road is built. The sum of \$325,880,000 being the only drawback to the speedy completion of the road, the railroad from Chicago to Patagonia must now take a back seat. The pamphlet before alluded to, which by the way is written by a gentleman entitled Juan B. Bobbio, says that the nine wonders of the world are a bagatelle to this railroad, which will likewise afford a profound and illustrated study, meditation and observation for the mathematician, politician and financier. We believe it, and if it is going to remove all the miseries of humanity, as Mr. Bobbio says, we are in favor of it provided we can be the *Directorio General*.

**THE DEEPEST WELL IN THE WORLD.**—The sinking of the deep artesian well near Buda Pesth, Hungary, is now completed; the works were commenced as far back as 1868, and during their progress many interesting facts relating to geology and underground temperature have been brought to light. The total depth is 3,200 feet, and the temperature of the water it yields is nearly 165° Fahr. The temperature of the mud brought up by the borer was taken every day, and was found to increase rapidly, in spite of the loss of heat during its ascent, down to a depth of 2,300 to 2,700 feet. Beyond this point the increase was not so marked. At a depth of 3,000 feet the temperature was 177° Fahr., giving an average increase of 1 for every 23 feet bored. Water first commenced to well up at a depth of 3,070 feet; here its temperature was 110° Fahr., and from this point onward it rapidly increased both in quantity and temperature. Thus, at 3,092 feet, its temperature had already risen to 150° Fahr., and the yield in 24 hours from 9,500 to 44,000 gallons. Finally, when the boring had reached 3,200 feet, at which point it was stopped, the temperature of the water, as it burst from the orifice of the tube, was 165° Fahr., and the volumetric yield 272,000 gallons in the 24 hours. This yield was afterward reduced to 167,200 gallons, in consequence of the bore being lined with wooden tubes, which reduced its diameter. The water obtained disengages carbonic acid in abundance, and also contains nitrogen and a little sulphuretted hydrogen, and 80 grains per gallon of fixed matters, chiefly sulphates and carbonates of potash, soda, lime and magnesia.

A DISPATCH from Singapore says the king of Siam has sent the decoration of "The Golden Flower of Siam" to Hon. Thaddeus Fairbanks, inventor of the platform scales. This is the first time this distinction has ever been conferred on an American.

**THE MICROSCOPE IN THE WITNESS BOX.**—As the New York *Tribune* says, the scientific aspects of the evidence against the Rev. Mr. Hayden, of Madison, Conn., for the murder of Mary Stannard, are truly remarkable; indeed the microscopic exhibition of arsenic and the comparison of arsenical crystals show that the law has a powerful auxiliary in chemistry. After the arrest of Mr. Hayden, and the disinterment of the remains of the dead girl for examination, it was claimed that all of the arsenic which Hayden had bought was still in a box in the barn. There a box was found containing a full ounce. It was shown that the arsenic found in Mary Stannard's stomach could not have been taken from this box. At this point recourse by the prosecution was had to Prof. Dana, who visited England, studied the manufacture of arsenic, and then, by the use of his microscope on the crystals, demonstrated that the arsenic from the girl's stomach was an entirely different lot from that hidden in the barn, and that it was identical with the arsenic sold by Tyler, at the time when Hayden is known to have bought his ounce. The conclusion sought to be established is that a part of the arsenic bought by Hayden was used to poison the girl, and that the rest was flung away, and that the barn arsenic was bought elsewhere afterward merely as a blind. The crystals of the stomach arsenic are three or four times as large as those of the barn arsenic, but none of them are large enough to be visible without the microscope. Hereafter criminals will do well to recognize in science one of the agents of possible detection.

THE Board of Managers of the Produce Exchange, of New York, have refused to grant the request of the grain dealers to drop the central system, and the system goes into effect Jan. 1st.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

PETER Saxe & SON, 520 Bush St. S. F. Importers and breeders of all varieties of thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

## SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

## POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Doves, etc. Eggs for hatching. Send for price list.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hogs and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Poland-China Swine and Black Cochins Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

## BEES.

JOS. C. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## PIANOS

## LARGEST MUSIC HOUSE

On the Pacific Coast.

WHOLESALE AND RETAIL.

Lowest Prices and Best Goods.

Write for information concerning any Musical Instrument, and terms of sale. It will be given with pleasure.

ESTABLISHED IN 1850.

KOHLER & CHASE,

137 and 139 Post Street, San Francisco.

## Lands for Sale and to Let.

## FARMS FOR SALE.

IN THE FERTILE AND HEALTHFUL

San Pasqual Valley,  
San Diego County, Cal.

## TITLES PERFECT.

The owner (an architect) having recovered his health by a residence of four years in this Valley, is desirous of returning to the city, and so offers the following farms for sale

## At a Great Sacrifice:

The Home Farm of 200 acres is well fenced and subdivided. There is beside 600 yards of movable panels,

## 50 Acres in Alfalfa.

Yielding five and six crops a year. There is an abundance of water on the place for stock, besides running water for garden, orchard, etc., and a one-sixth interest in the S. P. V. Ditch Co. House 28x36, enclosed in a lot 200x180, barn and stable, 54x35, two sheds 24x14 and 18x14, smoke-house, 20x14, with an adobe cellar under it, and every convenience as regards large tanks, etc., for making bacon. The implements are of the best, nearly all new, and in good order. They consist of two farm wagons, 10-foot header, header beds, hay rack, mower, gang plow, single do, harrow, 10-foot seeder and cultivator, small do, sulky rake, two sets of strong harness, together with a lot of other tools, hay, grain seed, etc.

Price for the whole, \$4,000; one-half cash, balance on time at 1 per cent.

## For Sale Also,

A farm under cultivation of 116 acres, adjoining the above, suitable for grain, corn or alfalfa, with a one-sixth interest in the Ditch Co., and about one and one-quarter miles of fencing, no other improvements. Price, \$1,200; one-third cash, balance on easy terms.

## For Sale Also,

A farm of 120 acres, one-quarter mile from the above ranches, mostly damp land, suitable for a nursery, alfalfa, corn, etc. There is a small house, etc., and a ditch running along its upper side. Price, \$900; one-third cash, balance on easy terms.

The neighborhood is exceedingly healthful and growing. Two schools are in the valley, one within one-quarter mile, and the postoffice within one mile, neighbors with families are all around.

My stock consists of superior brood mares, colts, hogs, etc., and they may be taken at a valuation if wanted.

For particulars apply to W. B. STEWART,  
San Pasqual Valley, San Diego Co., Cal.

## TO LET.

THE CELEBRATED

## BARTON VINEYARD,

Situated at Old San Bernardino, in San Bernardino Co., Cal., consisting of eighty (80) acres of Mission Grapes, together with two (2) cellars, one brick and one adobe, a small lot of tubs, vats and pipes, distillery and brick dwelling house. Location good and crop sure. Would prefer to let for a number of years on easy terms. For particulars address H. M. BARTON, P. O. Box 88, San Bernardino, Cal.

## FARMING LAND

For Sale in large or small tracts, on easy terms, in the best parts of the State.

## McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

## GRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000,

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$400,000.

## OFFICERS:

G. W. COLBY, President  
JOHN LEWELLING, Vice-President  
ALBERT MONTPELLIER, Cashier and Manager  
FRANK McMULLEN, Secretary

## DIRECTORS

G. W. COLBY, President, Butte Co.  
JOHN LEWELLING, Vice-President, Napa Co.  
J. V. WEBSTER, Alameda Co.  
URIAH WOOD, San Benito Co.  
J. G. MERYFIELD, Solano Co.  
THOMAS MCCONNELL, Sacramento Co.  
L. C. STEELE, San Mateo Co.  
SOLOMON JEWETT, Kern Co.  
C. J. CRESSEY, Stanislaus Co.  
SENECA EWER, Napa Co.  
A. D. LOGAN, Colusa Co.

The Bank was opened on the first of August, 1874, for the transaction of general Banking business.

CURRENT ACCOUNTS are opened and conducted in the usual way.  
GOLD and SILVER deposits received.  
CERTIFICATES of DEPOSIT issued for Gold and Silver.  
TERM DEPOSITS are received and interest allowed as follows: 6% per annum if left for 3 months; 7% per annum if left for 6 months; 8% per annum if left for 12 months.  
EXCHANGE on the Atlantic States bought and sold.

ALBERT MONTPELLIER,  
Cashier and Manager.

San Francisco, Oct. 15th, 1879.



## Seedsmen.

## SEEDS!

Thomas A. Cox &amp; Co.,

Importers and Dealers in

Vegetable, Flower, Field, Grass  
and Tree Seeds.We wish to announce to country merchants and the  
trade generally that we are ready to supply all descrip-  
tions of Seeds of the New Crop of 1879.Special prices on application.  
Vegetable and Flower Seeds put up in small packets for  
the retail trade.

## FRESH AND TRUE TO NAME.

We will send the following Seeds, postpaid, on receipt  
of price. Remit by P. O. Order or postage stamps:

Beets, per oz. .... 10c	Parsnips, per oz. .... 10c
Carrots, per oz. .... 10c	Radish, per oz. .... 10c
Cabbage, per oz. .... 25c	Spinach, per oz. .... 10c
Lettuce, per oz. .... 15c	Turnip, per oz. .... 10c
Onion, per oz. .... 15c	Tomato, per oz. .... 25c

We will mail to any address a collection of 20 packets of  
choice Flower or Garden Seeds for \$1.

Fruit and Ornamental Trees at Nursery Prices.

THOMAS A. COX &amp; CO.,

409 Sansome Street, San Francisco.

J. P. SWEENEY &amp; CO.'S

SEED WAREHOUSE,

409 &amp; 411 Davis St., San Francisco.

ESTABLISHED IN 1853.

Keep constantly on hand the largest stock of FIELD,  
GARDEN, CONIFER, or

## CALIFORNIA TREE SEEDS,

On the Pacific Coast. Seeds all FRESH and GENUINE.  
Our Stock is large, especially of the following varieties:

ALFALFA, BLUE GRASS,

Red and White Clover, Red Top, Timothy,  
Australian Rye Grass, Mesquit Grass,  
Lawn Grass and Millet SeedsOf different varieties. Field Seeds, Mangel Wurzel and  
Sugar Beets, Rutabagas, Carrot Seeds of all varieties,  
Peas, Beans, etc. Our assortment of GARDEN and  
FLOWER SEEDS are full and complete. Also, FRUIT  
and ORNAMENTAL TREES at Nursery Prices.

## Trees For Sale at Lowest Market Rates.

For Catalogue, Price Lists, etc., apply as above.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY  
BLUE GRASS, RED TOP TIMOTHY, SWEET  
VERNAL, MEZQUITE and other Grasses.  
RED CLOVER, FRENCH WHITE  
CLOVER, CHOICE CALIFOR-  
NIA ALFALFA, Etc.Also, a Complete Assortment of HOLLAND FLOW-  
ERING BULBS, JAPAN LILIES, FRESH AUS-  
TRALIAN BLUE GUM, or "FEVER TREE"  
SEED; together with all kinds of FRUIT,  
FOREST and ORNAMENTAL TREES,  
and everything in the Seed line,  
at the Old Stand.

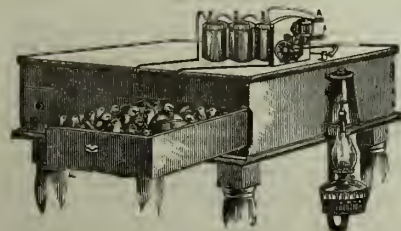
B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.

EXOTIC F. A. MILLER & CO., Mission St.,  
GARDENS. opposite Woodward's Gardens. Send  
for Catalogue and Price List.

## MONEY in CHICKENS



## If You Want to Make Money

By raising any number of Chickens at any season of  
the year without setting hens, procure an

## ECLIPSE INCUBATOR

(E. A. SAMUEL'S Patent).

In both public and private trials on this coast as else-  
where, the "ECLIPSE" has proved itself a perfect and  
successful Egg Hatcher. It may be examined and its  
merits proven to customers before they make purchases.  
Write for particulars and circulars toG. G. WICKSON, 319 Market Street, S. F.  
Agent for the Pacific Coast.

## KEATING'S COUGH LOZENGES!

The Great British Remedy. There is unquestion-  
ably no other remedy so certain in its effects. ASTH-  
MA, WINTER COUGH, BRONCHITIS and DIS-  
ORDERS of the THROAT alike yield to its influ-  
ence. The highest medical testimony states no  
better cure for these complaints exist (now proved  
by over a half a century's experience.) They contain  
no opium, morphia, or any violent drug. KEATING'S COUGH  
LOZENGES prepared by THOMAS KEATING, London,  
Britain, are sold by all Druggists.

Engraving done at this office.

## THE PLANTING SEASON!

THE RAINS CALL TO THE GARDEN!

Timely Hints May be Found in the

PACIFIC  
RURAL  
HANDBOOK.Containing a series of brief and practical Essays and Notes on  
the Culture of Trees, Shrubs, Vegetables and Flowers,  
adapted to the Pacific Coast. Also, Hints on  
Farm and Household Economy.Embracing One Hundred and Twenty Original Pages—Written in Plain and  
Pleasing Style.

By CHAS. H. SHINN,

An able author, and practical California Nurseryman and Cultivator. Prepared especially for  
the publishers of the PACIFIC RURAL PRESS. It is purely a California book, fresh and interesting  
to rural readers at home and abroad.

## LIST OF CONTENTS:

Chapter I.—LAYING OUT THE GROUNDS.—Innate  
Love of Rural Life.—The Pleasantness of Found-  
ing a Home.—We can Read Men's Characters in their  
Homes.—Value of Originality.—Importance of a well  
Considered Plan.—Hints on General Effects and Results.Chapter II.—IMPROVING THE SOIL.—Whatever is taken  
from the Soil must be Restored.—We may even Increase  
the Fertility of Soil.—Otherwise Farming would be a  
Sad Affair.—Thorough Cultivation.—Rotation of Crops.  
—Wasteful Methods of many California Farmers.—Com-  
mercial Manures.—Barnyard Manures.—Composting.—  
Alkali Soils.—Adobe Soils.—Sandy Soils.Chapter III.—IRRIGATION.—The Object one of Great  
Importance.—Need of Better Legislation.—Water, the  
Property of the People.—Examples of Successful Irriga-  
tion.—Value of our Mining Experience.—Sources from  
which Water is Obtained.—Methods of Lifting Water.—  
Artesian Wells.—How to Use Water, when Obtained.—  
Winter Irrigation.—Examples of its Use.—Irrigation in  
Lombardy, and elsewhere.—A Governmental System  
Needed Here Also.Chapter IV.—WIND-BREAKS AND HEDGES.—Bene-  
fits to be Derived from a Use of Wind-breaks.—Kinds  
most Popular.—Other Valuable Varieties.—The Best  
Way to Procure Trees in Large Quantities.—Hedge  
Plants for Fences.—The Plants Adapted to our Climate.  
—The Value of Low Boundaries for Ornamental Pur-  
poses.—Shrubs which may be Used.Chapter V.—FRUIT TREES AND SMALL FRUITS.—  
California's Leading Industry.—Orchards: Where to  
Plant Them.—Treatment Pruning, etc.—A List of Fifty  
Trees, for a Family Orchard.—Leading Market, Drying  
and Canning Varieties.—Their Culture, and Best Kinds  
Known.Chapter VI.—SHADE TREES.—Universal Love of Shade  
Trees.—Their Measureless Beauty.—My Friend who uses  
too many Evergreens.—The Proper uses of Conifers, and  
the most Desirable Kinds.—How to Transplant Ever-  
greens.—Deciduous Trees.—Their Great Variety, and  
Place in Landscape Gardening.—Leading Varieties.—  
Nut-bearing Shade Trees.—Trees with Tropical Foliage.  
—The Weeping Trees.—Ancestral Oaks.Chapter VII.—SHRUBS.—The Value of Shrubs.—Their  
Easy Culture, and Clustered Memories.—Shrubs for  
Each Season.—Deciduous and Broad-leaved Shrubs.—  
Diseases, Treatment and Method of Training.Chapter VIII.—THE VEGETABLE GARDEN.—Farmers  
ought to Raise More Vegetables.—Different Ways of  
Laying out a Garden.—The Combination System.—Gen-  
eral Culture and Treatment. The Tools Needed.—Notes  
on the Best Vegetables.—Birds in the Garden.Chapter IX.—FLOWER GARDEN AND LAWN.—Lord  
Bacon's Remark.—The Universality of Gardens.—Their  
Infinite Variety.—The Time when our Gardening Calen-  
dar properly Begins.—Autumn Work.—Our Californian  
Winter, and the Happy Awakening of the Flowers.—  
Gardens must be Permanent, kept Clean, and full ofFragrance and Gifts.—How to Lay Out a Garden.—  
Plans, Walks, advisable Flowers and Edgings.—Roses.  
—Garden Statuary.—Concerning Rock-work.—Aquatic  
Gardens.—Lawns.—Beds Cut in the Lawn.—The En-  
emies of the Garden and Lawn.Chapter X.—SEEDS, AND SEED PLANTING.—The  
Way Plants Grow.—Some of the Curious Things about  
Seeds.—Sowing of Flower Seeds.—Preparation of Soil.  
—Planting and Covering.—Tree and Shrub Seeds.—The  
Critical Periods.—Subsequent Treatment.—The Three  
Enemies.—The Delight of Success.Chapter XI.—CUTTINGS.—Nature Provides for many  
Ways of Increase.—Plants may be grown from Cut-  
tings, Slips or Pippings.—Nurseryman, Florist, and  
Gardener, Depend on this System.—The Ease with  
which Some People Start Cuttings.—The Difficulties of  
Others.—The Practical Divisions of Soft-wood, Hard-  
wood, Leaf and Root Cuttings.—Each one, Considered  
Separately.—Closing Hints.—Layers, and the Probable  
First Suggestions of Layering.Chapter XII.—WINDOW PLANTS, HANGING BASKETS  
AND FERNERIES.—Conservatory Gardens.—The High-  
est Type.—A Love of Flowers in the Homes of the  
Poor.—How to Make Window-boxes.—What Plants to  
Use, and How to Take Care of Them.—House Plants,  
for Winter and Summer.—Hanging Baskets, how to  
Make, and how to Keep in Order.—The Best Plants for  
Baskets.—Ferneries and Jardinieres: Treatment, and  
Suitable Plants.Chapter XIII.—A SMALL GREENHOUSE.—The Comfort  
of Having a Little Greenhouse.—Early Enthusiasm.—  
Changeableness of many Greenhouse Owners.—Their  
Frequent Failures.—The Mournful Tale of Friend.—The  
First Rule is not to Grow too many Kinds.—The Second  
Rule is to Give Constant Attention.—Liquid Manure.—  
Potting Plants.—Watering.—Hanging Baskets.—Au-  
tumn Work.—A Digression Concerning Mangoes.—Be-  
gonias.—Other Greenhouse Plants.Chapter XIV.—OUR HORTICULTURAL FUTURE.—En-  
thusiasm in some Degree Pardonable.—Our Latent Re-  
sources.—We Need not Despond.—The Wide Meaning  
of Horticulture.—The Impression which a Florist's Es-  
tablishment Would Make on a Savage.—Horticultural  
Development of the Last Half Century.—Its Refining  
Influence.—This is an Age of Homes.—The Work of  
Botanist and Nurseryman.—New Plants to be Discov-  
ered.—The Gradual Increase of Horticultural Sentim-  
ents.—What America may Become.—The New Eden.  
—What is Possible here in California.—The Temple of  
Our State.Chapter XV.—HOMES, AND HOME-LIFE.—The Cen-  
tral Thought of this Book.—For the Sake of our Chil-  
dren, we should have Beautiful Homes.—The Barren-  
ness of too many Farm houses. The First Necessity of  
a Home.—Woman's Work in the Garden.—Books.—  
Their Value.—How to Buy Books.—Books of Reference.  
—Books for a Family Library.—Newspapers.—Pictures,  
and Picture Frames.—The Expense of Home Adorn-  
ment Considered.—A Plea in its Behalf.TABLES.—I. Desirable Deciduous Shrubs; II. Desirable Evergreen Shrubs; III. Climbing Plants of Value;  
IV. Aquatic Plants.

Sold in substantial cloth binding (post paid) for \$1.00.

DEWEY &amp; CO., Publishers,

"Pacific Rural Press" Office (No. 202 Sansome St.) San Francisco.

## California Inventors

Should consult DEWEY  
& CO., AMER-  
ICAN AND FOREIGN PATENT SOLICITORS, for obtaining  
Patents, Caveats and Trademarks. Established in  
1860. Their long experience as journalists and large prac-  
tice as patent attorneys enables them to offer Pacific Coast  
inventors far better service than they can obtain else-  
where. Send for free circulars of information. Office of  
THE MINING AND SCIENTIFIC PRESS and PACIFIC RURAL  
PRESS, No. 202 Sansome St., San Francisco.PURDY'S RECORDER  
Best paper on fruit and flowers. Specimen free.  
Speaks for itself. Address PURDY, of Palmyra, N. Y.60 Chromo, perfumed, Snowflake & Lace cards, name on all  
10c. Game Authors, 15c. Lyman & Co., Clintonville, Ct

## ROOMS TO RENT.

Elegantly Furnished, and with Gas and  
Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

## LAND

Good land that will raise a crop every  
year. Over 14,000 acres for sale in lots to  
suit. Climate healthy. No droughts, had  
floods, nor malaria. Wood and water  
convenient. U. S. Title perfect. Send stamp for illus-  
trated circular, to EDWARD FRISBIE, Proprietor of  
Reading Ranch, Anderson, Shasta County, Cal.

## Nurserymen.

## Berries and Small Fruits.

The most certain and best paying Market Berries and  
well tried sorts.

## Monarch of the West

STRAWBERRIES,

Most Productive, Largest Berries and Healthiest Grower.

## English Red Antwerp, Naomi &amp; Hersteine

RASPBERRIES,

Best paying for market, and are perpetual bearers when  
irrigated.

## KITTATINNY BLACKBERRY,

The most prolific, largest and most popular sort.

I offer also a large assortment of new and old varieties of

## STRAWBERRY, RASPBERRY,

Blackberry, Gooseberry and Currants.

For full Price List send for a Catalogue.

To secure a crop of Berries the first season it is impor-  
tant to plant very early.

JOHN ROCK,

San Jose, Cal.

## THOS. MEHERIN,

516 Battery St., San Francisco.

## Seeds, Trees and Plants.

We offer for sale the present season the largest and best  
collection of Fruit and Ornamental Trees ever offered on the  
Pacific Coast, at REDUCED PRICES. Also,

Vegetable and Flower Seeds,

KENTUCKY, AUSTRALIAN and ITALIAN RYE  
GRASS, RED and WHITE CLOVER, Etc.

Agent for the

## Nursery of B. S. Fox.

Send for Price List. 516 Battery Street, San Francisco

1,000,000

Strawberry, Raspberry, Blackberry and  
Cranberry Plants.STRAWBERRY PLANTS.—The Essex Beauty, Crescent,  
Cinderella, Forest Rose, Glendale, Jucunda, Monarch of  
West, Langforth Prolific, Triomphe d' Gand, Wilson Al-  
hany.RASPBERRY PLANTS.—Cuthbert Early, Early Prolific, Re-  
liance, Pride of the Hudson, Brandywine, Hersteine, Phila-  
delphia Red, Clark, Henrietta, Hornet, Belle de Fontenay,  
Delaware Bristle.BLACKBERRY PLANTS.—Deering Seedling. Early and  
the most productive of all. I will give satisfactory proof  
that these Berries have realized \$750 per acre. It paid more  
than twice as much as the old varieties; also the Early Clus-  
ter, the Vina Seedling, Kittatiny, the Mammoth Cluster,  
Missouri Mammoth, Dorchester and Lawton.CRANBERRY PLANTS.—The Cherry Cranberry Vines at  
\$1 per 1,000, by mail 64 cents more.  
I will sell to responsible parties on time, part cash, 10-acre  
field of Cranberry vines under cultivation. Can be seen at  
the place. Send for Catalogue.

H NYLAND,

Boulden Island, San Joaquin River.

## Phylloxera-Resisting Vines.

Vineyard proprietors desiring to plant American Grape  
Vines, which resist the attacks of the Phylloxera,  
either as Grafting Stock, or for direct production, which  
proves to be the only salvation and means of reconstruct-  
ing the destroyed Vineyards of France, will do well to  
address

BUSH &amp; SON &amp; MEISSNER,

Bushberg, Jefferson Co., Mo.

## PEPPER'S NURSERIES.

(Established 1858.)

For sale at reduced prices, a general assortment of  
Fruit Trees and Small Fruits; also choice Ornamental  
Shrubs, Roses, etc. A limited supply of Cook's Seedling  
Apple, one and two years old. Catalogue and list of prices  
furnished on application. AddressW. H. PEPPER,  
Petaluma, Sonoma Co., Cal.

## HEALD'S

BUSINESS  
COLLEGE,  
24 Post Street,  
Near Kearny,  
San Francisco, Cal.The largest and best Business College in America. Its  
teachers are competent and experienced. Its pupils are  
from the best class of young men in the State. It makes  
Business Education a specialty; yet its instruction is not  
confined to Book-keeping and Arithmetic merely, but gives  
such broad culture as the times demand. Thorough in-  
struction is given in all the branches of an English educa-  
tion, and Modern Languages are practically taught. The  
discipline is excellent, and its system of Actual Business  
Practice is unsurpassed.LADIES' DEPARTMENT.—Ladies will be admitted for in-  
struction in all the Departments of the College.TELEGRAPHIC DEPARTMENT.—In this Department young  
men and young ladies are practically and thoroughly fit-  
ted for operators, both by sound and paper.For further particulars call at the College, 24 Post  
street, or address for circulars, E. P. HEALD,  
President Business College, San Francisco, Cal.

## The New Beekeepers' Text Book.

By N. H. and H. A. KING. The latest work on the  
Apiary, embodying accounts of all the newest methods  
and appliances. Fully illustrated. Sent by mail, post-  
paid, for \$1. DEWEY & CO., 202 Sansome Street, S. F.Dewey & Co. { 202 San- } Patent Ag'ts  
some St. }



## Ice Making by the Pictet System in Sacramento.

In our issue of May 25th, 1878, we published an illustrated description of the Pictet system of manufacturing artificial ice, or, as it is styled, the "Pictet anhydrous sulphurous oxide process." It is an item of local interest that this process has been put in practical operation on this coast in the ice manufactory of J. L. & D. H. Coles, at Sacramento. These gentlemen secured the right of the Pictet system for Idaho, Oregon, California, Arizona, Nevada and Utah, and to show the value of the system which they desire to introduce to the people of this coast, they erected the works at Sacramento, so that all could judge its merits by its actual accomplishment. They leased a suitable building on K street, and to secure pure and clear water they sunk an artesian well, with copious results. The Pictet apparatus imported from New York is now in successful operation, and, according to reports in the local papers, the public interest in the process is testified by the great numbers of visitors from all parts of the coast, who have heard of the Pictet process and desire to see it at its work. The Sacramento Bee gives the following description of the establishment:

The visitor who anticipates seeing a net-work of intricate machinery when he enters the ice manufactory will be disappointed, as its simplicity cannot be excelled. On entering the premises, nothing to attract the attention especially is seen except a covered tank, raised about two feet from the floor, and in the rear of this is a steam engine and boiler-room. In this tank are 12 apartments, separated by partitions which are open at alternate ends. It is filled with brine, 40° strong. Into this brine are lowered 240 oblong cans—which are made slightly flaring in order to admit of the ice being easily drawn therefrom—each of which is three feet long, one foot wide, and six inches in depth, and holds about 80 pounds. By means of an ordinary pump the brine is caused to circulate around these cans, and is made intensely cold by coming in contact with the tanks, which contain the anhydrous sulphurous oxide. This oxide absorbs the latent heat from the brine by its expansion, and then throws it off by being compressed through a condenser and becoming a liquid. This oxide may be worked over from year to year without losing its strength or changing its chemical condition, is perfectly harmless, non-corrosive, and has been pronounced by leading Boards of Underwriters throughout the world an excellent fire extinguisher. The brine is kept constantly at a temperature of 16° to 20° Fahrenheit.

The necessary power is supplied by an ordinary steam engine of ten-horse power, which runs a simple double valve pump which compresses the oxide from a gas to a liquid, by the aid of a stream of condensing water which passes through the tubes of a common condenser.

The boiler is known as the Pond patent, has a hydraulic test of 200 pounds to the square inch and is supplied with perpendicular tubes, hanging into the fire box and connecting at the top with a steam drum.

The ice making machine is what is known as the "Pictet Artificial Ice Machine," and was built by the celebrated New York firm of C. H. De La Mata & Co., a guarantee that it is perfect in every detail. Its capacity is ten tons of ice in every 24 hours, and the excellence of its working is attested in the clear, solid cakes of ice turned out by the process.

Coles Brothers have arranged ice store-rooms with a capacity of nearly 500 tons. They propose soon to begin the delivery of ice throughout the city of Sacramento, and as the claim of the Pictet system is in exceeding cheapness of production they will aim to bring ice within the reach of thousands of consumers who are unable to buy it at present rates. Other points soon to be realized are the erection of a skating rink in San Francisco, the water to be frozen by the Pictet process. As the system has also been already adopted to cooling the air in breweries, cold store-rooms, etc., Messrs. Coles propose to give it a local application to the cooling of deep mines, and it is expected that experiments in this direction will be made at an early day.

REMOVED.—Merry, Faull & Co., the well-known firm of provision packers and slaughterers, have removed their principal office to 125 and 127 California street, corner of Front street. This gives them better space and storage facilities for their large provision trade, and brings them more into the center of business, which is now tending toward the south. This firm is doing a large business in receiving and slaughtering on commission, on the plan which their advertisement in the RURAL continually announces, and our readers can find the new store easily by following Market street from the ferry until it opens into California, and then going to the end of the second block on the latter street.

THE Merchants Association of Boston has appointed a committee to co-operate with other organizations in an effort to secure the enactment of a national bankrupt law.

## A Strange Arctic Region.

Whether the success of Prof. Nordenskjöld in his voyage from ocean to ocean in the Arctic regions will ever be productive of commercial results or not, cannot now be determined. The discoveries made by him will, however, command the attention of scientific men, and perhaps be the means of solving many problems connected with the violent disturbances that have afflicted the globe and changed climates as well as the flora and fauna thereof.

When the ice closed in upon the *Vega*, and left the stout ship ensnared in those northern solitudes, Prof. Nordenskjöld wrote a letter to Dr. Oscar Dickson, the main contributor toward the fitting out of the expedition, describing the scenes along the coast. The letter dispatched on the 20th of February, has at last reached its destination, and is now published in the London Standard. The letter calls attention, in the first place, to a group of islands which are very remarkable in a scientific point of view. These islands, the new Siberian, open the book of the history of the world at a new place. The ground there is strewn with wonderful fossils. Whole hills are covered with the bones of the mammoth, rhinoceros, horses, uri, bison, oxen, sheep, etc. The sea washes up ivory upon the shores. In this group is possibly to be found the solution of the question of the ancestry of the Indian elephant, and important facts with regard to the vertebrates which existed at the time of man's first appearance on earth. How came horses and sheep in a region now locked in the fetters of an eternal winter, uninhabited by men, not now supporting animal life in any form, and almost impossible of access? Prof. Nordenskjöld was unable to solve the question himself, and he suggests that it is of the utmost importance to science to send a light draft steel steamer to those islands for a thorough exploration.

The new tribe of Indians found there, the Tschuktschi, are on the original highway between the cradle of the human race and the home of the aborigines of the northern part of North America, and it is not thought that the resemblance between them and the Greenlanders is accidental. The arrival of the *Vega* on the Tschuktschi coast was an event like the landing of Columbus in the new world. It was an unprecedented occurrence, and made a sensation throughout the region.

East of the Lena, Prof. Nordenskjöld found on shore no scattered blocks of stone such as are distributed over a continent by glaciers and such as are found elsewhere in Siberia. This fact was held to point to the absence of land out to sea north of that coast, and it excites anticipations as to the possible discoveries which are to be made by the *Jeannette*. Not the least of the peculiarities of this strange region is the fact that the coast appears to be rising slowly out of the sea. The inhabitants have to shift their villages at times nearer to the water, which is gradually receding from them.

THE LOS ANGELES NURSERY.—During the recent trip of the proprietors of the RURAL PRESS to Los Angeles, they took occasion to visit, among other localities, the Los Angeles nursery, occupying a tract of 50 acres or more, which has been for some years, and still remains, under the management of Mr. Milton Thomas. Having seen, we can speak from personal observation of the superior care and skill exercised in the management of this nursery. It is located in the western suburbs of the city, and it is seldom that one can meet with a locality so well adapted to the purpose, or one the advantages of which are kept so well up to its possibilities. The nursery is stocked with about 250 varieties of fruit trees—deciduous and semi-tropical. The proprietor employs first-class help and great care is taken in the introduction of new varieties to have them well tested in their adaptation to this coast, before offering them for sale on their merits. Care is also taken in budding from well-known varieties, to see that every tree is true to its label. All kinds of semi-tropic and deciduous trees can be obtained, in any desirable quantity and at prices which will be satisfactory, by addressing Milton Thomas, Los Angeles, Los Angeles Co., Cal.

CLAIMING THE FIRST COFFEE.—*Land and Home*, a new and promising agricultural journal of New York city, has an engraving from a photograph of a sprig of a coffee tree with ripe berries—the same said to have been grown in the open air in Florida by Mrs. Julia Atzroth. *Land and Home* claims that this is the first genuine coffee ever matured in the open air in the United States. It does not say when the Florida coffee was matured, but the presumption is that it ripened during the last season. If this be true we are quite sure that it is not "the first coffee grown in the open air in this country," for ripe berries were reported a year or two ago from Los Angeles county and we think other localities in this State. If our readers can give us the dates when any of these California samples ripened we should like to have them. It makes little difference where the first specimen of coffee ripened, for this no more makes a coffee crop than one swallow makes a summer; but so long as priority is the mooted point, it should be bestowed where it belongs.

## PATENTS AND INVENTIONS.

## List of U. S. Patents Issued to Pacific Coast Inventors.

[From Official Reports for the "Mining and Scientific Press," Dewey & Co., Publishers and U. S. and Foreign Patent Agents.]

FOR THE WEEK ENDING NOVEMBER 11TH, 1879.  
221,468.—CAN.—C. C. Lane, New Westminster, B. C.  
221,390.—PISTON FOR HYDRAULIC CYLINDERS—F. A. Bishop, S. F.  
221,527.—SPRINKLER FOR RAILWAY RAILS—M. F. Craig, Nevada City, Cal.  
221,454.—WEATHER STRIP—James C. Gibson, S. F.  
221,467.—REVERSIBLE FLOW—O. Haskins, Cambria, Cal.  
221,603.—SHATE—J. E. Farmer, Fort Pembina, Dak.  
221,470.—SAW CLAMP—S. Petty, Volcano, Cal.  
221,473.—GUIDE FOR STEMS OF STAMP-MILLS—W. Raup, Park City, Utah.  
221,621.—GRAIN SEPARATOR—W. H. Silsby, Chico, Cal.  
221,432.—DRELOING MACHINE—Geo. Uhl, Sacramento.  
221,483.—WASTE-PIPE CLEANER—F. J. Verrue, S. F.  
221,485.—ELECTRO-THERAPEUTICAL BELT—C. N. West, San Juan South, Cal.  
221,116.—TITLE, "EL MEJOR CAPE MOLINO DE COSTA RICA PRIMERA CALIDAD"—Label—E. Guittard, S. F.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

## BUDDING ORANGE TREES.—The Sanford Journal describes the following process of budding:

An easy and very successful way of putting in buds, practiced near here, we would like to have tried in some other locality. It seems that Mr. Wellington has been in the habit of trimming his buds during the heat of the day upon the piazza of his house, and dropping the trimmed buds into a cup of clear water, inserting them during the cooler part of the day. He ties his bud with prepared cloth, taking the best of bleached muslin and spreading on a composition of equal parts of rosin and wax for dry hot weather, and tar and wax for rainy and wet days. The result has been almost incredible. On one day, with two assistants, 580 buds were inserted, only six of which failed to grow. Many times he has put in from 20 to 100, and saved every one. It is certainly a very easy and unexpensive method, and is worthy the consideration of those who dislike to work in the sun.

## OUR AGENTS.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send one but worthy men.

J. L. THARP—San Francisco.  
B. W. CROWELL—California.  
A. C. KNOX—Pacific Coast.  
S. V. BLAKESLEE—California.  
G. W. McGREW—Santa Clara county.  
J. B. BACHELDER—Shasta county, Cal.  
JAMES ROGERS—Oregon and Washington Ter.  
THOS. H. MANNING—Nevada, Idaho and Montana Ter.  
CAPT. W. H. SHAMRNS—Arizona.  
M. P. OWEN—Santa Cruz county.  
H. E. HALLITT—Los Angeles county.  
T. H. OROAN—Alameda county.

## The Deaf Hear Through the Teeth.

The Dentaphone is a new invention by a gentleman of Cincinnati, for the purpose of enabling the deaf to hear through the teeth. Anyone who has noticed how clearly the ticking of a watch held between the teeth is heard when the ears are closed, will understand the principle of the Dentaphone. It catches the sound-vibrations with its diaphragm, and conveys them to the teeth, thence through the head to the nerves of hearing. Public tests are recorded in the Cincinnati newspapers; also in the New York Herald of Sept. 28th, etc. The American Dentaphone Co., of Cincinnati, send free pamphlet to all applicants. Advertisement is found in another column.

THE book is written in a very pleasing manner by one who thoroughly understands his subject. In laying out private grounds or gardens, or in the cultivation of flowers and plants, to one who is inexperienced in such matters, a copy of this book will be found valuable.—*San Jose Mercury*.

THE "PACIFIC RURAL HANDBOOK," written by Chas. H. Shinn for the publishers of the PACIFIC RURAL PRESS, will be sent, post-paid, in substantial cloth binding for \$1; in full leather, \$1.50; in cloth, interleaved with fine ruled paper for memoranda, \$1.50. Address

DEWEY & CO., PUBLISHERS,  
No. 202 Sansome Street, San Francisco.

THE RIVERSIDE HOUSE is pleasantly located in the center of the town in Riverside Colony, San Bernardino Co. It is a new two-story brick building, containing some 40 rooms. Health-seekers and other visitors to this most favored climate will find good boarding accommodations at favorable rates. For further information address the proprietors, CUNNINGHAM & MOODY, Riverside, San Bernardino Co., Cal.

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruher's great educator, the Zoographicon. Each department increases daily, and the Pavillon performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

HOW TO STOP THIS PAPER.—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate the copy sent.

EXTRA COPIES can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.

THOMAS DUNSON will oblige us by sending his P. O. address to this office.

## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, November 25th, 1879.  
Changes in market prices are neither large nor numerous. A better feeling has come to the wheat trade, as foreign advices seem rather more favorable.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.			CLUB.		
Thursday....	10s	7d@11s	5d	11s	5d@11s	9d
Friday.....	10s	7d@11s	5d	11s	5d@11s	9d
Saturday.....	10s	7d@11s	5d	11s	5d@11s	9d
Monday.....	10s	7d@11s	5d	11s	5d@11s	9d
Tuesday.....	10s	7d@11s	5d	11s	5d@11s	9d
Wednesday....	10s	7d@11s	5d	11s	5d@11s	9d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.			Club.		
1877.....	12s	8d@12s	10d	12s	10d@13s	3d
1878.....	9s	6d@9s	10d	9s	9d@10s	2d
1879.....	10s	7d@11s	5d	11s	5d@11s	9d

## The Foreign Review.

LONDON, November 25.—The *Mark Lane Express* says: Fortunately wheat-sowing made fair progress before the frost set in, and will proceed still faster if the weather ameliorates. However, in some districts it is feared that future prospects are jeopardized by the badness of seed wheat, really good samples of which are exceedingly scarce. Operations in Scotland are more backward, but if the weather remains propitious another fortnight a fair area will be sown. The harvest is now completed in the later districts of Scotland, but the results are unsatisfactory. In England the home crop of wheat is arriving more freely at the country markets, but its condition continues unsatisfactory. The provincial trade is dull, and wheat has declined 1s per quarter in many important centers. In London, the imports were from Russia, and these may yet be prolonged if the weather continues mild, as no definite news of the closing of the Baltic ports has been received. The future course of prices, however, depends on the action of America alone. The gigantic visible supply there fetters trade. Of course the large imports now arriving are considerably in excess of present requirements, but notwithstanding surface fluctuations, the outlook for holders is decidedly hopeful, and the stoppage of supplies may very probably turn the scale in the sellers' favor. Very little business was done during the past week. Wheat ex-ship was pressed for sale to avoid landing expenses and declined about 1s. Arrivals at ports of call have been moderate. There was a fair demand for wheat off coast, and a good many cargoes were sold both for the Continent and United Kingdom at improved prices, the decline of the early part of the week being fully recovered. Maize was slightly lower, but the demand was somewhat impaired. There was very little business done in forwarding wheat, owing to the high prices asked in America. Sellers offered very sparingly, but there have been some sales of Red Winter, on passage, at 53s 0d@53s 9d, and 55s for December and January shipment. Sales of English wheat last week were 40,065 quarters at 47s 10d per quarter, against 49,580 quarters at 41s 2d per quarter during the same week last year. Imports into the United Kingdom during the week ending on the 15th inst. were 2,110,944 cwt of wheat and 301,035 cwt of flour.

## Freights and Charters.

The *Post* says: Business in the wheat freight market continued slack during the past week. Scarcely enough was done to establish quotations. A wooden bark was chartered to load wheat to a Continental port at £3 5s, but that figure is no criterion of the rates to Liverpool or Cork, United Kingdom. The tone of the freight market, however, is weaker, and we have no doubt that tonnage holders are willing to make small concessions to force business. Wheat owners show no signs of giving way and the local market is apparently influenced very little by the dragging condition of the Liverpool trade. It is, therefore, probable that if there is to be a decline, ships will suffer more than the cereal. We do not anticipate any marked shrinkage in freights, however, as the amount of tonnage available within the next few months is not large, and the bulk of it is chartered to arrive. There was no change in the market for outside business during the period under review. We have now in port 39,190 tons of tonnage secured for wheat, and 5,239 tons for miscellaneous purposes.

## Eastern Grain and Provision Markets.

CHICAGO, November 22.—The markets have presented no new or very interesting features this week, prices being firmer and generally a trifle higher, but with no excitement in any direction. The closing rates are pretty firm, with a tendency to advance. Wheat sold at \$1.15½@1.17½, for December; Corn, 39¢@40¢, for December; Oats, 32¢@33¢, for December; Pork, \$10.95@11.45, January; Lard, \$6.87½@7.12½. Provisions were rather weak at the close, under heavy receipts of hogs and enlivened packing operations. There was a much decreased movement in grain, despite good prices, as will be seen by the following comparison: Receipts for the week: Wheat, 507,000 bushels; Corn, 701,000 bushels; Oats, 238,000 bushels. Shipments: Wheat, 836,000 bushels; Corn, 1,125,000 bushels; Oats, 160,000 bushels. Receipts in the same time last year: Wheat, 885,000 bushels; Corn, 630,000 bushels; Oats, 283,000 bushels. Shipments: Wheat, 652,000 bushels; Corn, 654,000 bushels; Oats, 245,000 bushels. The closing cash prices were: Wheat, \$1.17½; Corn, 41¢; Oats, 32¢; Rye, 72¢; Barley, 80¢; Pork, \$10.25@10.50; Lard, \$6.70@6.72½.

NEW YORK, November 22.—In the Merchandise markets there is less doing in many departments, while prices appear to be on a downward course. Still, in some instances, there is considerable activity. Breadstuffs are quiet and about steady. Provisions are dull, weaker, owing to the absence of speculation.

NEW YORK, November 24.—Markets quiet. Flour is in better export demand and 10c higher. Wheat is stronger, and a more confident feeling, based on firm cables, which indicate an increased export demand soon. Barley is dull and nominal. Provisions are dull.

## Eastern Wool Markets.

NEW YORK, November 22.—Wool is as active as the available supply will admit of, the demand keeping up to the full volume. Prices generally are higher all around, with prospects of a still further advance. California Wools find favor, with sales of 375,000 lbs. at 21¢@23¢; 10,000 lbs. secured at 70c.

BOSTON, November 22.—The wool market during the past week has been more excited than at any time this year. The news of buoyant opening sales in London caused a rush of buyers here, but they found most of the desirable wool held at a considerable advance, and the market fully 2¢@3c higher than last week, with a decided upward tendency. The highest price yet paid for XX fleeces is 50c, but most of the stock has been withdrawn at less than 55c, and some holders are not disposed to sell under 60c. For No. 1 Combing Wool 55c has been offered and refused for 100,000 lbs., although the highest prices obtained as yet are 51¢@52¢. There is more or less specu-







## Agricultural Articles.

## The Famous "Enterprise."

PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in habbitted boxes. Positively self regulating, with no coiling or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. *All warranted.* Address for circulars and information,



**HORTON & KENNEDY,**  
GENERAL OFFICE AND SUPPLIES, LIVERMORE,  
ALAMEDA CO., CAL. Also, Best Feed Mills for sale,  
San Francisco Agency, LINFORTH, RICE  
& CO., 401 Market Street.

## MATTESON &amp; WILLIAMSON'S

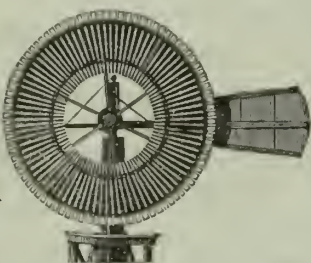


Took the Premium over all at the great plowing Match in Stockton, in 1876. This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

**MATTESON & WILLIAMSON,**  
STOCKTON, CAL.

\$50.

The New  
Worthing-  
ton  
Windmill



Manufactured by  
**W. D. PARKER,**  
1364 San Pablo Avenue, Oakland, Cal.  
Also, maker of the "Colorado Wind Engine," Wind Grist Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern of Deep Well and Artesian Lift Pump Cylinders. Circulars free.

## The Boss Pruner.

Patented Jan. 8, 1873.

## ENTIRELY NEW!

Works on a cog principle. Smallest size cuts one inch, and largest size two inches in diameter. Has been thoroughly tested, and given perfect satisfaction. Sold by

**GEORGE LARKIN,**  
Newcastle, Placer County, Cal.

## ST. DAVID'S.

A FIRST-CLASS LODGING HOUSE,  
CONTAINS 113 ROOMS.  
715 Howard St., near Third, San Francisco.

This House is especially designed as a comfortable home for gentlemen and ladies visiting the city from the interior. No dark rooms. Gas and running water in each room. The floors are covered with body Brussels carpet, and all of the furniture is made of solid black walnut. Each bed has a spring mattress, with an additional hair top mattress, making them the most luxurious and healthy beds in the world. Ladies wishing to cook for themselves or families, are allowed the free use of a large public kitchen and dining room, with dishes. Servants wash the dishes and keep up a constant fire from 6 A. M. to 7 P. M. Hot and cold baths, a large parlor and reading room, containing a Grand Piano—all free to guests. Price single rooms per night, 50 cts.; per week, from \$2.50 upwards.

**R. HUGHES, Proprietor.**

At Market Street Ferry, take Omnibus line of street cars to corner Third and Howard.

**DO**

NOT FAIL to send for our NEW PRICE LIST. More complete than ever. Contains descriptions of every thing required for personal or family use, with over 1000 illustrations. Send nine cents for it. (Stamps will do.) We sell all goods at wholesale prices in quantities to suit the purchaser. The only institution in America who make this their special business. Address,  
**MONTGOMERY WARD & CO.,**  
227 & 229 Wabash Ave., Chicago, Ills.

50 Pertumed, Snowflake, Chromo, Motto Cards, name in gold and jet 10c. G. A. Sprague, E. Wallingford, Ct.

50 Perumed, gilt edge & chromo Cards, elegant case, name in gold, 10c. ATLANTIC CARD CO., E. Wallingford, Ct.

## Nathaniel Curry &amp; Bro.,

113 Sansome Street, San Francisco,



Sole Agents for the

## Sharps Rifle Co., of Bridgeport, Conn.

FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO.

Also Agents for W. W. GREENER'S Celebrated Wedgehead, Chokebore, Breech-loading DOUBLE GUNS; and all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America. AMMUNITION of all kinds in quantities to suit.

## Secure Patents and TRADEMARKS.



Through Scientific Press Patent Agency.

OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library containing official American and foreign reports, files of scientific and mechanical publications, etc. All worthy inventions patented through our Agency will have the benefit of an illustration or a description in the MINING AND SCIENTIFIC PRESS. We transact every branch of Patent business, and obtain Patents in all countries which grant protection to inventors. The large majority of U. S. and Foreign Patents issued to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most reliable advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free. **DEWEY & CO., PATENT AGENTS.**

A. T. DEWEY. W. B. EWER. GEO. H. STRONG.

In consequence of spurious imitations of  
LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signatures thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

## MISSION ROCK DOCK AND GRAIN WAREHOUSES.

SAN FRANCISCO, CAL.

40,000 Tons Capacity. Storage for the Season, \$1 per ton.

GRAIN consigned to us by water insured in open policy at Special Rates. Wheat shipped by railroads via Stockton, care of the CALIFORNIA STEAM NAVIGATION CO. will be received by them at Stockton and delivered at Mission Rock Warehouse at same rate of freight as to Oakland Wharf. Freight paid, Fire Insurance and Loans effected and proceeds forwarded free of commission. Money advanced at bottom rates, Interest payable at end of loan. Fire Insurance 1% per annum. Short Rates of Storage—First month, 30 cts per ton, or 40 cts per ton if delivered. Each month thereafter 20 cts per ton. Weighing in, free. Weighing out, 10 cts per ton.

**CHAS. H. SINCLAIR, Superintendent.**

Or to the California Dry Dock Co., Office, No. 318 California Street, San Francisco.

## WELLS, RICHARDSON &amp; CO'S PERFECTED BUTTER COLOR

Gives Butter the gilt-edge color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. **WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.**

## PLEASANT SUMMER READING.

## THE NEW PENELOPE

— AND —

## Stories of California Life.

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. Agents wanted for this popular work. Easy sales and large commissions. Address

**MRS. F. F. VICTOR,**  
721 Market St., S. F., Bancroft's Building, top floor.  
PRICE, \$2.00.

## FRICK DROUTH-PROOF BARLEY

For Sale,

AT FOUR CENTS PER POUND.

By SALZ & CO., Agents.

Centerville, Alameda County, Cal.

## MONEY TO LOAN

AT LOWEST RATES

On Country Real Estate and Grain in Warehouse.

**McAFEE BROTHERS.**

202 Sansome Street, San Francisco.

**JOHN ROGERS & SONS,**  
GENERAL STOCK AND SALE YARD,

Corner Market and 9th Sts., San Francisco,

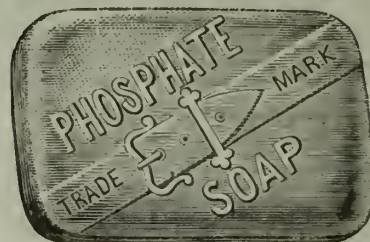
HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN. Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

## Engraving.

Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the MINING AND SCIENTIFIC PRESS, San Francisco at favorable rates.

62 Gold, Crystal, Lace, Perfumed and Chromo Cards, name in gold and jet, 10c. Clinton Bros., Clintonville, Ct.

## PHOSPHATE SOAP



THE BEST soap for toilet use ever manufactured. BEST because it contains all the excellencies of the most expensive foreign or American soaps without their defects. BEST because it combines strength with delicacy in such a way that its strong detergent qualities do not injure the skin. BEST because it is the result of years of study and experiment in the soap manufacturing business, assisted by modern chemical discoveries. BEST because it contains ingredients beneficial to the skin, which unite chemically with the soap in such a manner as to increase its saponaceous qualities. Every chemist familiar with soap manufacture knows that some ingredients which are in themselves beneficial to the skin cannot be saponified; some are partially neutralized, while others injure the quality of the soap. There are soaps in the market which are to some extent beneficial to the skin, but they are inferior articles for toilet use. PHOSPHATE SOAP is the ONLY article offered to the public which combines all the best elements of toilet soap with medical ingredients beneficial to the skin.

If you wish to make your hands soft buy a cake of PHOSPHATE SOAP, and when that is gone you will buy a dozen and recommend your friends to do the same.

Ladies who wish to make the skin look beautiful and natural should use PHOSPHATE SOAP.

For chapped hands the constant use of PHOSPHATE SOAP will be recommended by all who give it one fair trial.

## TESTIMONIALS.

SAN JOSE, September 24, 1879.

To the Standard Soap Co.—Gentlemen:

It affords me pleasure to say to the public that I have used and prescribed your PHOSPHATE SOAP as a remedy in various forms of cutaneous diseases with the happiest results. I am of the opinion that it is the mildest and most perfect detergent that can be used, either for cleansing the skin and leaving it soft and healthy, or for removing the fetor and corroding influences of sores and ulcerations. I should be sorry to be without it in shaving my face or making my toilet, to say nothing of my good opinion of its remedial qualities.

**A. J. SPENCER, M. D.**

SAN FRANCISCO, Aug 27, 1879.

Gentlemen:

I received a package of your soap (Phosphate Soap) and it gives me great pleasure to testify as to its superior excellence. As a toilet soap I have never seen anything to surpass it. It also possesses superior remedial qualities. I have used it in two cases of obstinate skin disease, one of intolerable itching, Pruritus, the other an Eczema. In both great relief was obtained. Its emollient properties are remarkable. Respectfully,

**W. A. DOUGLASS, M. D.,**  
126 O'Farrell St.

To the Standard Soap Company.

SAN FRANCISCO, July 19, 1879.

Standard Soap Co.—Gents:

I have tried your PHOSPHATE SOAP, and have no hesitation in saying that it is the best toilet soap ever used. My wife has used it and is of the same opinion. I have paid as high as fifty cents per cake for an article in every respect inferior to what you sell for twenty-five cents. **HENRY H. LYNCH,**  
515 Haight Street.

The genuine merits of PHOSPHATE SOAP and persistent advertising will force every druggist, groceryman and general dealer to order it by the gross sooner or later. Ask for it in every store. The retail price is 25 cents per cake. We wish to sell it only at wholesale, but in case you cannot find it we will send a nice box of three cakes by mail, postage paid, on receipt of 85 cents in stamps.

Address **STANDARD SOAP CO.,**  
204 Sacramento St., San Francisco



## JUST OUT: BELLS OF CORNEVILLE.

A handsome and complete edition of the "Bells of Corneville" by Planquette, is now ready; and as the music, the acting, scenery and costumes are quite within the reach of amateurs, it is sure to be extensively given and enjoyed. Pretty, lively French village scenes, contrasting with events in the haunted castle, make a spirited combination. Words unobjectionable. Price, \$1.50.

**WHITE ROBES**, the new Sunday School Song Book, by Abbey & Munger, bids fair to be one of the most successful books of its class, as it is undeniably one of the sweetest and best. It will pay to buy one, if only to sing from at home. Price, 35 cents.

**VOICE OF WORSHIP**, (L. G. EMERSON), \$9 per doz.

**THE TEMPLE**, (W. O. PERKINS), \$9 per dozen.

**NEW METHOD FOR SINGING CLASSES**, (A. N. JOHNSON), \$6 per dozen.

The above are our three newest Singing School Books. The first two have a full set of tunes for Choirs.

See full lists of New Sheet Music, every week in the *Musical Record*. That is the way to keep well informed of all new issues. Mailed for 6 cents.

Wait for these books (almost through the press).

**TEMPERANCE JEWELS**, J. H. TENNEY.

**AMERICAN ANTHEM BOOK**.

**PARLOR ORGAN INSTRUCTION BOOK**.

A. N. JOHNSON.

**OLIVER DITSON & CO., BOSTON.**

C. H. Ditson & Co., 843 Broadway, N. Y.

## MONEY FOOD For Farmers. For Hogs. CHEAP PORK. The Brazilian Artichoke,

Is the cheapest and best food for Hogs, being ahead of anything in existence for that purpose. 600 to 1,000 bushels to the acre. Little trouble. No harvesting. No feeding. The Hogs will help themselves if allowed to do so.

I have eight acres of Artichokes this year, and will furnish seed for half the price of last year, when my seed cost me 25 cents a pound.

**PRICE**—I will send by Express or common freight, 50 to 300 lbs. at 3 cents a pound. Over 300 lbs., 3 cts.; 1,000 lbs. and over, 2½ cts.; 3 lbs. by mail for \$1. I will send a circular with each package giving all information. Send all money in draft on San Francisco or P. O. Order on Hollister Post-office.

150 lbs. plants an acre.

For further information send for circular. Address

J. H. F. GOFF,

San Felipe, Santa Clara County, Cal.

P. JONES.

J. THOMPSON.

**JONES & THOMPSON.**

Wholesale and Retail Dealers in

**Hay, Grain and Feed.**

Also, Store and Sell on Commission at Reasonable Rates.

**COUNTRY CONSIGNMENTS SOLICITED**, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,

1535 Mission St., San Francisco.

M. COOKE.

R. J. COOKE.

**PIONEER BOX FACTORY,**

Corner of Front and M Streets, Sacramento

ALL KINDS OF

**Fruit and Packing Boxes Made to Order, AND IN SHOOKS.**

Communications Promptly Attended to.

**COOKE & SONS, Successors to COOKE & GREGORY.**

**A Card to Grangers and Farmers.**

**HAY, GRAIN, HORSES and CATTLE.**

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nos. 11 and 13 Bluxome St., San Francisco.

**F. A. ROBBINS.**

MANUFACTURER OF

**Canners and Soap Makers' Presses and Dies JEWELERS' TOOLS.**

**ELECTRICAL and MODEL MACHINERY.**

No. 7 First St., San Francisco.

TRADE



MARK.

**LITTLE'S CHEMICAL FLUID.**

The New Non-Poisonous Sheep Dip and Disinfectant. Price reduced to \$1.00 per gallon. For directions and testimonials apply to **FALKNER, BELL & CO.,** Sole Agents, 430 California Street, S. F.

**Agricultural Books.**

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.

## Winchester Repeating Rifle,

MODEL 1873.



One-third size by Dr. E. H. Pardee.



The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder,

**JOHN SKINKER, No. 115 Pine Street, San Francisco,**

SOLE AGENT FOR THE PACIFIC COAST.

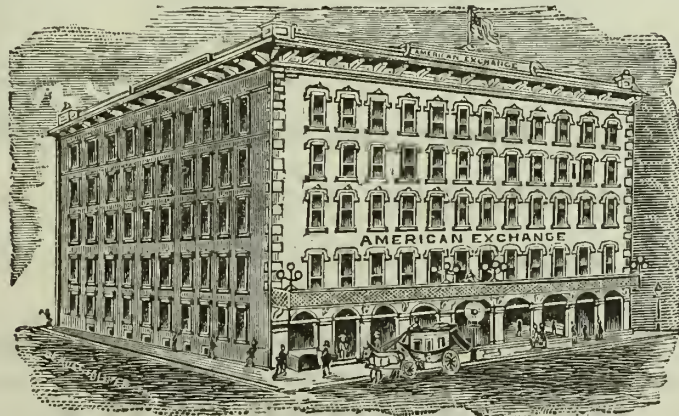
## The American Exchange Hotel,

SAN FRANCISCO, CAL.,

Is situated on Sansome street, next adjoining Bank of California, and is in the very center of the great city.

Sansome Street is one of the finest and principal business streets in S. F.

The Hotel is situated within two blocks of the U. Land Office and U. S. Surveyor General's Office; also within



two blocks of the City Hall, Supreme Court and all the District Courts; within two blocks of the Postoffice and Custom House. All places of amusement are convenient to the Hotel. Street cars for all parts of the city pass the Hotel every minute.

**THE AMERICAN EXCHANGE HOTEL**

Having been recently renovated and refurnished throughout is in every respect the BEST FAMILY HOTEL San Francisco. It has Two Hundred Rooms, well ventilated and neatly furnished, and being easy of access, fire-proof and sunny is decidedly the Hotel for comfort and convenience for the traveling public.

—OFFICE OF THE—

## BLACK POINT PACKING AND SLAUGHTER HOUSE.

MERRY, FAULL & CO., Proprietors.

**TO OWNERS OF LIVE STOCK!**

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

**SQUARE DEAL and FULL MARKET PRICES**

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices.

Please address our

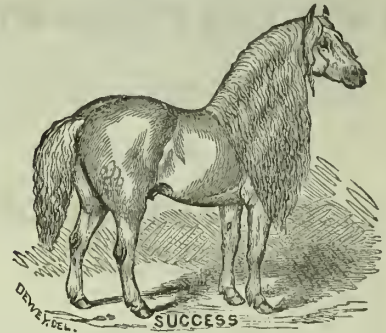
Principal Office, No. 415 Front Street, Cor. Merchant, San Francisco.

60 Elegant Perfumed Cards, Chromo, Motto, Lily, Etc., 15c. Gift with each pack. H. M. SMITH, Clintonville, Ct. YOUR NAME, PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

## M. W. DUNHAM Just Imported 36 Head

FOR HIS OAKLAWN STUD OF

## Percheron-Norman HORSES.



Largest and Most Complete Establishment of the Kind in the World.

**More than 200 Stallions and Mares**

Imported from Best Stud Stables of France.

Winners of First Prizes in Europe and America, awarded First Prizes and Gold Medals at the Universal Exposition at Paris, 1878, over all First Prizes and Grand Medals at Centennial Exhibition, 1876.

The public appreciation of its merits is indicated by the great demand for stock from every part of the country. During the past twelve months, the provinces of New Brunswick, Canada, and the States of New York, Pennsylvania, Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Nebraska, Kansas, Texas, Louisiana, Colorado, Nevada, California and Oregon, and Utah, Washington and Idaho Territories have drawn supplies from its Stables.

100-page Catalogue—finest thing of the kind ever issued; 25 pictures of Stallions and Mares, sent free on application.

**M. W. DUNHAM,**

Wayne, DuPage County, Illinois.

N. B.—All Imported and Pure Native Bred Animals Recorded in Percheron-Norman Stud Book.

## ARITHMETIC MADE EASY BY ROPP'S EASY CALCULATOR.

This valuable work is used by thousands of farmers, mechanics and business men, and is highly recommended for its practical utility and convenience.

It embodies an entirely new system of calculation, by which a vast amount of figures and mental labor—required by the ordinary methods—and fractions with their complexities, are absolutely avoided.

It is so simple and easily comprehended that even the most illiterate is enabled, in a few minutes, to reckon with absolute accuracy and speed; while its original and rapid methods, benefit and delight the most scholarly. It shows at a glance the accurate value of wheat, corn, rye, oats, barley, cattle, hogs, hay, coal, lumber and merchandise, from one pound to a car load, and for any price the market is likely to reach.

It gives the interest, simple and compound, on any sum, or any time, at six, seven, eight, and ten per cent.; the exact measurement of boards, scantlings, timbers, saw logs, cisterns, tanks, wells, granaries, bins, wagon beds, corn cribs, etc., the wages at various rates, for hours, days, weeks and months; besides numerous other important methods, rules and tables.

It is printed on fine tinted paper, is well and elegantly bound in pocket-book shape, and accompanied by a silicate slate, pocket for papers, and memorandum, which can be replenished in the two latter styles.

It answers the purpose of a pocket book and diary, and costs no more, although it was gotten up at great expense and labor, and is unquestionably one of the most useful publications ever issued from the press.

Price, bound in Fine English Cloth, \$1.00.

Sent direct from the Eastern publisher, postpaid, on receipt of price, by P. O. order, registered letter or receipted by express. Address

DEWEY & CO., San Francisco.

## THE WILSON ADJUSTABLE CHAIR, With 30 Changes of Position.

Patented in the United States and Foreign Countries. BEST CHAIR IN THE WORLD.

Parlor,	Combining
LIBRARY,	Beauty,
Invalid Chair	Lightness,
Rocker,	Strength,
BED or	Simplicity
LOUNGE.	and
	Comfort.

READING POSITION.

Same Chair in Cane Seating, very desirable for summer. Manufactured of the best of wrought iron and rivets. Castors made purposely for the Chair. Everything to an exact science. **BE WILL LAST A LIFE-TIME.**

Has been awarded Medals, Prizes and Diplomas for its superiority and merit wherever it has been exhibited.

Orders by mail promptly attended to. Goods shipped to any address, C. O. D. Send for Illustrated Circular.

Address the WILSON ADJUSTABLE CHAIR Mfg Co., 535 Washington St., Boston

**SEND FOR THE**

**\$1.50**

**Homœopathic Medicine Case.**

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address **BOERICKE & TAFEL,** Homœopathic Pharmacy, San Francisco.



# THE CELEBRATED BROWNE GANG PLOW.

Manufactured by B. D. Buford & Co., Rock Island, Illinois.

**LICHEST DRAFT,  
STRONGEST**

— AND —

**MOST DURABLE GANG**

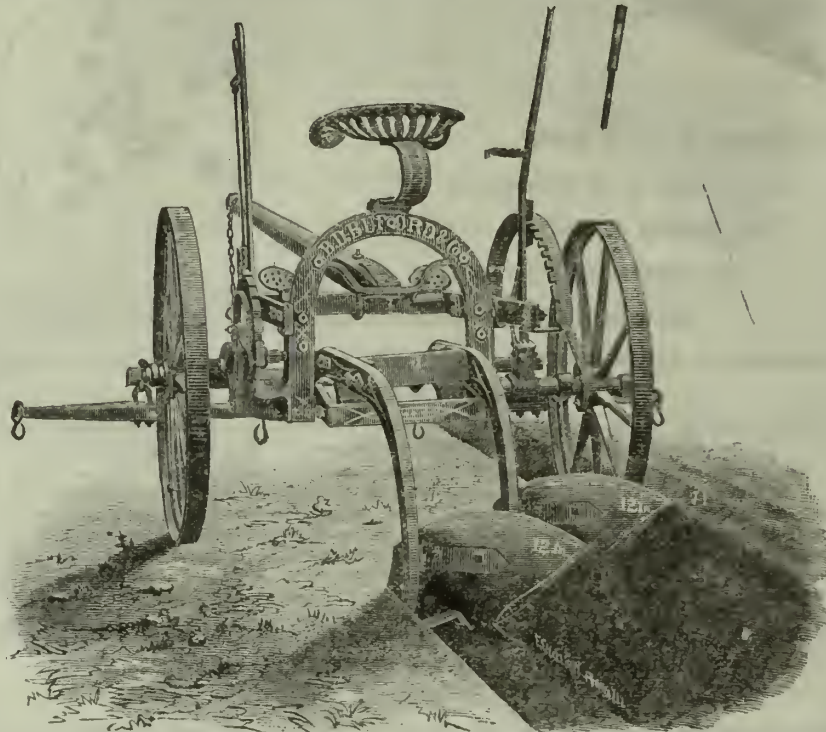
Ever brought to the Pacific Coast.

Wheels all Iron and furnished with

**PATENT BOXES.**

## The Browne Gang

Can be lifted out of the ground with 25 per cent. less power than any other Gang. In fact it is the nearest to Perfection of any Gang ever offered to the Farmers on this Coast.



## BROWNE SULKY.

The BROWNE SULKY is made on the same principles as the Browne Gang, and we claim the points of superiority over other Sulkies that we do for the Browne Gang.

**FARMERS,**

Give the Browne Sulky a Trial,

AND YOU WILL NEVER REGRET IT.

**PRICES:**

Browne Gang, cuts 10 and 12 inches.....	\$100
Browne Sulky, cuts 14 inches.....	80
Browne Sulky, cuts 16 inches.....	85

MADE ENTIRELY OF

**IRON and STEEL.**

**Wrought Iron Arches.  
Double Levers.**

Hundreds of Farmers are using them, and all say that it is the BEST SULKY ever brought to this market.

We want to call the attention of Farmers and Dealers to the Great Improvements in the Single Plows made by B. D. Buford & Co., known as the "CLIPPER." We keep a full stock of all sizes and warrant them the BEST PLOW ever offered to the Farmers. Give them a trial. We also carry in stock a full line of

**Collins Plows, Harrows, Cahoon Seed Sowers, Etc.**

FOR FURTHER PARTICULARS ADDRESS

## FRANK BROTHERS,

No. 349 Market Street, - - - - - SAN FRANCISCO, CAL.

**R. J. TRUMBULL & CO.,**  
SUCCESSORS TO

**R. J. TRUMBULL,**  
Growers, Importers, Wholesale and Retail  
Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND  
ORNAMENTAL TREES, ETC. FANCY WIRE  
DESIGNS, GARDEN TRELLISES, SYR-  
INGES, GARDEN HARDWARE.

Comprising the Most Complete Stock  
EVER OFFERED ON THE PACIFIC COAST.  
Prices Unusually Low.

\*"Guide to the Vegetable and Flower Garden  
will be sent FREE TO ALL CUSTOMERS. It contains in-  
structions on the culture of Fruit, Nut, and Ornamental  
Tree Seeds, Alfalfa, etc.

**R. J. TRUMBULL & CO.,**  
419 and 421 Sansome Street, S. F.

**SEVIN VINCENT & CO.,**  
Importers, growers of, wholesale and retail dealers in



Field, Grass, Flower and Tree Seeds.  
**CLOVER, ALFALFA,**

**BULBS, FRUIT, ORNAMENTAL TREES, ETC.**

We call the attention of farmers and country merchants  
to our unusually low prices. Trade price  
list on application.

We issue the most complete guide to the Vegetable and  
Flower Garden ever issued upon this coast. It is hand-  
somely illustrated, and contains full descriptions of Veg-  
etables, Flowers, Grasses, Trees, etc., with full instructions  
as to their culture; mailed free on application.

**SEVIN VINCENT & CO.,**  
607 Sansome Street, S. F.

**Dewey & Co.** { 202 San- } Patent Ag'ts  
some St.

**Geo. F. Silvester,**

IMPORTER, WHOLESALE AND RETAIL DEALER IN

## SEEDS,

**Fruit and Evergreen Trees, Plants, Etc.**

**ALFALFA, GRASS AND CLOVER SEEDS**

In large Quantities and offered in Lots to suit Purchasers.

GREAT REDUCTION IN PRICES.

Seed Warehouse, 317 Washington Street, San Francisco.

## RED CROSS OIL!

The Safest and Most Reliable Illuminating Oil. Water White and High Test. Brilliant, Pure and Economical.  
**C. T. RAYNOLDS & CO.,** Sole Agents, No 9 Front Street, San Francisco.

**Wanted Immediately.**

Five tons first-class Broom Corn, delivered at Clover-  
dale. Parties wishing to sell will please communicate  
immediately, as to lowest terms.

**THOS. McCOWAN,**  
Ukiah, November 19th, 1879.

**CARP FISH FOR SALE**

— BY —

**LEVI DAVIS,**

At Forestville, Sonoma County, California,  
IN LOTS TO SUIT.

GILES H. GRAY.

JAMES M. HAVEN.

**GRAY & HAVEN,**

**Attorneys and Counsellors-at-Law,**

In building of Pacific Insurance Co.,

Corner California and Leidesdorff streets, San Francisco.

**THOROUGHbred POULTRY.**

SAFE  
ARRIVAL  
OF  
FOWLS  
AND  
EGGS  
Guaranteed.



**LANGSHANS.** I now breed this justly celebrated  
Fowl. Send 3c. stamp for price list and circular describ-  
ing the different breeds I keep. Incubators.

**M. EYRE, Napa, Cal.**

37 Pamphlet on Breeding, Hatching, Diseases, etc.,  
adapted especially to Pacific Coast, sent for 15c.

**WELL AUGER.** Ours is guaranteed to be the  
cheapest and best in the  
world. Also nothing can beat our SAWING MA-  
CHINE. It saws off a 2-foot log in 2 minutes.  
Pictorial books free. **W. GILES, Chicago, Ill.**

Farmers, write for your paper.

**Baling  
Fencing  
Telegraph  
Telephone  
Galvanized**

## WIRE

**Barbed Fence Wire.**

All kinds of Wire—iron, steel,  
Bessemer, spring, copper, brass  
and galvanized—on hand  
or Made to Order.

Note the  
Trademark.



**A. S. HALLIDIE**

Wire Mills.

Office, No. 6 California St.  
SAN FRANCISCO.

**WIRE ROPE and CORDAGE**

Of every kind on hand or Made to Order.

**PACIFIC DEPARTMENT  
LONDON AND  
LANCASHIRE**

**Fire Insurance Company,  
OF LIVERPOOL.**

**CAPITAL.....\$7,500,000  
CASH ASSETS.....1,709,976  
U. S. BONDS, deposited in America 400,000**

**BALFOUR, GUTHRIE & CO.,**

General Agents,

316 California Street, - - - San Francisco

This paper is printed with Ink furnished by  
Chas. Eneu Johnson & Co., 509 South 10th  
St., Philadelphia & 59 Gold St., N. Y. Agent  
for Pacific Coast—Joseph H. Dorsety, 120  
Sutter St., S. F.





Volume XVIII.]

SAN FRANCISCO, SATURDAY, DECEMBER 6, 1879.

Number 23.

#### Some New or Little-Known Pears.—No. 2.

We continue in this issue the accounts of the showing of peculiar pears which we began last week, and for which we are indebted to Mr. L. B. Case, of Richmond, Indiana, editor of the *Botanical Index*. In our last we gave a description of the "Sha-lea," or "Chinese Sand pear," and noted its alleged value at the East as a substitute for the quince for culinary purposes and its freedom from blights and diseases, which make it a desirable material in the hand of hybridizers. It has already been used in this way to good advantage, and our engraving on this page shows the "Kieffer Hybrid," which, according to Mr. Teas, "is the result of the bloom of the 'Sha-lea' being fertilized with pollen from Bartlett, thus uniting the vigorous growth, great productiveness, and freedom from blight of the former, with the luscious quality of the Bartlett. Fruit very large, 10 to 12 inches in circumference, and often weighing three-fourths of a pound. The shape is much like an elongated orange quince, being different from almost any other fruit. The color is a beautiful yellow, shaded blush, season October."

This Kieffer pear is attaining a most enviable reputation at the East. Mr. William Parry, of Cinnaminson, N. J., the veteran fruit grower, whose word is regarded as above question, gives the *Rural New Yorker* an account of this fruit. He says: "The new seedling commenced to bear fruit in 1873, and has borne about all the tree could sustain every year since, the quantity increasing with the size of the tree, which is now about six inches in diameter, and yielded, in 1879, more than seven bushels of pears. It is a good shipper, may be carried for a month, or more, and arrive in better condition—ripening on the way—than when started, having a rich yellow appearance. The tree is a remarkably vigorous grower. They are of handsome shape, and make a fine appearance. The great superiority of this variety over other pears, in addition to the large size of the fruit and the wonderful productiveness of the tree, is its perfect health, partaking in this respect of the characteristics of the parent Chinese Sand pear, which has never shown any signs of blight or other diseases, which are so very discouraging to pear growers. Many pear trees of other varieties, partly dead with blight, have been restored by cutting away the blighted limbs and grafting with Kieffer's, which flourish and grow vigorously in the midst of others blighting and dying around them." This blight-proof quality, as we have said before, is not of the same moment here as at the East, but it is an important feature of the fruit, and hence is of interest.

**THE ENNOBLING OF HAY.**—We are seldom troubled with excess of water on our forage, but it is worth noticing that German practice with hay that has been damaged and coated with mud by exposure to floods and inundations, is to pass it, when dry, through a threshing machine driven somewhat more rapidly than usual. In this way it is effectually freed from dust and dirt quickly and cheaply. Hay that is woody and indigestible from the grass having stood so long before cutting, may be greatly increased in nutritive value by steeping it for a time in hot salt water or whey. The hay is first cut up small and stamped down in tubs, and the fluid then poured in till it just covers the mass. The tub must not be quite filled, for of course the hay expands under the influence of moisture. A lid should be placed on the surface and weighted down with heavy stones. This kind of food is best given when 24 hours old, and should therefore be prepared twice a day for use on the morrow. In less time than this it is not sufficiently softened, and if steeped longer it becomes sour and loses much in flavor. Of course the fluid must be given with the hay, as it contains a proportion of its nutritive constituents in solution. This may contain a hint for our cheese-factory patrons in using their whey. It is rather a dangerous food unless fed sweet, and this mixture, with cut feed, may prove valuable.

A MINOR state of siege still exists in Berlin.

**ANOTHER METHOD OF KEEPING GRAPES.**—As our readers frequently ask for methods of keeping grapes, we put on record all that come to our notice. We do not commend all the prescriptions, because we have not tried them. We present them rather as suggestions for experiment on the part of our readers. An English exchange thinks that the keeping of grapes off the vine is a simple matter, provided there is a perfectly dry room or place to store them in. Cut the grapes with several inches of the branch attached. Place the bottom end of the branch in a bottle or tray of water in which a little animal charcoal has been placed. The bottles or trays should be so placed that the grapes will hang free without touching anything or each other. Grapes treated thus will keep from one month to four or five months.

**CORNSTALK AND SORGHUM SUGARS.**—According to all reports, the sorghum sugar interest of the prairie States is wheeling ahead in a most lively manner. The Commissioner of Agriculture states that the making of sugar from the juice of the amber cane is a complete success. At a sugar manufactory 50 miles north from Chicago, the Commissioner reports a shipment of a carload of most excellent sugar, October 23d, with other carloads to follow. More than this, the Commissioner is enthusiastic over his cornstalk sugar experiments, and promises that with sorghum and stalks the "great West" will soon be flooding the saccharine markets of the world. We hope so.

**IMPORTED GRAPES AT PHILADELPHIA.**—The *Confectioners' Journal* gives some facts concern-

#### Startling Report about English Wheat.

Our readers have doubtless noticed from week to week, in the cable report of the Mark Lane wheat trade, that special mention has been made of the unfitness of the "milling samples" offered for sale, and they have also heard of the immense amount of damp and sprouted grain which the late unfavorable harvest produced. We doubt whether anyone thought the evil so great and far-reaching in its consequences as English reports now seem to think possible. It seems that English millers are becoming not a little excited over the lack of grinding quality in the home crop of 1879, and their utterances seem to indicate that a greater amount of foreign mixing qualities will be demanded than usual. We find in the *London Farmer*, a paragraph on this subject, which is of such possible importance to our wheat growers, in that they are the leading producers of hard, dry wheat, that we quote at length as follows:

"The millers assure us that the English crop has never, in all their experience, been found so generally unfit for milling purposes as in the present year. Even the more satisfactory lots of English wheat will, they state, take considerable time to get into condition to be available for mixing purposes, owing to the inferiority of condition and quality. A period of two years will be necessary to work it off, unless the great bulk goes into consumption for feeding purposes, which we consider as not at all unlikely. The wheat looks fair to the eye, but wanting in condition, and where used by millers, even to a moderate extent, has resulted in complaints of the quality of their flour. From the test these gentlemen have made of local wheat, they found it necessary to add 30% to the cost price for drying in and loss in cleaning, and then the quality of the flour is as bad as it is possible to conceive, and would not bring on any market 25s. per sack (or feeding or any other purpose. 'For bread-making it is perfectly useless.' We cannot help thinking that millers exaggerate the bad quality of the crop; at the same time we must bear in mind that if bread made with even a moderate admixture of English wheat is complained of, trade may be upset by an extraordinary demand for foreign wheat, and prices forced up several shillings—perhaps a sovereign—above their present level. If two years really will be necessary to work off this one year's English crop, then we have a yield of 6,000,000 reduced to 3,000,000, and the people may anticipate a dear loaf."

This is certainly a startling report, and if the facts yet to be demonstrated only partially uphold it, the influence upon the price of choice dry milling wheat must be considerable. Concerning the general summary of the English crop, the latest testimony is from the complete returns gained by the *London Times* of the harvest output. The leading facts thus gained indicate that the harvest of the country is unprecedentedly poor, and that the outcome of the year's agriculture is nothing less than a disaster. Aside from the poor quality of the wheat the gross amount is put at one-third to two-fifths below an average crop. The average per acre for the whole country, instead of being 28 bushels, cannot be put higher than 18 bushels. Less than 7,000,000 quarters is said to be the whole weight of the crop, and of this 855,000 quarters will be required for this year's seeding. This will create a demand for 18,000,000 quarters of imported wheat, and the *London Agricultural Gazette* says: "What the consequences may be on trade generally of such an enormous trade in this one commodity, it is hardly possible to imagine."

#### CONDITION OF CYPRIAN OLIVE ORCHARDS.

What the olive will stand in lack of culture may be learned from a description of the conditions of the orchards or groves in Cyprus. A recent traveler says: "To pass through carob and olive groves is dangerous, no passage being cut across the branches of trees. Ravines often break the way, making it necessary for the mule to descend, almost vertically, to a considerable depth, to walk some way in the water among sprigs and stones, and to go up a very steep ascent to re-take the road." From this it would seem that the useful olives and carobs are left to shift for themselves, and yet they are the mainstays of the people for food and fodder. Such a shiftless style of cultivation is of course not to be commended, but it is interesting to know that trees will stand such usage and still support their owners.

THE national debt was decreased \$799,823 during November.



THE KIEFFER SEEDLING PEAR.

according to their condition when cut and the dryness of the atmosphere in which they are placed.

**AUSTRALIAN WHEAT YIELD.**—We have remarked before that our Australian neighbors have been suffering fully as severely as we have in alternations of drouth and rust in their grain fields. Indeed the statistics of the average yields of some of the colonies would seem to indicate that their misfortunes were greater than ours. From the Australian accounts it appears that two and a half million acres of land in Australia were under wheat in the last harvest—1878-79—being more than twice the area under wheat eight years ago. The produce, however, in the present year was little more than 26,000,000 bushels, or about 10 bushels per acre, the largest wheat-growing colony (South Australia) having an average yield of little more than seven bushels per acre, while New Zealand averaged nearly 23 bushels, and New South Wales 14½ bushels per acre.

ing the foreign rivals which California grapes meet in that market. Among the choice grapes are the white ones from Almeria, Spain, and they come in 50-pound kegs, and they, as well as the best California grapes, sell for \$6 and \$7 per package of 50 pounds. Malaga grapes come in moderate quantities, and sell for \$6 and \$7.50 per package of 45 pounds. It is thought the recent storms in Spain will increase the price of grapes about 40%.

**JOURNALISTIC CHANGE.**—The *Stockton Independent* has been purchased by Messrs. Worley and Milne, formerly connected with the San Francisco *Bulletin* establishment. Mr. Worley won for himself an enviable position by his excellent editorial work, and Mr. Milne is equally famed in the mechanical departments of journalism. The *Stockton Independent* has long been a good newspaper, active and intelligent in advancing local interests, and we are sure that the new owners are qualified to maintain all its good points and add others to them.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

### From Pescadero to Santa Cruz.

EDITORS PRESS:—Pescadero is one of the most romantically located villages on the whole California coast. It is nearly surrounded by irregular, high, rolling hills, which are covered either with excellent crops of grain and fine pastures, or dense tanglewood, admirable coverts for hosts of quail and other wild game. To the west perhaps a mile, a single narrow opening shows where old ocean never ceases to pour his white breakers along the sandy beach. To the east, from the lofty, forest-covered mountains come rippling on their way three quiet streams of purest waters; not always quiet, for formerly, in might and grandeur they must have moved, to cut down through these hills great gorges 300 or even 400 feet deep. Now, as if contented with past prowess and labor done, they peacefully follow their willow-lined channels through moderate flats to come together near the village for a union of waters on their way to mingle in the vast ocean. The moderate flats of these three streams constitute a fine agricultural tract sufficient for a score of good farms, and twice as many on the hills. Such a farming district offers a living business for a good, fair-sized village. Beside this the attraction of the place as a summer resort for city visitors, gives it a means of support not enjoyed by many watering places. There is one disadvantage connected with the locality: it has no good safe place for bathing. The undercurrent on the beach is so powerful that no strangers should ever venture into the water; as rarely does any resident.

Still, this inconvenience is almost overcome by the advantage of the most remarkable pebble beach on the western coast of the continent. Cornelians, opals and chalcedony pebbles are very numerous, while quantities of others of all sizes and shades of color to deepest black form the entire beach for a distance of 40 or 50 rods. This is a very great curiosity to all strangers, and the gathering of its more beautiful specimens affords a never-ending enjoyment to youthful visitors. The farms in the region are generally from 160 acres to twice or three times this size. Wheat, oats, barley, flax and potatoes with some corn are grown, yielding well, and rarely failing from drouth. The rust has been severe the last two years, and it is hoped a variety of wheat can be found not much subject to this evil. The white Australian has been generally grown on the coast because the tendency of the winds and fogs has been to cause the flour of other varieties to appear dark. This, as a white variety, is better in this respect, but its susceptibility to rust is a great disadvantage.

From here south some 36 miles to near Santa Cruz the region is all occupied by large milk ranches, from two to five miles each in extent, along the narrow ocean flat and the near by rolling hills. Mr. Sprague, the two Messrs. Steele, Mr. Brangan and Mr. Finch seem to be among the most prosperous; but our impression was that probably none had been as careful to secure the best blooded milking stock as in some other parts of the State. The price of the animals, as far as we could inquire, was from \$25 to \$40. We should think it of the first importance that the best varieties should be secured, since they cost no more to keep, while their yield of milk is much greater. Still, as one milkman told us, the ruggedness of the hills made it difficult for the best varieties to feed upon them, and they were compelled to have a smaller, hardier variety. Even to within two miles of Santa Cruz, the one business of dairying prevails.

To the left on the highest mountains, out of the way of old Mexican claims, in a region of gorges, ridges, irregular hills and the densest forests in California a large agricultural population is located on farms of 160 acres or less each. It is rather wonderful to see the winding roads they have cut along steep hillsides, round rocky points, skirting the little farms and always overshadowed by the thick trees in most pleasing contrast with the open country in the lowlands. They are above the fogs of summer, enjoying a healthy, lovely climate, so high that drouth has never destroyed their crops, with a scenery of wild forests about them and the vast blue ocean of waters, or white with its covering of fog, 1,200 feet below. This elevated range is known as Ben Lomond, a splendid name for a mountain, grand in associations by its very sound, and immensely superior to Diablo.

Even here, in this rugged, elevated region, the land-grabbers are striving from the fiction of a Mexican grant to dispossess these hard tillers of the soil. Though beaten in three successive courts, they continue the struggle in the fourth. There is an immense amount of wickedness and outrage perpetrated under the guise of pretended law in connection with these Mexican claims. In '49 and '50 we heard the old Californians many times say that there were only 24 really good Mexican grants within the limits of the whole State. Yet the U. S. courts and authorities have already confirmed over 700, while 700 more are still adjudicated.

These mountain regions have sent down to the coast vast amounts of fine redwood lumber,

wood, oakbark and lime. But the redwood has been exhausted, wood will not pay for shipping, tanbark is but little called for, and the lime kilns are closed except at Santa Cruz and up the San Lorenzo. Thus times are hard with these mountaineers as well as with others, and it is difficult to meet the expenses incurred in defeating the designing land-grabbers.

From near Santa Cruz to the north, onwards to the south along the ocean coast, the whole aspect of things is changed to that of a flourishing agricultural region, all under cultivation in small farms. This is the last old ocean bed thrown up from beneath the waters by interior forces of the earth. Exposed for unknown ages to atmospheric influences and decaying vegetation, it has become a rich sandy mould—a soil of the best character for cultivation. Santa Cruz is the central place of business for all this farming country, and also of the mountainous regions adjoining. This large business, together with the attractiveness of the place for pleasure-seeking tourists in the summer season, its different manufactures, the business of a shipping point (the best but one south of San Francisco to Santa Barbara), as well as its inducements in climate, healthfulness and beauty of scenery for the retiring wealthy from the mines and elsewhere to secure permanent homes here, gives support to a large and prosperous population of from 3,000 to 4,000 people, supplied with excellent schools, churches, and other institutions of Christian civilization. S. V. B.

### "Gordo Vista."

EDITORS PRESS:—Although not a literal translation, "Gordo Vista" may be construed into "View of the Gorge," and as such we will describe one of our foothill farms. "Rancho" may sound very well to native Californians of the olden time, but to native Americans of the olden time, "farm" sounds better, and in our opinion it is better when applied to cultivated lands and pleasant home surroundings.

About six miles in an easterly direction from Oakland, in the foothills, is located Gordo Vista, the country home of G. D. Morse, the well-known photographer. You can reach this favored spot by either of two mountain roads; one by Piedmont and the Oakland cemetery, and the other by way of Brooklyn and up by those beautiful eucalyptus forests that lend such a pleasing aspect to the rolling hills that form a background to one of nature's grandest panoramas. Winding up the easy grade of an excellent mountain road, gradually the gorge deepens until the towering hills and dark-foliaged trees shut out forever the sunlight from the gaping chasm, where a hidden brook runs on forever, to be lost at last in the plain below.

In spring, myriad flowers of many colors border the road. In summer they linger one after another, clinging to the precipitous embankments here and there for moisture and life—to cheer and brighten the pathway to the oasis beyond. In autumn, sweet herbs make redolent of perfume the whole landscape; leading fragrance to beauty and health to man. There is not a more wild and romantic road, or more beautiful scenery, within a hundred miles of San Francisco (that we know of) than is to be found here. But the farm is the theme upon which we intend to expatiate. Mr. Morse is a good photographer, but nature and inclination make him a farmer. He cultivates the land, and rejoicing nature comes smiling back, laden with fruits to greet her benefactor. He does not rob her and cast her out, but gives a *quid pro quo* for what he receives, and the result is the account is balanced and there is an excellent feeling between the lord and the manor. His cattle rise up and bless him.

Mr. Morse is a great believer in blood in his cattle and horses, pigs, poultry, sheep and dogs, and, for aught we know, his cats are thoroughbred, though some short-tailed scrabs infest the chaparral thereabouts and poach upon his premises occasionally. Some as fine stock as there is in the State has been bred on this farm. There are at present some 15 or 20 head of Jersey cows, many of them young and of singular beauty and promise. Most of them have been sired by that famous old thoroughbred "Lord Byron." We doubt if a finer Jersey bull has ever been imported into this country. The old fellow is getting to be quite a formidable individual, and asserts his prerogative with aggressive despotism. A ring in his nose and a strong rope keeps him within bounds; not without much grumbling on his part, with threats and dirt-throwing. Without doubt, Mr. Morse has a sow which is well worth a drive to "Gordo Vista" to see. She is of the Berkshire breed, two years old, and no fancy sketch ever exaggerated her beauty. He has also some fine pigs of hers, and he makes them all work for their own and his good amongst the straw and compost until it is thoroughly pulverized and fit for dressing the land.

With all the cattle and horses that he keeps, he yet finds it advisable to have manure from Oakland, where it is to be had for the asking. Upon the farm, half a mile to the eastward of the residence, is a quarry, where stone for building may be had at small cost. Mr. Morse has hauled some to Oakland already. It has only to be introduced to be appreciated and in demand.

Mr. Morse's horses are his especial pride, and

it is amusing to see the colts following him around from place to place, poking their noses into his pockets and now and then playfully stirring him up with their nimble heels. The last of which he does not always seem to relish, which they are soon taught to know, and, as they grow older, they learn to respect him and to maintain a proper decorum while he is around. He has some fillies that he puts high valuation upon, and we believe they are worthy. No doubt some of them will make names for themselves in the near future, and others will doubtless become valuable roadsters.

We have thus far omitted to speak of the residence, which deserved the first consideration. It is a neat cottage house, white and clean outside and in. It is more like a suburban villa residence than many California farm houses. The interior suggests comfort and good taste, and we do not wish to advertise for tramps, but that they are well received and well treated, we will vouch, for we have been there. Mrs. Morse is a model housekeeper, and knows how to make the best use of the good things at hand. The orchard and garden have not been forgotten or neglected, and the cook does not find it necessary to send to town for vegetables more than for milk and eggs. Berries, in their season, are in abundance. There is also in bearing a fine orchard of apples and pears of the best varieties.

The water, of which there is a plentiful supply, is brought in pipes from a mountain spring to a reservoir, from whence it is distributed over the lawns and gardens on both sides of the house. There is a great variety of rare and beautiful flowers, from the lowly violets that enrapture the senses with sweet perfume to the gorgeous fuchsias that charm us with their beauty. A never-failing stream is the western boundary, fed by the same springs that water the gardens and the lawns. PHILMORE.

San Francisco, November 24th.

### Bluestoning Wheat.

EDITORS PRESS:—Your request for information regarding "bluestoning wheat" is duly received. In reply I would say that there are several methods employed, but the plan I adopt I think the best in use. I have a strong, tight box 16 feet long, two feet wide and two and one-half feet high; into this I empty about 15 sacks of wheat (nearly a ton), then I take about three and one-half pounds of bluestone or sulphate of copper and dissolve the same in a bucket of hot water, putting this in a large tub containing five buckets of water. After being thoroughly mixed, I take this and sprinkle the wheat in the box, then with a scoop shovel I have the whole quantity thoroughly mixed, so as to absorb the whole amount of bluestone water, which the above quantity of wheat will readily do. It is then replaced in bags and ready to sow the next day. This is the plan I have adopted and in use for many years, and last season, in a field of 4,000 acres, not a single grain of smut has been found.

There are many methods in use by farmers; most of them exceedingly objectionable, particularly that of soaking a sack of wheat in a barrel of bluestone water and letting it hang and drain. When limited for time the operation is performed in a hurry, and the center of the sack oftentimes receives none, and if it does, the outside receives too much and prevents the berry from germinating, as the material of the sack, acting like a sponge, takes up and retains for a long time the strong bluestone water and the grain is thoroughly soaked to such an extent that it will rot in the ground and not germinate.

As to the quantity for different varieties of wheat, I have found that the hard, flinty varieties require about four pounds to the ton, while the softer grains, as Proper, Pride of Butte, etc., only require about three pounds per ton.

After the operation is performed one can judge pretty nearly, by the appearance of the cracked grains, which, when thoroughly mixed and with proper amount of bluestone, will present a light sky-blue appearance; if darker, less bluestone is necessary.

Many who read this brief article will be surprised that a ton of wheat will take up six buckets of water in so short a time. After trial they will be convinced. If thoroughly mixed I never have any to draw off. It may also seem tedious, but one man can bluestone from six to eight tons per day and tie up in sacks ready for sowing. The wheat when bluestoned will be good for a number of years. I have sown it after keeping it for three years with good results. If limited for time and help, the operation can be done in bad weather when the farmer cannot work out, for rain, etc., and the wheat all piled up ready to sow the first fine weather.

There are many other ways of preventing smut, as soaking in strong brine, but it is not so good or effectual, and is attended with more labor. Some recommend distributing pulverized lime over the wheat, which is as effectual but attended with disagreeable effects in sowing and handling. I have thus attempted to give the manner as adopted by myself and in use for many years with the best of success, and in a practical way that your correspondent can clearly understand the whole operation.

CHAS. F. REED.

Grafton, Yolo Co., Cal.

## FLORICULTURE.

### Californian Polypody.

We are glad to know that Prof. Mehan will continue his admirable work on "The Native Flowers and Ferns of the United States." It is doing noble service in popularizing many of our peerless indigenous growths which have heretofore had but local fame except in the mind of the botanist. The first series has had wide sale, and the four parts which have thus far been issued of the second series, show that the high standard already recognized will be maintained. The publishers of the second series are "The American Natural History Publishing Co.," of 1121 Chestnut St., Philadelphia, although the artistic and mechanical work is still done by Prang & Co., in their best style.

In one of the latest parts we find due recognition of a beautiful Pacific coast fern, *Polypodium Californicum*, which we quote as follows:

*Polypodium Californicum*, Kaulfuss.—Fronds deeply

pinnatifid; segments oblong, retuse, sharply serrate, the

inferior ones narrower towards the base, decurrent; veins

oblique parallel; veinlets dichotomous, anastomosing; sori

ovate, solitary. (Kaulfuss in *Enumeratio Filicum quas*

*in itinere circa terram legit cl. Adelbertus de Chamisso*,

etc.)

As none of our popular botanical text-books

contain any description of this pretty fern, we

have translated the original description of the

species as given by Dr. Frederick Kaulfuss in

the work above referred to. Chamisso accom-

panied the navigator Kotzebue in his celebrated

voyage; and Kaulfuss, who was professor of

botany in the celebrated German University

of Halle, described and remarked on the ferns

his friend collected. According to Kaul-

fuss, Chamisso simply gives "California" as its

location, but it is found much further north, as

specimens from which our drawing was made

were gathered for us near the Falls of the Wil-

lanette, by Mrs. Fanny E. Briggs, who thus

graphically describes the spot from whence they

came: "Oregon City, one of the oldest towns

in the State, is the most picturesque in situa-

tion I have yet met with. Here are the Falls

of the Willamette, and a line of high rocky

bluffs rise abruptly, leaving only a narrow strip

of level ground along the river. The railroad

is built on this. The town is wholly on the

bluffs, and is reached by long flights of stairs,

some of the steps set zigzag in upright frames.

The town is neat and pretty, with gardens,

shade and fruit trees in abundance. The rocky

face of the bluff is covered by mosses, ferns and

vines, and two or three little silver ribbon-like

mountain streams leap sparkingly from its

rocky brow." We are very glad to be able to

give a representation of this very beautiful fern,

because in pursuance of our plan to take repre-

sentatives of the flora from every part of the

United States we want to have Oregon repre-

sented; and also because this species offers the

opportunity to say a little on the importance

of examining the veins in determining the

various kinds of ferns. The earlier botanists

paid attention chiefly to the form of the fruit

dots, their position on the fronds, or their situa-

tion on the veins; but characters derived from

the veins themselves do not appear to have at-

tracted much attention till a comparatively

modern date. In 1836 Prof. C. B. Presl, one of

two brothers, both celebrated botanists of

Prague, published a work on ferns in which

characters drawn from the veins occupied a very

prominent position. Those who make ferns a

special study do not seem to agree in all cases with

Prof. Presl as to the precise value of such char-

acters, but still they are found generally to be

of as much value as most other characters in

ferns, and hence all students in these times

examine the veins as closely as any other parts

of a fern. Some veins are simple, others

branched, others run completely to the margin,

while others stop short. Again there are others

which continually diverge, and no matter what

may be their length, never touch another after

having once started from the parent vein; while

there are others which seem to run backwards

and forwards, connecting one with another, and

forming a complete net-work all over the sur-

face. In some cases these characters are con-

stant, that is to say, are generally found the

same in all the specimens of the species we may

find, and then they form what botanists call a

valuable character; but in other cases they are

found to vary, sometimes having, perhaps, free

veins, that is never being connected at their

points, and at others they form a net-work, or

as it is technically said, they anastomose.

Our present species is just one of these

uncertain cases. It will be noted that the

description translated from Kaulfuss says

"veinlets anastomosing," but these will not be

found in that condition on our plate. The rea-

son is that about the time when our species was

first discovered the condition of the veins was

supposed to be more unchangeable than it is

known to be now. In some places a form was

found like that that did not have the netted veins,

and it was thought therefore to be another

species, and named by Hooker and Arnott *Polypodium*

*intermedium*; but as more specimens

were discovered some of the former would

occasionally be found with free veins and some

of the latter with netted veins, and therefore

in this case at least the character is worth

nothing as a distinction. Consequently Hooker,

in his "Species Filicum," published in 1864,

united the two, and they are now both known

by the oldest name, *P. Californicum*. Our plant



in its earlier history would have been probably known as *P. intermedium*.

Whether a form is to be considered as a distinct species or as a mere variety depends very much on experience as to the fixity of characters, rather than on any specific points that can be readily explained; and we can see in this case that only for the fact that a few netted veins had been found in one case, and a few free veins in another case, both forms would in all probability be regarded as distinct species to this day; and it is such facts as these which make observations on the range of variation in species of so much value to practical botanists. In ferns especially very much has to be learned on this point. For want of this knowledge synonyms are very numerous. In the case of our present species, Prof. Kunze, in a paper translated in *Silliman's Journal*, new series, Vol. 6th, remarks that Hooker and Greville, standard authors on ferns, had united very different species with it. Another writer in the 6th Vol. of the "Bulletin of the Torrey Botanical Club," suggests a doubt whether another species of the Pacific coast, *Polypodium fulcatum*, may not be referred to *P. Californicum*. Botanists may not be wholly prepared for this view yet, although we incline to it; but it shows how uncertain much fern knowledge yet remains.

A very pretty feature in our Californian *Polypody* is its transparent veins as seen when held up to the light. These veins are club-shaped, or thickened upwards at the termination, a point that does not seem to have attracted the attention of describers, though as to the mere frond differences in the opacity of the various forms have been commented on.

Kaulfuss, in the work from which we have translated the description, says it is "similar to *Polypodium vulgare*," which is our common Eastern form. But this is from the botanist's standpoint. The popular vote will be that it is much handsomer, by its more slender lobes and generally graceful fronds.

If we, as it seems we must, combine *P. intermedium* with *P. Californicum*, it gives a wide geographical range to it on the Pacific coast from the Columbia river southwards.

## THE FIELD.

### Another Ray of "Sunshine."

EDITORS PRESS:—I feel complimented to know that my article was commented on by Prof. Hilgard. He says: "I remark that while the facts cited by Dr. Simms are undoubtedly correct, we should hesitate to substitute the vague idea of 'sunshine' for the perfectly definite and well proved explanation given of them by a century's investigation in the domain of agricultural chemistry." I am at a loss to understand the meaning of his language. If my proposition is undoubtedly correct, as he says, how in the name of common sense can it be "a vague idea."

If we know that by plowing differently from the present way, and thereby we increase the product ten to fifty fold, we know that we have made an important discovery, and should not be governed by the experience of three thousand years. There is an old saying about the school of experience and those who learn therein.

The Professor says: That sunshine helps and intensifies the chemical processes of decomposition in the soil is well recognized, but it is also known that an excess of it tends to remove from the soil its vegetable matter, so important to plant growth, and hence we find that "shading" is strongly recommended in southern climates.

I lived in the South for nearly 50 years, and his idea of too much sunshine is new to me. If such "a vague idea" should prove correct, it would only be a question of time when the fairest portion of God's creation would be a barren waste. But any such vague idea would be contrary to nature's laws. The Creator would not have done anything so foolish. He fertilizes with the snow and frost of the north, and with water and the sun of the south. The Mexicans, in their primitive way of farming, have not worn out their lands. They do not use the turning plows. How do you account for it, Professor? They have not "shaded," without the shadow of the moon has had a tendency to counteract the effects of "sunshine."

Prof. Hilgard says again: "Now, as to plowing, Dr. Simms is undoubtedly correct in one sense. It is not intrinsically desirable to use the turning plow. But its universal use is the out-growth of the necessity of plowing more cheaply than can be done by means of any implement that simply loosens the soil." With my present plows, my plowing has been done as rapidly as ever before, and much better. I can convert any turning plow into my style of plow. My plow is so constructed that I can use the mold-board when desired. If I summer-fallow, and there was a good coat of vegetation on the ground, I would turn it under.

I had flattered myself that the Professor belonged to the class called progressive. He says: "I think we shall hereafter, as heretofore, find it safe and profitable to be guided by the experience of three thousand years rather than to rely on the efficacy of sunshine."

He plays upon the word "sunshine." Where would we have been had Columbus, Fulton,

Morse, and all their great coadjutors, been governed by the experience of three thousand years ago. Take it all back Professor, and say that you belong to a progressive age, and are teaching a progressive science like that of medicine. The science of agriculture must be a progressive one if it all.

J. R. SIMMS.  
Near Santa Rosa, Cal.

### Nature's Farming.

A Reply to Dr. Simms' New Departure.

EDITORS PRESS:—For the consolation of those of riper years a proverb is extant that "young folks always think the old folks fools, whereas the old folks know the young ones are." I can with the more grace quote the proverb, in that I have attained that happy medium in years, when I can no longer be classed as very verdant, or numbered with those whose "frosty brows" proclaim them "ready for harvest." Firm on this neutral ground I feel much disposed to question my own precocious sagacity, when it inclines to run counter to, or disparage, the wisdom painfully acquired by our forefathers.

Now I concur with Dr. Simms just so far as he inculcates the need of following nature's teachings in our farm work. I will go further, and say that only so far as we follow nature's teachings can we be successful. Dr. Simms' main points appear to be something as follows: Nature does not turn over the soil in order to put in her annual crop. The sun is the great fertilizer, and it is the soil the sun acts on that produces the crop's food. Are these nature's teachings? Let us see.

Nature's farming is all stock farming. In California before bipeds jumped her claim she raised "all kinds of creeping things living innumerable, both small and great beasts." Latterly she raised here elk, deer, grizzlies, lions, coyotes, moles, squirrels, gophers, quail, badgers, horned-toads, rattlesnakes, worms, wasps, tumble-bugs and other such small deer.

Now, Messrs. Editors, I willingly admit that nature's plows had no mold-boards, but I affirm that they turned the soil, for all that, most effectually. Worm carried his modicum of dirt to surface from way below. Mole ran his lively burrow along very near the sunshine as he made it hot for the worms he lived on; and occasionally humped his back high enough to upset a very little underlying dirt. Gopher made a daily business of carting up subsoil, from one inch to six feet below the surface, and spreading it, finely comminuted, above ground. Squirrel, rabbit, bat and mouse made holes here, there and everywhere; all mixed up, subsoil and top dirt. After them came badger and grizzly, who mixed up squirrel and gopher and subsoil and top stratum pretty badly. Nature did not turn it over every year, although in spots her live stock yet turn over rather more than some farmers I know of like.

Then another of her agents was pretty busy turning things over for her; cutting out here and piling up there. This agent was very powerful—irresistible in fact; had at this work two names and two shapes: ice and water.

The crops nature grew assisted in the turning over process. We'll class them for our purpose as herbs (such as clover), shrubs (such as poison oak), and trees.

Far from being fertilized, properly speaking, by the sun, they drew their substance entirely from earth and air. The herbs drew their nitrogen and potash and phosphorus and what-not mainly from a stratum of soil not exceeding a few feet in depth from the surface; the shrubs sent their rootlets deeper; the trees deeper yet, perhaps 30 or 40 feet down. Dr. Simms writes as though plants derived their nutriment from the immediate inch of dirt on which the sun shines. The sun did not give the sustenance. It pumped from the sea the water that made soluble the soil-constituents. It roused the dormant life in the seed. It maintained the rhythmic flow of sap. It gave to each leaf that enormous energy that tears apart the molecules of carbonic acid inhaled from the air, and builds up in the plant-structure carbon for the service of man. It empowered the living tree-engine to bring to the surface the fertilizing ingredients of the subsoil from great depths. When the plant died, the sun helped it to decay and disintegrate and become part and parcel of the surface soil.

This is how nature turned over the soil without any mold-board to her plow. But then nature never let a year pass without manure to the crop, which was invariably applied as a top-dressing, except in cases of root excreta and decaying roots. Either she fed down her crop with her live stock, or else let it rot on the ground. Then the rain perhaps brought some little ammonia in its reviving drops; nature, poor thing, being overcome with heat and drouth. Air oxidized annually a fresh supply of plant-food in the earth and by no means confined its operations to the top layer of soil.

I think, then, that our forefathers have not been following a delusion when they have turned over the soil. They appear to me to have followed the course of wise physicians in imitating and assisting nature's operations.

Nature must be closely studied that her plans may be known. But if nature makes two and two four, it does not pay to think she makes two and two to be five. He that bases his calculations on erroneous observations of nature's laws, builds his house upon the sand to be de-

molished by the winds of truth and waves of experience.

Nature's laws are to me—and to all, whether they will or no—God's laws, and, of necessity, must be done. But though my most thorough-going, every day prayer is, "Thy will be done," I do not always find it easy to know just what that will is, even about such ordinary work as plowing and sowing.

EDWARD BERWICK.  
Monterey, Cal.

## THE PUBLIC LANDS.

### Home Making on the Red Lands.

EDITORS PRESS:—I have taken a mania for going to the country to make a home; but as we are not able to buy the expensive land in the valleys, I wish to inquire in reference to the "red lands" below the Sierras. I have recently seen mention made of them in some of the papers as though they were mostly vacant or very cheap, and I would like your opinion; and if you will be kind enough to write me answers to a few questions, I shall be very grateful: First, are any of those lands open for pre-emption within reach of market? Are they in the frostless belt? Can they be irrigated and how? Will German prunes grow there, and how many years till they bear? Would Egyptian corn be a productive crop? I think these lands are rolling. Are they partly or altogether wooded? —MRS. S. C. EWING, Oakland.

EDITORS PRESS:—I had already partly written the following account of our experience on the red lands of Shasta county before I received the above questions, which you send me for answer. I think the following will cover the points mentioned, so far as our experience goes.

The first anniversary of our location upon our new home finds us still here, struggling with the yet unsolved problem how to make a living while subduing this beautiful wilderness. Some of our neighbors have become discouraged and left, selling out their claims. Several of these, however, after looking elsewhere for months, have returned and are again bravely at work.

We have now experienced the whole four seasons, and found the single drawback in the intense heat of summer. At Anderson the mercury ranged from 100° to 112° for 35 consecutive days. Probably our locality was nearly the same. In our low-roofed cabin, with no water except that from the mining ditch, we found it almost intolerable; and had I attempted writing then, probably I should have given a shady picture; but now that the early rains have cooled the atmosphere and laid the dust, winter work again goes forward with the energy of hope. Looking over the records of the past year we note some progress, but not such as meets our expectations or seems proportionate to the outlay. We invested in a little stock of several kinds—cows, hogs, poultry and bees—not one of which has realized our hopes. When we raise our own hay and grain, thus having some feed to tide over the seasons of scarcity, it will be very different from now, when we must buy at good prices and haul up from the valley, some 10 or 12 miles distant.

Very little can be expected from the soil the first year, as our red land, resembling much of that in the foothills, requires summer-fallowing. How productive it may prove when well subdued we cannot tell, but I have heard several old residents express the opinion that this high land would equal if not surpass the lower lands as a wheat-producing region, while there can hardly be a doubt that it will prove an excellent fruit locality. We are not in a frostless belt, by any means—have already had several light frosts this fall, and ice forms many nights during the winter; but our gardens were untouched last spring, while those in the valley were badly damaged. We believe semi-tropical fruits can be raised here, which, with dried fruits and nuts, can no doubt be marketed with profit. Our soil is rather heavy, such as I have read the plum tree requires. Our plum trees have survived much hard treatment, and seem determined to live and grow. I hope we will find this the home of the plum and the prune.

Vegetation keeps green longer there than in the valley, the soil seeming to retain moisture very well. Our gardens and grain patches, though little or no profit this year, grow well enough to encourage us to hope for good results the second year. The first necessity is a substantial rabbit-proof fence. Our own stock greatly damaged our garden and trees, after which rabbits harvested the rest just as string-beans and squashes were ready for the table, tomatoes forming, and corn in silk.

The Igo mining ditch runs by where it can easily be brought on our land, and the company offer water at very reasonable rates. For alfalfa, young trees and late vegetables, it will be a great benefit, and several near neighbors combining would be a great advantage in irrigating. Grain will require no water, and a good crop of early spring vegetables can no doubt be raised without. We have no drying winds to suddenly blight our hopes, vegetation slowly dying out in the hot weather of July and August.

Our garden was planted rather late, and met with too many accidents, to be a very fair test. Egyptian corn planted between East India millet and sweet corn had the advantage of both in earliness, being well headed out when we turned the calves in to share with the rabbits.

Poison oak is quite abundant here, and is a great objection to many persons, but, fortunately, our family seem quite exempt from its effects.

We hear considerable about land higher up in the mountains: that there are springs of pure, cold water, and little spots of a few acres where

anything will grow. Bands of cattle are driven up there to longer have green pasture, and people often go to escape the heated term.

Some who first stopped here have since located in the Bald hills, nearly 20 miles west of us. The soil there being adobe, and no timber at all, they have the advantage in beginning; but this section lying within a few miles of the railroad I consider far more desirable for homes, and believe its location will, if nothing else, make it more valuable. I have, in no degree, lost faith in the country; although, with limited means, our progress will naturally be slow, I trust each year will show some steps toward home comforts and adornments.

To clear this land of the heavy brush wood and prepare it for cultivation is the work of time. We found a man, a team and a boy could hardly clear two acres a week. As year by year the underbrush slowly gives way to orchards and grain fields, how we can make a living in the meantime becomes an important question. There is brush, brush, all around us everywhere, our nearest neighbor being almost five miles distant.

Goats, we have learned, will live upon brush. Goats then we must have. Well! The goats, a flock of 500 graded Angora, are here enjoying themselves and growing fat, while they look so beautiful trimming up the brush.

Now, as to vacant lands, I know very little outside of this township. Several claims have been taken up the past six months, but there are still good places vacant, and others, among the best, could now probably be bought for a trifle. Instead of being small spots capable of cultivation between hills, as I have an impression foothill land generally is, the level land here lies high up, while the waste land is in the narrow gulches that intersect it. There are whole sections here where every acre can easily be cultivated. Others have not more than half level land.

As we are interested only in agriculture, I have not mentioned the mines. Chinamen mine in several of these gulches, thus bringing water within our reach. As it is believed we will have to go quite deep for water, we still depend upon the ditch, which, except in hot weather, is very good. Some of the new settlers have prospected upon their claims and are preparing to wash out gold this winter, believing they have found it in paying quantities.

While I have feared to encourage people to come here without any means lest they might regret the move, on the other hand I would not discourage any, who, knowing the obstacles to be overcome, are willing to try. I believe economy and industry can make a living here. The new settlers have cut and hauled wood to the railroad; burned some charcoal and hauled it to Reading and Shasta, while some plowing and harvest work, or now and then a day's work with team for the Chinese miners can be had.

With the coming of winter we see signs of revived interest in home-hunting, and expect a lively time the next few months. Most of those who come are well pleased with the country.

MRS. J. M. K.

Anderson, Shasta Co., Cal.

[Mrs. Kerlinger's honest description of experience in home-making on government land in Shasta county, will be read with much interest. We should be pleased if other locators on the "red lands" in other foothill counties would send us the facts of their successes or failures, if such there be. We desire the plain truth on all such questions.—EDS. PRESS.]

## THE STOCK YARD.

### A Reward for an Improved Stock Car.

At a recent meeting at Chicago of the American Humane Association, a prize of \$5,000 was offered for an improved stock car capable of carrying live animals long distances without needless suffering.

We certainly think that the inventor who will contrive a cattle car free from objectionable features, will reap a reward compared with which the offer of \$5,000 would be a small sum. There is undoubtedly room for invention in this business, and the demand for an alleviation of the sufferings of cattle during transportation is becoming greater, as the carrying of stock on railroads increases in magnitude. It has been estimated that the saving in shrinkage in cattle between Kansas City and New York or Philadelphia, by proper appliances for food and water while en route, would nearly pay the cost of transportation, hence the opportunity to inventors to reap an immense reward.

There are numerous patents upon cattle cars, and many efforts have been made to introduce them, but the general similarity of design occasioned suits for infringement, which virtually destroyed their humane utility.

The old National Cattle Car Co., of Chicago, with Zadoc Street and his son John W. Street, procured the manufacture of about thirty cattle cars, by the McNairy & Claffin Manufacturing Co., of Cleveland, Ohio. The cars contained all of the appliances peculiar to cattle cars, viz.: feed boxes and water troughs, by which the animals could be cared for from the outside of the

CONTINUED ON PAGE 362.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### Nationality of the Grange.

The inquiry is sometimes made, What advantage is gained by the Grange being national in its character? What does the National Grange do for the Patron? The question might be answered by asking another: What is the use of a county or State organization? or, to carry out the argument, What is the use of any organization at all? for the argument, if logically carried out, resolves itself into this. The inquiry may be answered by referring to the Farmers' Clubs, which from time to time have sprung up and as rapidly disappeared. The fact is, there was a want of extensive organization in the latter to give them any lease of life. The common bond of brotherhood was wanting, which the Grange supplies. Besides, the Farmer's Club, whatever its platform of purposes may be declared to be, necessarily sinks to the condition of an agricultural association exclusively.

The Grange contemplates in its action to reach and satisfy all the wants of the agricultural class. Its power consists in co-operation. A unity of interests and common wants enjoins this. The more extended the association, united by the same purposes, aims and wants, the greater the power to attain the objects sought. It is idle at this day to talk about accomplishing great objects without co-operation. It is the efficient factor in all great enterprises. Every other industry, every other department of trade, is aware of this efficiency, and guilds, trades-unions and legalized corporations are the result. The farmer, from his isolated position and employment, has not appreciated the advantage of associated effort. The world has taken for granted that the importance of agriculture, both for the maintenance of commerce and manufactures, gave a sufficient guarantee of its independence and growth, independent of Government patronage or other outside influences. The result was that legislation was strained to advance commercial and manufacturing interests, while agriculture was snubbed on every occasion. The whisky interests of Ohio to-day have more influence in controlling the legislation of that great State than the entire agricultural interests of its people.

But the Grange is an organization which has for its object not only the thrift, growth and character of its members, but in the securing of these to advance the interests of the commonwealth. The result could not be otherwise, for that which shall benefit and elevate the largest class, or indeed any class, just that far contributes to the common weal and strength.

Limit these influences to a county, and a decade of years will show that the county so situated will outstrip adjoining counties in population, intelligence, wealth and refinement. Certain causes must produce certain results, and these are among them. Extend these influences to the limits of a State, and we have the same factors at work. It is like the advance of civilization a few years ago on our Western border—a steady progressive movement towards the Pacific, as clearly defined, year by year, as an army making its regular march. Under the genial influences of the Order of Patrons, there not only is but must be a progressive movement along the line of the whole body of farmers, who are in sympathy with the work. Unlike trades-unions and monopolies, the prosperity of the Grange, representing the agricultural class, is identified with the general prosperity.

We therefore conclude that, having for its object so far-reaching a purpose, its most efficient power lies in its State and National extent. Whatever adds to the National unity adds to the strength and perpetuity of the Republic, and appeals not only to the self-interest, but to the patriotism of the citizen.—*Grange Bulletin*.

### The National Grange.

The first intimation we get of the character of the meeting of the National Grange, held two weeks ago, is the following written by the Master of the Missouri State Grange to the *Journal of Agriculture*. He writes:

The National Grange opened its 13th annual session at Canandaigua, N. Y., on the 19th inst., with 28 States represented, with report of delegates of two more States on the way. Representatives present seem to realize the importance of the work in hand. But what will be done, cannot at this early part of the session be even conjectured, but more earnest determination for effective work is manifested at this session than at any we have attended preceding it, the greatest harmony prevails and every proposition is thoroughly discussed and carefully considered, but nothing of any importance has been entirely disposed of; and until a final disposition is made we cannot say what results will be.

We expect next week to have full notes of the proceedings.

### Resolutions of Respect.

Sacramento Grange No. 12 has adopted resolutions of respect to the memory of Sister Sarah A. Carter, who is mourned as a faithful and upright Patron, a highly respected member of society, and an exemplary and kind-hearted wife. She was one of the most enlightened members and most zealous workers in the Grange. Committee: A. F. Raymond, A. M. Haynie and D. B. Hall.

Sacramento Grange also deplores the death of Sister Sarah Eldred, a beloved member of the Order, and a devoted wife and mother. A tribute to the memory of Sister Eldred has been adopted by the Grange. Committee: James Rutter, Hattie E. Sprague and Fannie S. Manlove.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### BUTTE.

RAISINS.—*Record*: Mr. C. L. Durban is in town, from Messilla valley, with a load of raisins and wine for Chico merchants. Speaking about his raisin crop he informs us that he has done well this season. He says that he cut down a large number of old Mission vines and grafted the best quality of raisin grape into the stock, and the result was a superior raisin grape, with a yield of about 15 pounds to the graft.

#### COLUSA.

COLUSA COUNTY ORANGES.—*Sun*, Nov. 29: L. F. Moulton brought us, this week, a number of oranges of excellent flavor, grown upon his place. Mr. Moulton has a large orchard of choice varieties of young trees all doing well, and in a few years he will have plenty of fine fruit for sale. He will put down the sub-irrigation pipe in his orchard this season.

#### LASSEN.

BEEF AND HAY.—*Susanville Cor.* Reno *Gazette*, Nov. 25: Joe Stevens of Lake View, Oregon, drove down 500 head of beef cattle to feed for the San Francisco market. Oscar Hemler also drove 600 down to feed for Hayes, Carrig & Co., of Oakland. All the hay in the Tule Confederacy, amounting to about 15,000 tons, has been sold to feed beef. The price paid was from \$4.50 to \$7.50 per ton. Connor, the tree man of your city, was here this week with a large lot of trees for the northern country. All the farmers about Honey Lake are plowing.

#### LOS ANGELES.

ANAHEIM WHEAT.—*Gazette*, Nov. 28: From all the information attainable, we should judge that between 4,000 and 5,000 acres of land in this Fourth Supervisorial district will be seeded to Odessa wheat this season. That more will not be planted is solely due to the scarcity of seed and its high price. It is not to be supposed that, in the present financial condition of the agricultural community, many farmers can afford to sow largely of a grain, the seed of which is held at five cents a pound. It would be entirely appropriate to discard the name "Odessa," as applied to the rust-proof wheat, and substitute "Anaheim." To Anaheim belongs the credit of having introduced this wheat into California and of having forced it upon public attention.

SHIPPING LARD.—*Express*, Nov. 29: Messrs. S. Speedy & Co., of our city, have been killing about 75 hogs a day for the past two or three weeks. Porkers are packed by the cord at their establishment on Aliso street. The house is also putting up 40,000 pounds of lard on order, to ship to Grass Valley, Nevada county.

ORANGE PRICES.—The orange crop of Mr. Briswalter is estimated at 1,500,000 this year. He has sold it at the rate of \$15 per tree, or a total of \$22,500. His grape crop from 100 acres of vineyard sold for \$9,000. Thus Mr. B. realizes \$31,500 from trees and vineyards covering less than 120 acres.

FRUIT BUYERS.—Mr. Luke G. Sresovich, of the firm of Sresovich & Co., San Francisco, left to-day for home, having concluded contracts with fruit growers in the immediate vicinity of this city for over 2,000,000 oranges of the coming crop. Coming here when the fruit is about half grown, he looks an orchard over and makes the owner an offer in lump for his crop.

#### MENDOCINO.

AGRICULTURAL SOCIETY.—*Ukiah Press*, Nov. 28: At the last meeting of the Directors of the Mendocino County Agricultural Association Mr. Kraker resigned his position as Secretary, W. H. Young being appointed by the Board of Directors to fill the vacancy. Mr. Kraker starts East about the first of December. Mr. R. E. Madden was appointed director at the same meeting, to fill the vacancy caused by the appointment of Mr. Young to the secretaryship.

ANDERSON VALLEY.—Farmers are taking time by the forelock, and pushing farming operations vigorously. Gschwind has his grain all in, and many others are nearly done. Much land seems to be cleared up that has hitherto lain idly brushy. The fogs keep off the frost in a measure in that region, and the rains have been, and are always, more copious there than here; so that grass is better advanced than in this valley.

HOP CULTURE.—We hear that some of our farmers, incited by the price of hops, are talking of setting out small fields the coming season. In view of the fact that they have only brought a living price one season in four since first their cultivation was begun here, we should deem it inadvisable for beginners to engage in their culture at present. The cost of putting out a yard, building kilns and presses, is considerable, and when once a man determines on running the hop business, he must go into it to stay, if he desires any profit. The heavy export of California hops to England the present year, and the attention they have attracted

from consumers there, would seem to indicate a better demand in the future. Therefore, we can expect that they will always command a much better price hereafter, though often the profit will rest with the broker. In late quotations we see it stated that California hops had risen to £30 per bale in English markets, they alone being deemed fit to take the place of the finer grades of English hops, there ascertained to be a total failure. In view of these facts, those now in the business should stick to it, but there is really no encouragement for any more to start in.

#### NAPA.

THE REPRESENTATIVE OF THE VINICULTURAL INTEREST.—*St. Helena Star*: The Vinicultural Society of St. Helena and vicinity met at 2 P. M. An assessment was levied on all wine-growers of 12½ cents per ton for all grapes raised in 1879, also, assessing all wine-makers five cents per ton on all grapes made up by them, excepting those raised by themselves; for the purpose of raising \$250 as the contribution of this district toward the expenses of Mr. Wetmore, delegate of the Vinicultural Association of this State to go to Washington and defend the interest of California wine-growers during the coming session of Congress.

PROFIT IN VINEYARDS.—An experienced vintner gives us his opinion that the vineyards within ten miles of St. Helena have paid this year an average profit of \$75 an acre.

#### SAN BENITO.

FISH CULTURE.—*Hollister Enterprise*, Nov. 28: J. D. Culp has at considerable expense made upon his place several ponds in which 5,000 Eastern and McCloud river trout eggs were placed. The eggs hatched well, and the ponds are now full of fish large enough for table use. The largest of these ponds is about 150 feet in circumference and 10 feet deep. A great many gold fish have also been placed in with the trout. The fish are fed once a day, their food consisting principally of chopped raw liver, and so accustomed have they become to the presence of Mrs. Culp they will come up and eat from her hands.

#### SAN LUIS OBISPO.

PASO ROBLES.—*Editors Press*: The farmers are as busy as bees putting in their grain. This is a good wheat country, and in a good season it yields 40 bushels to the acre. There have been 2,000 acres dry-sown, and, as we have had rain enough to sprout and bring it up, it does look splendidly. Vegetation has started, and it makes the husbandman wear a cheerful look as he perceives his prospects for a golden harvest. At this time some are plowing, some sowing, others harrowing. My new home reminds me of olden times back East for sociability, as we have "meeting" twice every Sunday and Sabbath-Schools. On Friday night there is spelling-school. We have plenty of good wood for fuel, which we enjoy these cool, frosty evenings when our good neighbors come in to spend a few hours. This country is settling up; new settlers are coming in every day, still there is plenty of government land, but there will not be long, for people are coming in very fast.—*Mrs. S. C. STEPHENS*.

#### SANTA CLARA.

APPLES.—*Gilroy Advocate*, Nov. 29: There are some people deluded with the idea that no perfect apple of good flavor can be produced in this valley. Could any of these people see and taste the samples brought to town this week from Mr. Cordes' orchard, they would entertain a more exalted opinion of the various apples grown in this locality. We have no hesitation in saying that we have never seen finer looking specimens of the different varieties of this fruit. The Smith-cider, Bellflower, Winter Pearmain and Fall Pippin, are all as sound and rich in flavor as any grown on the Pacific coast.

#### SONOMA.

CLAY FOR SANDY ROADS.—*Democrat*, Nov. 29: While at Sebastopol on Saturday we found Wm. P. Berry had several teams busily hauling clay along that piece of sand in the road from the long bridge to the main street of the town. They clay mixes with the sand and forms one of the best roads that can be constructed. The experiment was tried a number of years ago on the main street of the town, and has proven satisfactory. The roads between here and Sebastopol are in excellent condition.

IMPROVEMENT IN PLOWS.—*Times*, Nov. 29: Dr. J. R. Simms, proprietor of a fine ranch on the Sonoma road, east of town, has made an important improvement in plows, the working of which we had an opportunity of witnessing on Friday. Unlike the common plow now in use, the deflection of the handles is to the left of the beam instead of the right, and by means of a front and rear clevis, which are connected by a strong iron rod and extend about a foot from the beam, places the operator and team on the solid ground instead of in the furrow. A share and upright or standard, to which the draft is attached by means of the rear clevis, and a cutter fastened to the right of the share is all that is used in plowing. The mold board is dispensed with, making the draft much lighter than with its use, and consequent pressure thereon. By means of this improvement the ground is rendered looser and finer, and in better condition for plowing. No huge, lumpy furrows are turned to harden in the sun, as is the case on "doby," where the old plow is used, and no dead furrows and ridges are left. The Dr. invites all to come and witness the workings of his improvement. The plows were made at the shop of S. Weller, on Fifth street, east of Mendocino street.

#### STANISLAUS.

SHIPMENT OF WINE.—A Schell, in *Modesto Herald*: I have just been informed that a notice had been published in your paper that I had shipped from "Red Mountain Vineyard" 40,000 gallons of wine to the Eastern market, during the past year. The amount shipped will not exceed 3,000 gallons.

#### TULARE.

ITEMS.—*Delta*, Nov. 28: For the first time in two years the grass is green again. It is growing well, and in some places is high enough now for sheep feed. The grain sown in summer-fallowed land, before the rains, is looking well, and there is no doubt but there will be a better crop next year than we have had before for three years. A large extent of country near the foothills, between here and Tule river, is being plowed and seeded to wheat.

#### TUOLUMNE.

EDITORS PRESS:—The first day of winter, so says the calendar. For three days past there was a warm, moderate south wind, with gentle rain, which yesterday fell more heavily, and fills to overflowing the measure of the rancher's needs. On this lovely winter day, the thermometer at 70°, the hills covered with fresh verdure, and the cereals "booming" under the genial influence of warmth and moisture, who dares to say that the foothills of the Sierras are not the fit abode for a prosperous and happy people. And the blooming roses in our gardens, away up here, several thousand feet above the sea—what a contrast to the bleak north winds, the snow and the ice, which make our Atlantic friends gaze with yearning hearts toward our golden land, for golden it truly is. For example: A couple of miles east of Columbia, where for 30 years the miner has passed and re-passed, stood a ledge of rock, prominent above the ground. All about it the trees were felled and converted into lumber, the miners washed out the gulches, but no one had the stupidity to give the rock a hammer-blow till a week or two ago. Lo! the result. In miner's phrase, the rock was "lousy" with gold, and in a week's time the lucky finder, Mr. Arnold, had 30 pounds avoirdupois of good yellow gold. Alike in mineral as in agricultural resources, our county acknowledges no superior. She is the peer of the best. But with our teeming orchards of choicest fruits, we are handicapped with 30 or 40 miles of land carriage, and thus unable to enter the markets of the lower towns and cities on equal terms. Gold and lumber, fruits, grain, marble, etc., await the railroad that is to be, for it is a necessity of our present and future weal. Then, and then only, will the "winter of our discontent" become the truly glorious summer.—*J. WINCHESTER*, Columbia, Dec. 1st.

### The Free Labor Exchange.

G. W. Schroeder, Manager of the Free Labor Exchange, at 35 O'Farrell street, has made his second annual report of the transactions of the Exchange for the year ending Nov. 22d, 1879. We learn therefrom the following summary of results:

Male Department.—Number of orders received, 832; number of persons called for, 1,351; number of persons engaged, 803; number of order tickets issued, 999.

Female Department.—Number of orders received, 2,308; number of persons called for, 2,663; number of persons engaged, 1,230; number of order tickets issued, 2,097.

Total number of persons engaged in both departments, 2,033.

In presenting his second annual report to the friends and patrons of the Free Labor Exchange, the Manager says: "On account of the continued hard, uncertain and exciting times of the past year, there has been in the male department a decrease of orders and engagements of about 40%, as compared with the first year. I should feel disposed to attribute this falling off of orders to the management, if I did not have the fact before me that in the female department, which requires a great deal more of judgment, delicacy and skill in its operations, both the orders and engagements were equal in numbers with those of last year."

In closing his biennial report, the Manager requests all, in behalf of the many very worthy persons out of employment, to bestow their patronage on the Free Labor Exchange.

BONE DUST.—As a general rule when American farmers use bone dust they apply too small a quantity to show decisive results. Thus, in improving pasture, a hundred pounds or so might not show much good result, because the growth being removed daily the increase is not readily recognized. Only think, if a pasture season be considered one hundred and fifty days, then a ton increase of feed per acre is but about thirteen pounds a day over an acre. In England, where bone manuring is in favor, large quantities are used with advantage. Prof. Tanner recommends bone dust, applied at the rate of one ton per acre in the autumn, for the improvement of grass lands.—*Scientific Farmer*. We trust that some of our readers are making tests of the effects of the bone dust ground in this city, and of which the greater part is now shipped to Australia, as we have said before. This material should not be permitted to go out of the State.



## Proposed Commissioner of Agriculture.

EDITORS PRESS:—In an article on the subject of "Experimental Farms," published in the RURAL PRESS, Nov. 1st, I alluded to our great need of an efficient State Board of Agriculture, with a Secretary whose time should be devoted to the collection of industrial statistics, facts and information in regard to all parts of the State, our resources, industrial progress, etc., with the means of publishing annually a report of such work for the education and information of our own people and the information of the people of other States and countries.

We have, however, according to law, a nominal State Board of Agriculture, composed of the Directors of the State Agricultural Society. It fails to do much that most certainly ought to be done by a Board of Agriculture. It is very inefficient, as compared with the Boards of Agriculture of many of the older States, in encouraging the development of industrial resources, and in promoting and stimulating progress in agriculture and manufactures; while such a work is more needed in this State and the cost would be better and more rapidly repaid.

The last annual meeting of our State Agricultural Society was, according to report, a disgraceful wrangle for office and the control of the next State fair. No time was spent in consultation or discussion in regard to the wants, prospects or condition of the agricultural interests of the State. It is more than probable that the State Society is largely under the control of the "fast-horse" influence—of men who put a conventional value upon speed, and keep horses for other than useful purposes—an influence that will never benefit agriculture or any industrial pursuit.

This State has been remarkably liberal in appropriations "for the encouragement of agriculture and other industries." In 1872 there was appropriated \$26,000 for the benefit of the State Society, and the various district agricultural and horticultural societies. In 1876, there was appropriated \$16,141.89, to pay the indebtedness of the State Society; and in 1878, \$21,000 for the various societies. Probably, similar sums in other years. That these large sums might have been better used for the permanent improvement of the State, there is scarcely room for doubt. In the acts making the appropriations may be found the stipulation that "no part whatever shall be given in any contingency in purses for horse-racing." This looks well, but practically amounts to nothing. The fund arising from membership fees, gate fees, entrance fees, etc., may be used for the horse-races, and the State money to pay the other premiums. It is "allege same." A State, district or county fair ought to be so managed as to be self-sustaining, and they are usually so managed in other States. The fairs of the St. Louis Agricultural and Mechanical Association, at St. Louis, Mo., are the largest and most successful fairs held in the United States, or in the world for that matter, and are managed by a joint stock association that never received a dollar from the State.

Any reasonable amount of money appropriated by the State and judiciously used, in a way to stimulate production and manufactures, will soon bring a rich return by increased prosperity. We greatly need more manufacturing. No purely agricultural country can ever become wealthy or permanently prosperous. Agriculture and manufactures must go hand in hand.

Daniel Webster, after observing, with his keen intellect, the prosperity of agriculture in England, thus speaks of its relative importance: "No man in England is so high as to be independent of this great interest—no man so low as not to be affected by its prosperity or decline. The same is true, eminently, emphatically true, with us. Agriculture feeds us, to a great extent it clothes us; without it we could not have manufactures, and we should not have commerce. These all stand together like pillars in a cluster—the largest in the center, and that largest is agriculture."

As we have a State Agricultural Society, with its nominal State Board of Agriculture, the suggestion now submitted is, not to interfere with that organization, trusting that in time new life may be instilled into it, its sphere of action enlarged and thought and investigation directed in other channels besides, or in addition to the State fair with its horse-racing, and that a State Commissioner of Agriculture be secured, who will do important work left entirely untouched by, if not out of the field of, the State Agricultural Society. The cost to the State of such an officer would be less probably, than the amount usually appropriated "for the encouragement of agriculture and other industries;" that the result would be vastly more important for the progress and improvement of the State, there is not the least doubt.

A large proportion of the older States publish annual agricultural reports, many of them of exceedingly great value. The importance to this State of a Commissioner of Agriculture, with a thorough and reliable annual report, can be readily understood. It is believed that it would be a good step in advance, and an improvement on the mode pursued in most of the other States.

The following is proposed as a bill for the consideration of the next Legislature:

## An Act

To provide for a Commissioner of Agriculture, for the encouragement of agriculture and other industries.

The people of the State of California, represented in Senate and Assembly, do enact as follows:

SECTION 1. The Governor shall appoint, with the advice

and consent of the Senate, a Commissioner of Agriculture who shall hold office for four years and until his successor is appointed and qualified; said appointment shall be made solely with reference to qualifications for the office and regardless of party affiliation.

SEC. 2. The duty of the Commissioner of Agriculture shall be to collect information, statistical and descriptive, from all parts of the State, in regard to the resources thereof and the condition and progress of agriculture, manufactures and other industrial interests, and to collect such other facts and information as may be deemed important for the promotion of said interests and for the encouragement of immigration and the investment of capital in the development of the resources of the State. He shall make a full report of the results of his labors to the Governor on or before the first Monday in February of each year.

SEC. 3. The Colleges of Agriculture and Mechanics in the State University, the State Agricultural Society, the State Horticultural Society, and the various district and county agricultural and horticultural societies shall, on or before the last day of December in each year, make a report to the Commissioner of Agriculture of their condition and operations for the year.

SEC. 4. The Commissioner of Agriculture shall receive an annual salary of twenty-five hundred dollars, to be paid monthly from the State Treasury; and his office expenses and such traveling expenses as may be necessary in the performance of his duties shall, on approval of the Governor, be paid out of the State Treasury.

SEC. 5. The State Printer shall, annually, under the direction of the Commissioner of Agriculture, with the approval of the Governor, print and bind in one volume not exceeding six hundred pages, eight thousand copies of the report of the Commissioner of Agriculture, embracing the reports, in whole or in abstract, provided in section 3 of this act; four thousand copies shall be for the use of the members of the General Assembly for distribution among their constituents, two hundred copies for the State Library, and the remainder for the use of the Commissioner of Agriculture for distribution among the agricultural and horticultural societies of the State, and to exchange for the agricultural reports of other States and countries.

SEC. 6. All other acts or parts of acts inconsistent with the provisions of this act are hereby repealed.

SEC. 7. This act to take effect and be in force from and after its passage.

The passage of the above bill would render the separate publication of the report of the State Agricultural Society, as now required, unnecessary; otherwise it would interfere with nothing.

L. D. MORSE.

San Mateo, Nov. 28th.

## Agricultural Society Meeting.

EDITORS PRESS:—At the annual meeting of the Sixth Senatorial District Agricultural Association, held at Santa Cruz, November 15th, 1879, the following officers were elected for one year: President, J. S. Mattison; First Vice-President, R. H. Sawin; Second Vice-President, Joseph Francis; Treasurer, Martin Kinsley; Secretary, Roger Conant; Trustees: J. S. Waite, R. H. Sawin and Joseph Francis; Librarian, Roger Conant.

The appointment of the Library Committee was postponed till the next regular meeting, to be held on Saturday, December 6th, 1879. Thomas W. Wright was proposed and elected a member of the association. R. Conant moved to amend the Constitution so as to make the dues \$1 instead of \$3 a year. It was laid over for two weeks. The association is beginning to look up once more. New members are joining and old members are returning. There seems to be an earnest intention on the part of the members to place the association where it once was, and to make its meetings instructive to all.

I shall have some reports to send you after the next meeting. ROGER CONANT.

Santa Cruz, Nov. 24th.

[We are glad to see this sign of revival among local societies. Reports of their meetings are always gladly received for publication.—EDS. PRESS.]

MR. HENRY H. MASON died in Carson City, Nevada, November 22d. Since 1860, when we first knew Mr. Mason in Sierra county, he has been in feeble health, and as an invalid has been faithfully cared for by a diligent wife. One act of his life will never be forgotten by the writer. When our entire printing office was burned, with the town of La Porte, in 1861, Mr. and Mrs. Mason tendered us the use of all their hard-earned accumulations to continue the publication of the *Mountain Messenger*. Honest and industrious, their purse was not as large as their hearts, but their hands were swift indeed to help their humble friends in time of need. That kindly act has ever since strengthened our faith in human friendship.

INCUBATOR AT WORK.—The Eclipse Incubator is now at work at Frank Bros' store, 319 Market street, where the general agent, Mr. Wickson, is prepared to exhibit and explain its behavior when in actual operation. One hatch will be due December 20th, and other eggs will be introduced so as to bring out chicks at intervals after that date. The Eclipse is winning wide approval according to the testimony of those who have used it in different parts of the State. Mrs. Taber, of San Jose, reports a hatch of 96% of the fertile eggs, and other testimonials are very satisfactory. The chance to see the machine at work at 319 Market street should be improved by all who are interested in artificial incubation.

A SERIOUS accident occurred at the Union mine, Virginia, Nev., caused by running the cage and skip into the sheaves. Several men injured, two fatally.

J. D. BASNETT has been appointed agent for the Press for the State of Nevada.

## Destruction of Government Timber.

The annual report of Secretary Schurz, handed to the President last week, contains the following passage, of special interest for Pacific Coast States, Colorado and all the Territories. After stating that the measures taken by the Interior Department for the protection of public timber have produced a good effect on public sentiment in many localities, he says: "It must be kept in mind, however, that the limited means allowed by Congress permitted a small field to be covered by these operations. The greatest danger of the wholesale destruction of our forests and of the disastrous consequences that destruction will bring after it, exists in those States and Territories where the timber indispensably required for domestic use and local industry must be taken from public lands, there being no timber lands in private possession; and the public lands being mostly unsurveyed and not subject to purchase or entry. In my last annual report I discussed the inadequacy of the laws enacted by the last Congress, authorizing citizens of Colorado, Nevada and the Territories to fell and remove timber on the public domain for mining and domestic purposes, and providing for the sale of timber lands in the States of California and Oregon and in Washington Territory." The opinion I ventured to express, that the first of these acts would be taken advantage of, not only by settlers and miners to provide economically for their actual current wants, but by persons who would see in this donation a chance to make money quickly; that it would stimulate a wasteful consumption, beyond actual need, and lead to wanton destruction, and that the machinery left to this Department to prevent or repress such waste and destruction, through the enforcement of rules to be made by the Commissioner of the General Land Office, would be found insufficient for that purpose has already, in many places, been verified by experience; also, the predictions made by the Commissioner of the General Land Office with regard to the effect of the second one of the above named acts. Referring to what was said about these laws in my last annual report, I repeat my earliest recommendation, that they be repealed, and that more adequate legislation be substituted therefor. It is by no means denied that the people of the above-named States and Territories must have timber for their domestic use as well as the requirements of their local industries; neither is it insisted upon that the timber so required should be imported from a distance so that the forests in these States and Territories might remain intact. This would be unreasonable, but it is deemed necessary that a law be enacted providing that the people may lawfully acquire the timber required for their domestic use, and their local industries from public lands, under such regulations as will prevent the indiscriminate and irreparable destruction of forests, with its train of disastrous consequences. It is thought that this end will be reached by authorizing the Government to sell timber from the public lands, principally valuable for timber thereon, without conveying the fee, and to conduct such sales by Government officers under such instructions from this Department as will be calculated to prevent denudation of large tracts, especially in those mountain regions where forests once destroyed will not reproduce themselves. I have no doubt that under such a law, well considered in its provisions, the people of those States and Territories would be enabled to obtain all the timber they need for domestic as well as industrial purposes, at reasonable rates, and that at the same time the cutting of timber can be so regulated as to afford sufficient protection to the existence and reproduction of the forests, which is so indispensable to the future prosperity of those regions. I venture to express the opinion that the enactment of such a law has become a pressing necessity, and cannot much longer be delayed without great and irreparable injury to one of the most vital interests of the people."

The Secretary, referring to the enormous devastation of forests by fires left negligently burning or deliberately set for the purpose of denuding timber, recommends the enactment of some severe penalty, for willful or negligent setting of fires upon the public lands of the United States, and, also, for the recovery of all damages thereby sustained. He says it may in many cases be difficult to obtain testimony necessary for the conviction of persons guilty of this offense; but if the law is successfully enforced only in some instances, it will serve to direct general attention to the danger of incurring its penalty, and thus make many persons, who so far have given no thought to the possible consequences of their negligence or recklessness, more careful in future.

Secretary Schurz this year renews his previous recommendation for legislation to provide for the more speedy settlement of private land claims in territory acquired from Mexico, except California, which was provided means for the judicial determination of such matters many years ago.

PLANTS AND SEEDS.—The new catalogue of plants and seeds, for sale at the San Francisco Exotic Gardens, owned by F. A. Miller & Co., should be examined by all floriculturists and gardeners. The lists will be found to contain a very full assortment of flowering and foliage plants, bulbs, trees, shrubs, etc. The Exotic Gardens are on Mission street, opposite Woodward's Gardens.

## News in Brief.

MICHAEL CHEVALIER, the political economist, is dead.

The miners of Cambridge valley, Ohio, are on a strike.

The Bishop of Massai, Abyssinia, has been imprisoned by King John.

The Indian outbreak in Colorado is again assuming unpleasant features.

GRANT does not expect to visit Washington until his return from Mexico.

A NEW reservation, in some of the Territories, is to be selected for the Utes.

SERIOUS Indian troubles are reported from Texas, many whites having been massacred.

CHIEF OURAY has been presented with a watch for his friendship to the whites.

The poor in the southwestern portion of Ireland are suffering for want of necessities.

The Sidney-Australia exhibition has received only \$70,000 against \$1,115,000 expenses.

ALL of the newly elected officers of San Francisco took their seats on the 2d of December.

FLOOD & Co., have disposed of their interest in the Hale & Norcross and Yellow Jacket mines.

AN extradition treaty between the United States and the Netherlands will soon be adopted.

The Cuban insurgents have met with a serious reverse in the Province of Santa Clara.

The coal companies of Pittston, Pa., have voluntarily advanced the wages of the miners 10%.

Two representatives of the French government are in New York inspecting postal facilities.

PULSIFER, of the Boston *Herald*, is now the nominee of all parties for Mayor of Newton, Mass.

CHIEF DOUGLAS has returned the money he stole from Mrs. Meeker at the time of her capture.

THREE THOUSAND women are registered in Massachusetts for the coming municipal elections.

THREE Catholic Bishops are to be established in America, under the Archbishop of New York.

SPECIE received at New York from abroad from January 1st to date, aggregates \$77,184,080.

PATRICK CROWLEY has been chosen by the San Francisco Police Commissioners as Chief of Police.

The Atlantic and Great Western railroad is to be sold under foreclosure at Akron, O., January 6th.

SILVER in London 53½d; consols, 97 5-16; 5 per cent United States bonds, 105½; 4s, 106½; 4½s, 109½.

A HEAVY land slide in Niles canyon is causing considerable trouble to the Central Pacific Railroad Company.

BRITISH iron workers are cautioned in an address not to emigrate to America until assured of employment.

SIXTEEN Revenue Deputies have been captured by "Moonshiners" in Georgia, one being badly wounded.

BAKER PASHA has gone to Asia Minor, to superintend the introduction of the proposed reforms there.

AN effort is making to create a great exporting and importing point for the South and West at Port Royal, S. C.

ANOTHER attempt has been made to assassinate the Czar of Russia while on his way from Berlin to Moscow.

At Liverpool wheat is quoted at 10s 7d to 11s 6d for average California white, and 11s 6d to 11s 10d for club.

YAKOOB KAHN has departed from Cabul, which is said to mean that Afghanistan has seen the last of its Ameer.

The marriage of King Alphonso and Archduchess Marie Christine took place at Madrid Saturday, and was an imposing affair.

In San Francisco half dollars are quoted at par; trade dollars, 95 buying, 96½ selling; Mexican dollars, 96 buying, 96½ selling.

In New York Government bonds are quoted at 102½ for 4s of 1907; 102½ for 5s of 1881; 105½ for 4½s; sterling, \$4.81½@4.84; silver bars, 114½; silver coin, 3@½ discount.

A NEW RAILROAD SIGNAL.—On Wednesday last the Southern Pacific Railroad Company placed in position, at the intersection of the railroad and Valencia street in this city, a pneumatic bell or annunciator for the signaling of approaching trains. The invention, patented by the Pneumatic Manufacturing Company, is for the signaling of trains at any distance from 500 to 1,500 feet, and every car wheel passing over a lever affixed to the rail rings a bell in the station house. The fall of the lever compresses the air in a cylinder to which it is attached, and the compressed air escapes through a tube in communication with the bell at the depot. The invention will undoubtedly prove of the utmost value.

## The Free Labor Exchange.

Established by voluntary donations, for the special object of providing work for the needy and destitute, free of charge to all, continues its benevolent designs and operations. Employers of all classes of help, male or female, are earnestly requested to patronize this institution, and send their orders to the Free Labor Exchange, 33 O'Farrell St., S. F.

G. W. SCHROEDER, Manager.

We would call attention to the swine and poultry advertisements of Wm. Niles, Los Angeles, Cal, which appears twice each month.





### How to Live.

He liveth long who liveth well!  
All other life is short and vain;  
He liveth longest who can tell  
Of living most for heavenly gain.

He liveth long who liveth well!  
All else is being flung away;  
He liveth longest who can tell  
Of true things truly done each day.

Waste not thy being; back to him  
Who freely gave it, freely give;  
Else is that being but a dream;  
'Tis but to be, and not to live.

Be what thou seemest! Live thy creed!  
Hold up to earth the torch divine.  
Be what thou prayest to be made;  
Let the great Master's steps be thine.

Fill up each hour with what will last;  
Buy up the moments as they go;  
The life above when this is past  
Is the ripe fruit of life below.

Sow truth, if thou the true wouldst reap;  
Who sows the false shall reap the vain;  
Erect and sound thy conscience keep;  
From hollow words and deeds refrain.

Sow love, and taste its fruitage pure;  
Sow peace, and reap its harvests bright;  
Sow sunbeams on the rock and moor,  
And find a harvest-home of light.

### Nell's Experiment; or Must the Girls Leave the Ranch?

[Written for the Press by Mrs. RANCHER.]

#### CHAPTER I.

John and Mary, Teddie, Belle, Kittie, Tom and brown-eyed Nell, these were the children of good Farmer Hildreth.

Fifteen years ago you might have seen them all, from wee baby Nell to sturdy John, making the old home ring with their fun and frolic. But the right answer to an old-time question had taken Belle and then Mary from the family group. Ted had found his calling in the city, as a missionary among the poor. Tom, in the same city, looked forward to the day when he might call himself an engineer. Kittie was a schoolma'am; and John, even bachelor John, had found his match at last, and was settled in a home of his own. So none were left but Nellie, and she was peering over the side of the nest and pluming her wings for flight. Indeed, it was this self-same uneasiness on the part of the last fledgling that gave rise to our story.

It was noon of a lovely day in September. Nellie was stepping to and fro in her light, easy way, clearing the table after the noontime meal, while Mr. Hildreth, with chair tilted against the wall, and the bald spot on his head protected from the flies by a red silk kerchief, was scanning the latest advices from Liverpool. But even the wheat probabilities failed to fully occupy his mind at the time, for presently he looked up, and spoke as if in continuation of a train of thought.

"So you want to do something for yourself—to be independent. Is that it, Nellie?"

"Yes, sir," answered Nellie, as she deftly filled the sugar-bowl in readiness for the next meal; "and, really, I don't know as that is just the case, either. I'm independent enough as I am; but I'm growing mercenary—I want to make some money of my own."

"Natural enough, natural enough," responded the old man, "and I'm not surprised at it, for you come of that kind of stock. Your mother was earning her own bread and butter when I married her, and she's been doing the same thing ever since. We've seen some pretty close times, but I never knew her without a dollar or two laid by for a rainy day. No; it's a proper feeling, child, but it would be powerful lonesome here for your mother and me if you were to go."

The old man's voice quavered a little, and Nellie was at his side at once.

"I won't go, if you feel that way about it, father," she said. "Indeed, I could take no comfort in my earnings if I thought they were taken from your happiness and mother's. I suppose I should be wofully homesick, anyway, for I'm that when I go for a visit of a few weeks."

"Your mother and I talked this matter over last night, Nellie," continued her father, "and if you're willing to try our plan, I'll guarantee you'll make as much clear money as Kittie does, and stay at home, too, by Jemima Joram!"

Jemima Joram was the sum total of Farmer Hildreth's profanity. His sons, nor his daughters, nor even his nudes had ever heard him use any stronger word than this. Once when his wife remonstrated with him on the frequent use of his favorite expletive, he had said: "I'll leave it off, Mattie, if you'll stop drinking strong

tea. Jemima Joram don't hurt any one, while I believe the tea does hurt you." But Mrs. Hildreth clung to her tea, and Jemima Joram was called upon as frequently as ever.

"Why, father, how; pray tell me how?" said Nellie.

"You know, daughter," replied her father, "that to each of my children, as they have started off in life, I have given a small portion; not much to be sure, but something for a send off. As I have done by the others, I want to do for you. Kittie makes \$65 a month and pays \$20 for board, so she clears \$45. She teaches at the outside 9 months in the year; 9 times \$45 is \$405. Our idea is for you to go into the poultry business. As a start, we will give you the use of the fowls, chicken-house, coops, etc., for three years if you want them so long. When you are ready to give it up, you must return us the same number of fowls as there are now, and the buildings in good repair."

Nellie thought soberly for awhile, as she put the dishes away in the cupboard. Her mother had come in as they talked, and now sat gently rocking in her low old-fashioned chair. She thought over her dreams of laying up something herself. She could not think but what her father was mistaken in counting her gains from his plans so large. Still, if her father and mother really wanted her, would it be right to leave them? She glanced at her mother. Mrs. Hildreth's head rested wearily against the back of the chair. The snow lines were very plain in the soft hair, this kindly face was seamed by many cares. Nellie's resolution was taken and she spoke heartily.

"I'll try it, father, and we'll see if this ranch has resources for girls as well as boys. There's one thing more you must throw in, mother," she added.

"What is it, Nellie?"

"Your experience," replied Nellie.

"My experience you shall have, and there are several other things which your father has not mentioned yet," said Mrs. Hildreth. "The run of the ranch for one. Then I shall need some help about my work. If you were to go away, I should be obliged to keep a girl at not less than \$15 a month; counting \$10 for her board, would swell it to \$25. She would probably assist me 10 hours a day. Now, if you will help me until two o'clock Mondays and Tuesdays, and two hours a day the rest of the week, you can have your board."

Mr. Hildreth had stepped to his secretary, and was busily engaged.

"What are you doing there, father?" called Nellie.

"Come and see," he replied.

Nellie leaned over his shoulder, and read from the first page of a new account book:

#### POULTRY RECORD.

An exact account of the gains and expenditures of

N. E. HILDRETH,

For a term of three years.

"It seems to me that sounds like business," said she.

"Business is what I mean," replied her father. "I want to know what you can make."

"Let's go down this very evening and take an account of stock," said Nellie, entering into the spirit of the thing.

"By the way," said Mrs. Hildreth, "I made up my mind this morning, if Nell gave up her scheme about teaching, I must give up my strong tea."

"Whew!" whistled Farmer Hildreth. "Then goodby to Jemima Joram," and he strode away to see to his men.

"I guess we'll have to call the first chicken 'Reformer,' if all this good is brought about," said Nell. "And now, then, I'll get that slipper case I'm working for Ted, and then I'll be ready for your first lecture."

"I can't lecture, child," replied Mrs. Hildreth, as Nellie seated herself. "I should mix matters up so you would never be able to arrange them in your mind. But if you will leave the first four leaves in your book blank, I will write out a series of remarks, as you may need them."

Evening found them counting the fowls. Eighty-nine hens, 15 roosters, 45 young chicks, 7 hen-turkeys, 5 gobblers, was the live stock, all told. One large chicken-house, built conveniently and so that no strange animal could enter it, 12 well-made coops, and a small yard for young fowl, comprised the rest.

When Nellie went to make her first entry in her new book she found there:

REMARK I.—Eggs are low now, and there is no better time for raising young chicks. Set the three hens we found on the nests last night. Thanks to insect powder, there are no mites to battle; but an ounce of prevention you had better use, in the shape of a little powder sprinkled under each sitting hen, lest the powder of cure be needed before you are aware.

A month later, eggs commenced to bring good prices, and thus called forth—

REMARK II.—Now is the time to feed the hens stimulating food.

So Nellie, through her father, bought an occasional sheep (they were very low that fall), and the egg basket overflowed.

She was surprised to see how her money counted up. Expenses were light.

One morning, in the very first of the trial, her mother had said, giving her a piece of hog's liver: "Here, daughter, we never want more than one meal of that sort of meat; chop that up for your hens." And Nellie had replied decidedly: "No, mother; that won't do. If I am really to see what I can make, you must not bear the expense, nor a part of it."

"I suppose you are right, daughter," said her mother. "How would you like, then, to buy

these odds and ends, and pay me in work?"

"First-rate," replied Nellie. "What do you charge for that piece of liver?" "Seven minutes," said Mrs. Hildreth, and seven minutes were duly entered in the big book to her credit. On the other hand, Mrs. Hildreth paid the regular market price for all the products of the poultry yard consumed by herself.

Nellie found that her chickens, paying for her board, and earning little things by work, such as churning for what sour milk she wanted, keeping the winter's vegetables and fruit free from decayed portions for refuse and peelings, occupied on an average six hours a day. The rest of the time found her free to sew and practice her music, to visit and read, and enjoy herself in whatever way she pleased. And her work was such that, by planning beforehand, she could have almost the entire day for a picnic when, in the spring, picnics came along.

[To be continued.]

### Etiquette of Conversation.

Do not manifest impatience.

Do not interrupt another when speaking.

Do not find fault, though you may gently criticize.

Do not talk of your private, personal and family matters.

Do not appear to notice inaccuracies of speech in others.

Do not allow yourself to lose temper or speak excitedly.

Do not allude to unfortunate peculiarities of anyone present.

Do not always commence a conversation by allusion to the weather.

Do not, when narrating an incident, continually say, "you see," "you know," etc.

Do not talk very loud. A firm, clear, distinct, yet mild, gentle and musical voice has great power.

Do not be absent-minded, requiring the speaker to repeat what has been said that you may understand.

Do not try to force yourself into the confidence of others. If they give their confidences never betray it.

Do not use profanity, vulgar terms, slang phrases, words of doubtful meaning, or languages that will bring the blush to anyone.

Do not intersperse your language with foreign words and high sounding terms. It shows affectation, and will draw ridicule upon you.

Do not carry on a conversation with another in company about matters which the general company knows nothing of. It is almost as impolite as to whisper.

Do not speak with contempt and ridicule of a locality where you may be visiting. Find something to truthfully praise and commend; thus make yourself agreeable.

Do not make a pretense of gentility, nor parade the fact that you are a descendant of any notable family. You must pass for just what you are, and must stand on your own merit.

Do not contradict. In making a correction say, "I beg your pardon, but I had an impression that it was so and so." Be careful in contradicting as you may be wrong yourself.

Do not be unduly familiar; you will merit contempt if you are. Neither should you be dogmatic in your assertions, arrogating to yourself much consequence in your opinions.

Do not feel it incumbent upon yourself to carry your point in conversation. Should the person with whom you are conversing feel the same, your talk will lead into violent argument.

Do not make a parade of being acquainted with distinguished or wealthy people, of having been to college, or of having visited foreign lands. All this is no evidence of real genuineness worth on your part.

Do not use the surname alone when speaking of your husband or wife to others. To say to another that "I told Jones," referring to your husband, sounds badly. Whereas, to say, "I told Mr. Jones," shows respect and good breeding.

Do not yield to bashfulness. Do not isolate yourself, sitting back in a corner, waiting for some one to come and talk with you. Step out; have something to say. Though you may not say it very well, keep on. You will gain courage and improve. It is as much your duty to entertain others as theirs to amuse you.

Do not aspire to be a great story-teller; an inveterate teller of long stories becomes very tiresome. To tell one or two witty, short, new stories, appropriate to the occasion, is about all that one person should inflict on the company.

Do not indulge in satire; no doubt you are witty, and you could say a most cutting thing that would bring the laugh of the company down upon your opponent, but you must not allow it, unless to rebuke some impertinent fellow who can be suppressed in no other way.

Do not spend your time in talking scandal; you sink your own moral nature by so doing, and you are, perhaps, doing great injustice to those about whom you talk. You probably do not understand all the circumstances. Were they understood, you would doubtless be much more lenient.

Do not flatter; in doing so you embarrass those upon whom you bestow praise, as they may not wish to offend you by repelling it, and yet they realize that if they accept it they merit your contempt. You may, however, commend their work whenever it can truthfully be done; but do not bestow praise where it is not deserved.—*Hill's Manual of Social Forms.*

### Ethics of Money-Getting.

The following is an abstract of a lecture recently delivered at the Independent Church, Oakland, by Rev. N. E. Boyd:

The desire to make money is a common characteristic of our race. Every man wants to acquire property, i. e., to be able to direct labor and to control its products. This acquisitiveness (as phrenologists term it), being a universal propensity in human nature, must be viewed as divinely implanted, necessary and salutary, yet requiring checks and balances to keep it within proper limits.

How convenient and agreeable it is to have money, we all know very well; there are few boys or girls 10 years of age who have not begun to understand that. As they grow up and find how many things good and pleasant, nay, indispensable, money and nothing but money will purchase, they often come to regard money-getting as of all things the most important. Not so often do they come to realize that all valuables which can rightfully be bought and sold involve the labor of some one.

"The world owes every man a living." A true maxim; but true only when married to its counterpart, which is this: *Every man owes the world a life*, a life of honest usefulness, of hearty service.

Those things which contribute to our living are furnished partly in the raw material of the planet, and partly through the activities of mankind—ourselves and others. We are each entitled to this use and enjoyment of a fair proportion, not only of the necessities, but also of the comforts and amenities. But this right is bound up inseparably with a duty, viz., that each contribute his or her share of the work involved in the grand total of things needful, helpful and delightful to mankind. In short, we must each of us pay for what we have, and pay in useful labor of some sort, mental or manual. If we get our living without earning our living, we are either thieves or paupers. No matter how much money you or I may have inherited, how "independent" we may be in our circumstances, we owe the world a life; and our "sphere" is where we can, all things considered, effect the most for the good of the whole. There is need of brain-work and hand-work, rough work and fine; there is work of some sort for us each and all. And those who are freed from the cramping necessity of drudging for their daily bread should dedicate themselves all the more sacredly to such work as the world is suffering for lack of, and cannot always pay for in coin or bank notes. Each one should have his portion; each, also, must do his portion, else another, somewhere in creation, is defrauded and suffers need.

Those people who are more concerned about doing their full share in furthering human welfare and happiness, are the generous. Those who will do their stint and mean to have their pay for doing it, are the just. While all those who care little about doing their part, but are bent on getting their part—and if possible some one's else, beside—ars the mean, grasping, selfish, covetous.

"Take heed and beware of all covetousness;" of seeking to gain possession of the products of others' toil, without rendering them a full equivalent; or still worse, by pandering to their vices for the sake of lucre.

Herein lies the wickedness of all gambling; essentially covetous itself, it ever begets more covetousness. There is no exchange of values, but whatever one wins, another loses; the successful gambler preys upon the unsuccessful; the good fortune of any implies the misfortune of some other. No wholesome thirst is slaked, no value is created by all the activity of the players; they only band together to cheat each other and mutually whet cupidity. The loss of one party is uncompensated, the other's winnings are unmerited and the covetous propensities of both are fostered and increased. Hence, all games of chance, with stakes however trifling, tend to demoralization, and should be utterly avoided and discouraged. We should constantly, and as a matter of principle, refuse to take any part in lotteries or raffles under any pretext whatever. Let us not do evil that good may come!

It is a searching question: What am I living for? But let us each one learn to put it to self with an unsparring and unflinching fidelity. Am I living for short-lived, selfish ends, or for all time and human interests? Am I merely getting my living out of the world, or am I giving the world a manly or a womanly life?

As our boys and girls are coming up to face life, ask its meaning, and begin to shape their plans, let us see to it that they are imbued, nay, enkindled with generous desire to be of all the use—to put themselves to the best use they can. It is of serving they should be emulous, rather than of being served. Incite them to look around in search of something that humanity is in especial need of having done, and to make it their business and their chief ambition to do that well, with their might, "not so anxious about the reward as the work." (The reward will come, yet not so surely if it be made the foremost object of solicitude.)

Call it utopian, visionary, who will: "nons the less the dream abides" and must at length be realized of the day when no child of man will be found so mean and undeveloped as to live contentedly "on the interest of his money," or by snatching at unearned booty out of passing tressure, or in anywise without minister-



ing at least as much to others as others minister to him.

The lecturer closed with these words from Emerson: "I hope America will come to have its pride in being a nation of servants and not of the served. How can men have any other ambition where the reason has not suffered a disastrous eclipse? Whilst every man can say: I serve, to the whole extent of my being, I apply my faculty to the service of mankind in my especial place, he therein sees and shows a reason for his being in the world, and is not a moth or incubraunce in it. \* \* \* As the tree exists for its fruit, so a man for his work. A fruitless plant, an idle animal, does not stand in the universe. They are all toiling, however secretly or slowly, in the province assigned them and to a use in the economy of the world."

### Chaff.

When the boarders in a certain Philadelphia boarding house complain of the butter, the landlady silences them by pointing to that portion of the wall on which hangs a card, reading: "To the pure all things are pure."

A CRUSTY old bachelor, not liking the way his landlady's daughter had of making free with his hair-oil, filled the bottle with liquid glue the day before a ball to which the young Miss had been invited, and she stayed at home!

ASTRONOMY VS. GASTRONOMY.—"Julius," said a Brooklyn gentleman to his colored servant, "don't you enjoy the astronomical phenomena these fine evenings?" "Dunno, sah," responded the darkey; "mush-mellons are my favorite fruit."

AN OLD man, intent on making his will, was asked by the lawyer the name of his wife, when he gravely replied: "Well, indeed, I really don't recollect what it is. We've been married for upwards of forty years, and I've always called her my old woman." The lawyer left a blank, to be filled up when his old woman's name was ascertained.

A MAN who made it a business of writing obituaries, epitaphs, etc., used to solicit patronage far and near. Hearing of the death of a man in a distant part of the country, and business being a little dull, he made a journey there. Finding the widow of the deceased person, he stated his occupation and asked if she wouldn't like a few lines about her husband. "Lines about him!" she said woefully; "he had all the lines he wanted. If he had had one line less, he would have been alive to-day." "What ailed him, madam?" "He was hung."

HEARTLESS SCIENTIST—"Miss Adelina, permit me to ask your acceptance of my hand—"

Gushing Maiden—"Ob, professor, so sudden—"

Heartless Scientist (continuing)—"My—er—hand-book of the Buddhist psychology and ethnology of the Hindoos."

Collapse of G. M.

"WHEN I with a little boy," lisped a very stupid society man to a young lady, "all my ideath in life were thentered on being a clown." "Well, there is at least one case of gratified ambition," was the reply.

SOME of the hotels have bills of fare with the fly-leaf covered with cards of various business houses. An Oregon man recently took a seat behind one of them, when the waiter appeared with, "What will you have, sir?" To the utter confusion of the waiter, he leisurely remarked: "You may fetch me a new set of teeth, in gutta percha; an improved sewing-machine, with patent lock-stitch; and a pair of No. 7 calf-skin French boots." In a moment the waiter replied: "We do not furnish those articles." "Then what have you got them down on the bill of fare for?" retorted the customer.

FARM LIFE.—A writer in *Scribner's Magazine* asserts that the farmer, having the most sane and natural occupation, ought to find life pleasant. He alone, strictly speaking, has a home. How can a man take root and thrive without land? He writes his history upon his field. How many ties, how many recourses he has; his friendship with cattle, his team, his dog, his trees; the satisfaction in his growing crops, in his improved fields; his intimacy with nature, with bird and beast, and with the quickening elemental forces; his co-operations with the clouds, sun, seasons, heat, wind, rain and frost. Nothing will take the various social distempers, which the city and artificial life breed, out of a man like farming—like direct and loving contact with the soil. It draws out the poison. It humbles him; teaches him patience and reverence, and restores the proper tone to his system. Cling to the farm, make much of it, put yourself into it, bestow your heart and your brain upon it, so that it shall savor of you and radiate your virtue after your day's work is done.

AGRICULTURE.—In a late address by Gov. Seymour, who is a farmer, discussing the influence of farming, he said: "Agriculture has always been known as the basis of civilization with all people. But it has rarely happened in the world's history that it has wrought out such marked and rapid changes in the credit and prosperity of a government as those which we now witness in our land. It could never before be said, with even a show of plausibility, as I now say, in full faith, that American farmers, beyond lifting up their government from its low financial condition, beyond giving food to suffering classes in other lands, exert a potent influence in the political affairs of the civilized world."

## Young Folks' Column.

### Our Puzzle Box.

#### Numerical Enigma.

I am composed of 14 letters.  
The 7, 12, 9, 10 is a snare.  
The 1, 5, 11, 4 is a vessel.  
The 3, 8, 13 is to fix firmly.  
The 6, 2 is a negation.  
The 14 is in youthful.

The whole was an important event connected with the history of our country. UNCLE CLAUDE.

#### Transpositions.

1. P-u-r-e-o-o-r-i, spells what large lake?
2. N-o-s-h-u-d, spells what great river?
3. S-o-r-e-w-e-n-l-a-n, spells what Southern city?
4. D-o-d-h-a-c-k, spells what salt-water fish?

MELANCHTON.

#### Arithmetical Problem.

A man went into a store and said to the proprietor: "If you will give me as much money as I have now, I will spend six cents." The storekeeper complied, and the man spent six cents. He then went into another store and made the same bargain. He tried the third store, with the same result, when he found his money all gone. How much money had he when he entered the first store? W. H. G.

#### Letter Changes.

1. I am a small bay: Change my initial, I am a contest; change again, I am altitude; again, I am to illumine; again, I am darkness; again, I am correct; again, I am vision; again, I am opposed to loose.
2. I am to throw: Change my initial, I am rapid; again, I am the final; again, I am a ship's spar; again, I am immense.
3. I am a cake: Change my initial, I am amusement; again, I am a weapon; again, I am an inhabitant of a convent; again, I am a witty saying; again, I am to proceed rapidly.

PHAROS.

#### Answers to Last Puzzles.

CROSS-WORD ENIGMA.—Mississippi.  
SYNOPSIS.—1. Wear, war. 2. Part, 'pat. 3. Read, red. 4. Bard, bad.  
CHARADE.—Can-non (nun.)  
BURIED CITIES.—1. Saco. 2. Bath. 3. Macon. 4. Lancaster.  
DIAMOND PUZZLE.—

R  
N  
E  
T  
B  
A  
C  
O  
N  
R  
E  
C  
E  
I  
P  
T  
W  
E  
I  
G  
H  
O  
P  
E  
T

### Making Things Beautiful.

"Dear me, but she's a fright of a doll; just look, Marsie Bernard, just look at her face;" and Bell Stevens held the "fright" quite out at arm's length, with a contemptuous toss of her rizzled head and a contemptuous look in her eyes.

Marsie looked up for an instant and then down at the ribbons she was twining through her fingers, wondering as she twined, how a doll with wax cheeks and flabby hair that would comb could be a fright, and wondering if she would ever have a doll with such wonderful dresses, all flounced and frilled, such cunning hats and stockings and shoes, and thinking of the homely rag baby, Jessamine, which she had so fondly sung asleep before she came away and tucked snugly in the cradle in the corner.

"The girls have such sweet dolls," continued Bell, partly to herself, "and as to clothes, deary me, I am just ashamed for any body to see these frights," and she threw the abused doll down at her side, greatly risking her head altogether, and turned again to Marsie.

"What kind of dolls are yours at home? Are they very fine?"

"I only have one," said Marsie, softly. "It is a grand one then, I suppose. I'd rather have one and have it just the nicest kind, you know, than to have all these frights."

Marsie was still for an instant. She would rather not have told Bell Stevens about Jessamine at home; it was very hard to own that her doll was not grand, and was only a rag doll with the plainest kind of clothes. Bell had taken for granted that it was a fine dolly and already was envying it; how easy to say nothing and let her continue to think it fine. But Marsie was too true to deceive; the next instant she was saying:

"Jessamine is only made of rags, and her clothes are not fine at all, but I love her and she is pretty to me."

"Made of rags! I don't know what you mean, but then she has some kind of a fine face?"

"Not nice like your doll's, for it is only of rags."

"Now, Mrsie Bernard, I most don't be'ieve you!"

"Mamma made her and I love her," said Marsie, thinking regretfully of having been ashamed of her.

Bell came and knelt down quite close to Marsie as she sat on the floor, and twining back the long golden curl that had fallen over her face, stooped to look in the blue eyes and see if they were "telling true."

"Hasn't she any hats?" continued Bell, "nor any shoes to take off? and has she nothing but rag checks, and no wax at all?"

She leaned over and picking up the fright she had cast down, began smoothing the rumpled hair as she asked:

"Why hasn't Jessamine fine clothes?"

"Mamma hasn't no time to spare; she sews and sews everybody's things to get money for me and Bobbie, and then she is too pale and tired to sew for dolls."

"Hasn't she one single flounced frock?"

"No, none flounced, but p'ain are pretty enough."

Bell was picking up one dress and pretty nickerack after another and tossing it down again.

"Flaxy has lots of dresses, and so have all

my dolls, only I don't think them nice. Is Jessamine as big a Flaxy?"

"Almost, I guess; only not so nice except to me."

"Flaxy has lots of things. She can sparo these," holding up some pretty dresses and fancy doll fixings. "I know mamma will not care if I give them to Jessamine. I will run this minute and ask her."

Marsie was too glad when Bell came back to say many words of thanks, but the happiness in her eyes was enough to tell the story.

"But Flaxy is a fright—now don't you think so, Marsie?" Bell began, again coming back to the original point.

"You have spoiled her a little, but she is sweet, I think."

"Prettier than Jessamine?"

"Jessamine is only rags, you know, so she cannot be pretty only to me."

"How can she be pretty to you?"

"Because I love her, and mamma made her for me."

"That don't make her pretty."

"Mamma says it is our own eyes and hearts that makes things ugly or beautiful."

"I don't believe I know what you mean."

"Why, don't you know when you look at Flaxy if you think about the ugly things she will be nglly, but if you think how blue her eyes are, and how pretty her hair, and try to find the pretty things about her, she will be pretty to you? That is what mamma means when she says things are beautiful or ugly as we make them so by our own eyes and hearts."

"I cannot help seeing that her nose is stubbed and her face all scratched up."

"No, but her face is only a little scratched, and her nose a little speck stubbed, and I'd try to forget about that—forget to hunt for the scratches."

"Oh, I know I do keep hunting for the scratches. Of course, if I did not look close, I could not see them; and after all, she must be a great deal better than a doll made of rags;" and as Bell, after trying around her a pretty ribbon, held her off once more at arm's length, gave her an approving glance, she said very earnestly:

"Marsie, do you know I believe it must make people always happy to be looking only for the beautiful things?"

## GOOD HEALTH.

### How not to Take Cold.

Dr. Beverly Robinson, discoursing upon the subject of "colds and their consequences," gives the following useful advice: If you start to walk home from a down-town office, he said, and carry your coat on your arm because the walking makes you feel warm, you are liable to take cold. Therefore don't do it. If you should take the same walk after eating a hearty dinner, your full stomach would be a protection to you, but even then my advice would be, don't take the risk. A person properly clothed may walk in a strong wind for a long time without taking cold, but if he sits in a room where there is a slight draft, he may take a severe cold in a very few minutes. Therefore don't sit in a room where there is a draft.

Unless you are affected by peculiar nervous conditions, you should take a cold sponge bath in the morning, and not wash yourself in warm water. Plunge baths in cold water are not recommended, neither is it necessary to apply the sponge bath all over the body. Occasional Turkish baths are good, but those who have not taken them should be advised by a physician before trying them. Warm mufflers worn about the neck do not protect you against taking cold, but on the contrary render you extremely liable to take cold as soon as you take them off. They make the throat tender.

Ladies ought to wear warmer flannel under-clothing than they now do, if one may judge from the articles one sees hanging in the show-windows of the shops. People take cold from inhaling cold air through their mouth often, perhaps, than by any other way. Ladies dress themselves up in heavy furs, go riding in their carriages, and when they get home, wonder where they got that cold. It was by talking in the cold open air, and thus exposing the mucous membranes of the throat. The best protection under such circumstances is to keep the mouth shut. If people must keep their mouths open in a chilly atmosphere, they ought to wear a filter.

Above all, be careful of your feet in cold damp weather. Have thick soles on your shoes, and if caught out in a rain which lasts so long as to wet through your shoes despite the thick soles, put on dry stockings as soon as you get home. But in cold, wet, slushy weather don't be caught out without overshoes. Rubbers are unhealthy, unless care is taken to remove them as soon as you get under shelter. They arrest all evaporation through the pores of the leather. Cork soles are a good invention.

When you go into the house or your office, after being out in the cold, don't go at once and stick yourself by the register, but take off your coat, walk up and down the room a little, and get warm gradually. Warming yourself up over a register just before going out in the cold is one of the worst things you can do. Never take a hot toddy to warm you up unless you are at home and don't expect to go out of the house again till the following morning. In short, make some use of your common sense, and thus emulate the lower animals.

## DOMESTIC ECONOMY.

### Roast Pig.

Read Charles Lamb's inimitable essay, and then practice as directed by the Chicago *Tribune*, in the following: A suckling pig is in its best estate for roasting when three weeks old, though it will furnish remarkably fine eating if its life is protracted till even twice that age. Some dainty people object to eating the flesh of full grown hogs, because they are filthy creatures that wallow in the mire, and eat all sorts of food. But these objections cannot be brought against the young pig. The young pig is the type of cleanliness. It is the most attractive and best developed of all the young animals. It sleeps on clean straw, green grass or sweet clover. It eats nothing but pure milk. There is no more guile in its disposition than in that of a young lamb or dove. It is a creature to be admired for its beauty. It has not, like the calf, too much bone for its flesh, or like the hog, too much flesh for its bones. It is an example of symmetry.

It is less trouble to dress an old pig than an old turkey, goose or hen. It is easily captured while taking nourishment from the maternal fount. With the hand still hold of the hind legs, a thin-bladed knife should be thrust into its neck. The bold need not be loosened till its young life is extinct. It is easily scalded in a pail of hot water. About a minute is sufficient for the operation. If the bristles do not start readily, it may be dipped again. The water should not be too hot, or the scalding too long continued, as the skin will be rendered very tender. A little powdered rosin will be of use in removing the bristles. After the skin has been scraped the entrails should be removed, as from a pig of larger growth. The eyes should then be removed and the nostrils cleaned with a cloth around a stick. The carcass should be thoroughly washed in cold water.

It is usual to serve the pig whole, the body being stuffed with cracker or bread crumbs flavored with sage. As all do not relish the taste of onions, it is better to omit them. If desired, they may be served as a side dish. It requires about three hours to roast or bake a pig of the age of three weeks. If older than this, more time is wanted. To preserve the ears and nose in good condition it is well to cover them with paper till the cooking is nearly completed. Some place paper over the loin, as that requires less cooking than the hams and shoulders. From time to time the pig should be basted with fat, or the gravy that tries out during the basting or roasting. When sufficiently cooked, the skin will be a light cinnamon brown, and very crisp. It is usual to put a bunch of flowers in the mouth of a pig before taking it to the table, and to ornament the platter with cress or parsley.

A roast pig differs from most kinds of meat or fowl, in the circumstance that there is very little choice between the different parts. Every cut is excellent, juicy, tender and delicately flavored. The skin is especially fine eating. Cold roast pig is to be preferred to cold pork, veal, beef or mutton. It is an admirable dish for supper, luncheon, or picnic. In truth, it is good at all times and seasons. As the flesh of roast pig is very tender, it must be carved with a sharp knife. As the head of a young pig is preserved merely as a matter of ornament, some persons do not take the trouble of saving it. If the head is removed previous to cooking, the pig may be prepared for cooking by dividing it into halves. The two halves may then be placed back to back in the baking pan, and cooked as meats usually are. Whichever way the pig is cooked, care should be taken to render the skin brown and crisp.

BLEACHING FEATHERS.—A new method is said to have been devised for bleaching feathers, which, it is thought, will supersede those methods now and previously resorted to. This improved practice rests on the interesting fact that feathers immersed in resinous essences—such as turpentine and other hydro-carbureted oils from distillation of resinous juices in general, or in like oils, in lavender, thyme, etc., or in bituminous hydro-carbons—are discolored under the action of light and heat. The feathers, especially ostrich plumes, are kept in the vessels a longer or shorter time, according to the degree of bleaching intended, at about 86° Fah., while exposed to light as much as possible. In three or four weeks they are dried and prepared according to known methods.

CRANBERRY DUMPLING.—One quart of flour, one teaspoonful of soda, and two teaspoonfuls of cream of tartar, sifted together; mix into a soft dough with sweet milk; roll the dough out very thin in oblong shapes, and spread over it one quart of cranberries, picked and washed clean; add half a pound of sugar, sprinkled evenly; fold over and over, then tie in a pudding-cloth and put into steamer, where let it cook over a steady fire for one hour, with faith, never looking into the pot. Serve with a sweet wine sauce.

WHEAT CAKES.—Three cups flour, two cups Indian meal, white; dissolve one small cake compressed yeast in a cup of water, pour into a jar, add flour and meal; mix with lukewarm water to a stiff batter, set in warm place to rise over night; next morning add a tablespoonful syrup, one teaspoonful salt, one teaspoonful soda; bake on a hot griddle.





DEWEY &amp; CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 202 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES, 1 week. 1 month. 3 mos. 12 mos.  
Per line.....25 .80 \$2.00 \$5.00  
Half inch (1 square).....\$1.00 \$3.00 7.50 24.00  
One inch.....2.00 5.00 14.00 40.00

The Scientific Press Patent Agency.

DEWEY &amp; CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

Quack Advertising positively declined.

Our latest forms go to press Wednesday evening.

SAN FRANCISCO:

Saturday, December 6, 1879.

## TABLE OF CONTENTS.

**EDITORIALS.**—Some New or Little-Known Pears—No. 2; The Ennobling of Hay; Another Method of Keeping Wheat; Australian Wheat Yield; Startling Report About English Wheat; Condition of Cyprian Olive Orchards, 353. The Week; The Study of Political Economy; Meeting of the State Horticultural Society, 360. Letters from Southern California—No. 6; The Asbestine System of Soil-Irrigation, 361. Will the Breeding of Percheron-Norman Horses Pay as a Future Business? 364.

**ILLUSTRATIONS.**—The Keiffer Seedling Pear, 353. Arrangement of Pipes in Asbestine Sub-Irrigation System, 361. Percheron-Norman Stallion, "Romulus," Owned by M. W. Dunham, Wayne, Du Page county, Illinois, 364.

**CORRESPONDENCE.**—From Percedero to Santa Cruz; "Gordo Viala"; Bluestoning Wheat, 354. Agricultural Society Meeting; The Proposed Commissioner of Agriculture, 357.

**FLORICULTURE.**—California Polydory, 354-55. **THE FIELD.**—Another Ray of "Sunshine"; Nature's Farming, 355.

**THE PUBLIC LANDS.**—Home Making on the Red Lands, 355.

**THE STOCK YARD.**—A Reward for an Improved Stock Car, 355-62.

**PATRONS OF HUSBANDRY.**—Nationality of the Grange; The National Grange; Resolutions of Respect, 356.

**AGRICULTURAL NOTES** from the various counties of California, 356.

**NEWS IN BRIEF** on page 357 and other pages.

**HOME CIRCLE.**—How to Live (poetry); Nell's Experiment; or, How the Girls Leave the Ranch? Etiquette of Conversation; Ethics of Money-Getting; Chaff; Farm Life; Agriculture, 358-59.

**YOUNG FOLKS' COLUMN.**—Our Puzzle Box; Making Things Beautiful, 350.

**GOOD HEALTH.**—How not to Take Cold, 359.

**DOMESTIC ECONOMY.**—Roast Pig; Bleaching Feathers; Cranberry Dumping; Wheat Cakes, 359.

**MISCELLANEOUS.**—Ancient America; An Important Engineering Scheme, 362.

## Business Announcements.

Hannay's Nursery—Jno Hannay, San Jose, Cal.  
Los Angeles Nursery—Milton Thomas, Los Angeles, Cal.  
\$3 Printing Press, Kelsey & Co., Meriden, Conn.  
Real Estate—Lingley & Beatty, S. F.  
Assesment Notice—California Fruit Growing Association.  
Napa Valley Poultry Farm—R. G. Head, Napa, Cal.  
Mission Rock Dock and Grain Warehouse, S. F.  
Situation Wanted—J. Shoer, 639 Mission St. S. F.

## The Week.

The beating of the raindrops has sounded a rousing *encore* to last Thursday's Thanksgiving. All the upper part of the State has been drenched generously, and the lower edges of the storm, so far as reported, seem to have moistened the coast counties as low as San Luis Obispo, and to have trailed thence across the State to the foothills of Tuolumne. Thus the blessing seems to have been bestowed up to this writing. The clouds are still lurking about the horizon and possibly the end is not yet. The amount of rain for the season in San Francisco is now 5.15 inches, about twice as much as during the two preceding years. Probably enough has now fallen in most of the northern counties to ensure a month of work and growth, even if the clouds should now wait to baptize the new-born decade of the '80's.

The winter of political discontent is now fairly begun, as Congress has opened and there is a vast amount of president-making to be carried out, as well as some small measures for the popular benefit. In the city, the political excitement has culminated in the quiet induction of the new staff of municipal officers, and all will now await with interest the new demonstration of the relation between precept and practice. Soon now we shall have the opening day of the new regime at Sacramento. In fact, all things seem to indicate a busy winter both for the worker and the talker, and there will be no excuse for idleness. The coming summer will prove clearly which has worked best for the public welfare and his own.

A TELEGRAM from London says: Hereafter sheep exported from the United States will not be required to be slaughtered at the place of landing; the restriction in consequence of the foot and mouth disease having been removed.

## The Study of Political Economy.

An eminent English writer in a leading American periodical\* holds that political economy is not a science, and argues lucidly in support of his view. Upon this leading point, however, the doctors disagree, and we are willing that they should have the full enjoyment of their discord. We find in the lateral branches of this writer's argument certain statements, definitions and allusions which seem to us of the utmost importance, and we use them as a text upon which to found an exhortation.

In this age of our country, which may, we think, be fitly termed its industrial age, it seems especially desirable that those actively engaged in the development of our industries should put forth extra effort to inform themselves as fully as possible concerning the laws which underlie production and trade. Our understanding of the natural laws and of the material which are involved in our work is advancing most rapidly through the discoveries of scientific investigators and in the light of experience. It cannot be doubted that this branch of our industrial education is progressing faster than is our understanding of the laws which underlie success in production and trade as embodied in political economy. The plain inference is that our minds should be rounded up in this direction, and therefore we commend all our readers who are not familiar with the subject to give a part of the coming winter evenings to the study of political economy. For the young man of sober mind, and possessed of a desire to master some of the world's most practical problems, the study of political economy affords an opportunity for self-culture easily attainable and very satisfactory.

We find in the article alluded to above, the most direct commendation of political economy to the ordinary reader. The writer fitly denounces the style adopted by some economical writers, and which he attributes to their overweening desire to make a "science" of their subject, as though, forsooth, in making their meaning obscure by the adoption of ingenious and uncommon terms, they could elevate the theme to the plane of the exact sciences. As this writer forcibly observes:

"The language of every-day life was cast aside, and that of intellectual casuistry put in its place. Merchants, traders and artisans found matters which occupied their conversation every hour wrapped up in language new, hard and unfamiliar, and this, he it carefully observed, on matters which they felt no want of good and expressive words to discuss. Had they been in search of astronomical or geological information, unusual language would have seemed natural; they would have had the feeling of their own ignorance and of the abstruse nature of the subjects. But to hear huying and selling, talked of in hard words and scientific formulas, could only repel them from listening. They called it jargon. Can anyone after this be surprised that a scientific economist is the one person whom every one turned away from on questions of supreme economical importance?"

But this writer does not stop with the denunciation of those who have succeeded in making economical principles obscure and unintelligible. He gives a most encouraging and truthful definition of what political economy really is, and we commend his words to those who may be prompted to take up the line of inquiry which we have advised. He writes as follows:

"Political economy stops at common observation. Unlike geometry and chemistry, it has no beyond. It does not reveal a single new truth which, in some form or other, was not previously known and acted upon by men possessed of natural sagacity. It examines and takes to pieces common processes which underlie the economical action of all men. It shows what they are—why intelligent men have practiced them as the obviously true and natural course to adopt. It discerns the rules which have governed their action, and it can speak of laws, but so also can the laborer, who knows that a vigorous hoeing will greatly enlarge the crop of turnips. Political economy is not a science, but a body of systematic knowledge, gathered from analyzing common processes which the human race has pursued at all times with greater or less efficiency. Its vocation is to unravel the complications of industry and trade, and to apply the suggestions of common sense and natural sagacity to the processes they employ.

Such, in brief, is the study which all our wide-awake industrialists, who have hitherto neglected it, should make a part of their winter's intellectual work. The facts and the deductions from facts which they will acquire and master will give many of them new insight into the causes which underlie success and failure in the world of industry, and there will be many points gained for guidance in individual affairs. At the same time, too, those who pursue the study conscientiously will find their intellectual powers strengthening and sharpening as they proceed, and the result will be that their fathers will have better sons, their children better fathers, and the State better citizens, both as electors and legislators. And the State has need of such a gain.

\*"Is Political Economy a Science?" by Prof. Bonamy Price, in *North American Review* for December.

## State Horticultural Society Meeting.

The November meeting of this Society was held at Y. M. C. A. Hall on the 29th ult., President Hilgard in the chair. There were about thirty members present, including several ladies. The minutes of the last meeting were read and approved. Ten applications for membership were announced, which will be acted upon at the next meeting. The report of the committee on amending the constitution, was read by the Secretary, and the amended instrument will come up for adoption at the next meeting. Upon motion, the document will be printed and sent to members before that time.

The meeting was graced by the exhibition of several handsome horticultural products. Mr. Rixford showed the blossom spike of a date palm, cut from a seedling grown in Sonoma; also some fine Japan persimmons just ripening on trees imported by him three years ago; also some jujubes, plucked and upon the branches, apparently growing to perfection. These were all from the ranch of L. P. Rixford of Sonoma. Dr. Strentzel, of Martinez, showed in contrast with Mr. Rixford's Japan persimmons, some grown upon a seedling tree. They were not larger than walnuts and showed that in this, as in so many other varieties of fruit, reliance must be placed upon grafted stock.

The Secretary showed a beautiful Olivia lemon from the originator, G. C. Swan, of San Diego, which was viewed with much interest; also some almonds from Leonard Coates, of Yountville, for a name. As the Society has not yet appointed its standing committees, this problem will be laid aside for future consideration.

There was also a fine exhibit of the codling moth in all its stages and washes and appliances used for its destruction, by Matthew Cook of Sacramento.

After the transaction of the introductory business, the subject of injurious insects was introduced by Dr. H. Behr, of this city. The following is an outline of Dr. Behr's remarks:

California for a considerable time has been comparatively exempt from ravages by insects injurious to vegetation. This exemption is not a peculiarity of California; it is an advantage of most countries for the first decade of their cultivation. With the introduction of agricultural and horticultural plants some insect enemies may be introduced, but there is a question if they are able to adapt themselves sufficiently to a new climate and changed circumstances to play a prominent part as destructors. There are few insects cosmopolitan enough to do it.

The insects natural to the country also require some time before they adapt themselves and multiply sufficiently to cause damage, for we have to recollect that it is only the suspension of the equilibrium in nature, by the exclusive cultivation of certain plants in certain localities, that furnishes conditions under which hitherto solitary and scarcely noticed animals multiply sufficiently to become gregarious and injurious.

At the same time, the equilibrium in nature must be suspended in other ways to favor the multiplication of the enemy. The enemies of the enemy, viz: the birds, are decimated; carnivorous insects that prey on the destructor must be disturbed in their haunts by agricultural operations or otherwise.

With the exception of a few rare genera, the Aphidians are parthenogenetic; that is, they propagate through many generations without sexual intercourse, and have only once in the year, generally towards the end of the year, a sexual generation, sometimes of a very different aspect, which peculiarity in most genera only refers to the males. In the phylloxera, and probably in some other genera too, there intervenes even a third form of existence between the viviparous and the sexual generation. The most frequent method of propagation in this group is the following: From the hibernating eggs develop, in spring, individuals which, after having shed their skins several times, produce a great number of young ones. Bonnet, of Geneva, the discoverer of this curious fact, counted in *Aphis alni*, 95. After having given birth to this offspring, the old one dies, and the young ones go through the same process of growth, parturition and death in the course of about a fortnight. This viviparous generation is generally called females; more properly Mr. Steenstrup's expression should be used, who applies to analogous facts amongst another family the expression "nurses." In most species, it is the last autumnal viviparous generation that produces the sexual generation, consisting of exceedingly short-lived males and females. This generation has oviparous females, and out of their eggs rises the first viviparous generation.

With most of the Aphidians power of locomotion is very limited; some even resemble the Coccus family by entire absence of locomotive power. Notwithstanding this imperfection their devastations are considerable, as we all know. The Aphidians seem not to be very palatable to the birds; at least the birds are no great help in their destruction, but some beetles are, and amongst them the most prominent are the different species of *Coccinella*, the lady-bird. The larvae of the lady-bird destroys a great quantity of them, and so does the perfect insect.

The action of the ants toward the Aphidians is something marvelous, for while antipathies exist frequently in nature, sympathies of this kind are rare. Whenever you find ants anywhere about your vineyard or orchard, know that you

have a very shrewd little enemy there, because he is a sworn friend of the Aphidians. The ants use them just as mankind use cattle, driving them to pasture, milking them, and driving them home. Microscopic investigation has revealed the fact that the insects exude a sort of milk, of which the ants are very fond, and the desire to obtain which induces the ants to not only herd them but colonize them. Colonies of Aphidians have been found upon roots in the subterranean corridors of ant-houses. They sometimes pierce the bodies of the captive insects to make the desired luxury exude faster, and altogether take very good care of the vine pests. They will carry them from a root which seems nearly exhausted to a fresh root, transplanting them as it were. The ants are so jealous of their servants, the lice, that they will fight among themselves to possess them. Therefore, as ants are such active friends and propagators of the Aphidians, the horticulturist should destroy ants wherever he may find them around his place.

Dr. Behr was called away from the meeting before he had opportunity to conclude his remarks, and, as he had but fairly entered upon the subject, we trust he may pursue it farther at some future meeting.

M. Cooke, of Cooke & Son, Sacramento, turned the attention of the Society to the codling moth as the greatest scourge which has yet invaded our orchards. He reviewed the progress of the insect, its habits and the means by which success has been attained in fighting it. He showed the insect in larva and pupa states by abundant specimens. His treatment of the subject was very interesting, and he was awarded a vote of thanks by the Society for his studies in this direction. We need not report his address at length, because we have heretofore given at length the results of his studies in the Press, and because he has issued an illustrated pamphlet covering the whole ground, which he will be pleased to send free to any reader of the Press who applies for it to Cooke & Son, Sacramento.

J. B. Saul, manager of the large orchards of the Oak Shade Fruit Company, at Davisville, Yolo county, gave at length his experience and observation of the codling moth at the East and in this State. Although approving the plan of scraping trees and washing them thoroughly with the solution of whale-oil soap and sulphur, recommended by Mr. Cooke, he placed great reliance upon trapping the larva by tying paper bands around the trunk at a little distance from the ground. These bands, as we have said before, may be made of common brown wrapping paper six or eight inches wide, tied tightly around the upper edge and left a little away from the bark at the lower edge, so that the worms will crawl under and make their cocoons instead of seeking crevices in the bark. These bands can be put on very cheaply. A smart Chinaman can fold and tie on 1,500 papers in a day. They should be put on in May, examined every few days, the worms destroyed and the papers tied on again. This work can be done very quickly, 3,000 can be fixed this way in a day. Mr. Saul observed the necessity of scraping thoroughly and breaking open the nest of the worm, or else the soap solution would not kill it.

President Hilgard made a few remarks upon the behavior of certain insects when introduced in new locations. Some foreign insects acclimated here make but slow progress, as, for instance, the phylloxera. It has not yet, so far as observed, developed into the winged form, by which it is so rapidly spread by the wind in Europe, and by which agency it will be carried, perhaps, 100 miles, and the disease will break out suddenly, when the intervening space is not affected. The phylloxera has been known to be in Sonoma valley for about five years, and in that time it has not extended more than three miles each way from its initial point. This would seem to indicate that the insect could be stamped out in this State, if vigorous efforts were adopted, and Prof. Hilgard thought some action should be taken by the State to secure them.

Mr. Dwinelle alluded to the importance of examining all new trees and plants which are brought into the orchard or garden, to be sure that they are free from parasites. This can be easily done with a good hand magnifier. For additional security, plants could be dipped or washed with a solution of whale-oil soap, or lye from wood ashes. A little precaution in this respect may save much trouble afterwards.

Dr. Strentzel mentioned the good effects to be obtained by powdering infested trees and shrubs with dry wood ashes before a light rain. The rain will leach the ashes, and the lye will destroy insect life that it comes in contact with. He also mentioned a good wash for trees, made by melting sulphur and potash together, the product being soluble in water and a good insecticide.

Mrs. Volney E. Cushing remarked that she had been successful in using the following remedy for scale on fruit trees: Two parts linseed oil and one part kerosene. Apply with a white-wash brush.

After a conversational discussion of the various points advanced, the subject was laid aside for future consideration.

A vote of thanks was tendered to the California Academy of Sciences for the use of their rooms at previous meetings.

The next meeting of the Society will be held December 26th. There will be no stated subject, but all are invited to bring forward notes of their experience under the general subject of "horticultural lessons of the year 1879."



## Letters from Southern California—No. 6.

A railroad ride of some forty miles from the old Mission of San Gabriel takes the traveler to the new railroad.

## Town of Colton.

Situated directly upon the Southern Pacific railroad and very near the geographical center of the great county of San Bernardino. Four miles to the northeast is the new town of San Bernardino, and seven miles in nearly an opposite direction is the large and flourishing settlement of Riverside. Colton is the shipping point of the entire valley, with the exception of Riverside, which receives a large portion of its supplies by the Pacific Coast S. S. Co's. steamers, which deliver and receive freight at Anaheim Landing—the nearest point for Riverside to the ocean. Colton is, and ever must be, an important railroad center. It has thus far been built up by the Southern Pacific, and through it must pass the Utah Southern railroad, if that or any connecting or parallel line, finds its way to the sea, or even into Los Angeles county. The Atchison, Topeka and Santa Fe road will also pass through this place, in case no practical route can be found through the eastern portion of San Diego county. Messrs. George B. Wilbur and Lucius B. Pratt, the Boston representatives of that road, were in that region a few days since, looking into the feasibility of that route, in case their engineers, now looking for a route directly west from southern Arizona, fail in their search there. The tourist, the merchant, the trader, and all who come into this great valley, or who desire to pass through it to Los Angeles, or San Francisco by rail, must pay tribute to Colton. When San Bernardino valley becomes settled up, as it soon will be, at every point where either natural or artificial irrigation can be commanded; and when the two or three southern trans-continental railroads are completed and commence pouring the tide of Eastern travel into and through southern California, Colton will become a very important point and the commercial center of the county. Such must be its destiny in the early future. It has already some very creditable buildings, the principal of which are owned by the Railroad, and the Colton Land and Water Company. Within one mile of the railroad station there is

## A Mountain of Pure Marble.

The largest and apparently the most valuable marble deposit yet discovered on the Pacific coast. Samples of this marble which have been sent to Mr. Henry G. Hanks, the mineral expert of this city, have been pronounced of very superior quality. It is found with all shades of color and some pure white, and as good for statuary purposes as the purest from Carrara. This mountain of marble rises abruptly from the plain to a height of 450 feet, standing upon a base of over one square mile in extent. It is known as Slover mountain, named from an old man of that name, an early pioneer in this region, who was killed by a grizzly bear near its western extremity. The mass of marble here is simply enormous, and capable of furnishing material sufficient to build a dozen cities. Being directly upon the line of the road, it can be taken away very cheaply, especially as it can be loaded upon return cars, which go mostly empty. We understand that the railroad is willing to make easy terms with any company which may be organized to work the quarries on a large scale. When properly opened, they must give employment to a large number of men, and greatly increase the business and importance of Colton. The property, we believe, belongs to the Colton Land and Water Company.

## Mines of Precious Metals.

As well as those of a useful character, such as iron, coal, lead, etc., also occur in the mountains of San Bernardino county. An interesting, and what may yet prove a very valuable feature in connection with the above-mentioned marble deposit, is a dike of granitic quartz about 100 feet wide, which runs entirely through and near the center of the mountain. A short time since some very rich specimens of chloride of silver ore were found in this dike, or vein, which has led to a prospecting enterprise that was commenced a short time previous to our visit, under the direction of Mr. W. H. Mintzer, the resident agent of the Land and Water Company above referred to. The mines of San Bernardino county, some of which are already well known, will no doubt become much more valuable when they are made more accessible, as they will be when the Utah Southern railroad is completed through to Colton.

The Ivanpah, Lone Valley, Bear Valley, Ord and Mojave mines of gold and silver are already quite well known. In addition to these, valuable coal deposits are known to exist in the Cajon pass, which only await the coming of the locomotive to render them valuable. The tin mines in the Temescal mountains, some 20 miles southwest of Riverside, are already of world-wide fame, and will form the subject of a special letter in this series.

## The Town of San Bernardino.

A stage ride of three miles from Colton took us to the town of San Bernardino, which is the county seat. This town was originally settled by the Mormons as an outlying colony between Salt Lake and the ocean. This was when Brigham Young dreamed of an empire in the great central plateau of the American continent, with Los Angeles, or some other point on the Pacific,

for his seaport and San Bernardino for his half-way house or an outfitting depot for those en route to the promised land.

The Mormon war of 1857 caused a change in his programme, the Mormons were called back to Utah, and San Bernardino was abandoned to the wicked Gentiles. Subsequently, however, the followers of Jos. Smith, who repudiate polygamy, gathered in this town, where they still have quite a flourishing colony and church. With this modified condition of things a better class of emigrants, Gentiles, as well as Mormons, began to come in, buy farms and settle up the town and vicinity, and the locality presents, to-day, a most inviting and flourishing appearance. Well cultivated fields of corn, wheat, potatoes, etc., neatly kept farms and thriving orchards and vineyards are met with on all sides. The town of San Bernardino covers one square mile, or one section, bounded by the sectional lines, and is regularly laid out with broad streets running due north and south, and east and west. One of the principal east and west streets is laid out directly upon the due west line of departure from the Mt. San Bernardino meridian. Each square or block contains eight acres and is generally subdivided into lots of one acre each. The streets and blocks are thickly studded with trees, lined with neatly constructed cottages, interspersed here and there with dwellings of a more pretentious character. These, with the green and well culti-

suddenly into a perfect little mountain paradise. There are 200 or more orchard trees, mostly orange, in various stages of growth, from those just set out to those well into bearing, all covered with living green, and loaded at all seasons of the year with fruit in some of its various stages of growth, from bloom to golden ripeness. Winding your way among these trees, and crossing one or more beautiful little streams of water, you finally reach the modest yet comfortable home of the hospitable proprietor. Everything about the house and grounds shows thrift and good taste. A long grape arbor in front, approached through a beautiful arch of woven cypress, invites you to stop and tarry.

The proprietors of the RURAL PRESS were most cordially received and welcomed as we alighted from the carriage, and when we entered the dwelling our welcome was more than repeated by the genial and pleasant hostess and her amiable daughters. We felt at once that we had reached a home—a resting place, for a brief season at least, from the toils and dust of travel. As we entered the sitting-room we found tables well covered with papers, magazines, etc., a well selected library, writing materials and a cabinet of curiosities, mostly collected from and about the place, all giving evidence of the literary and educational tastes of the family. After a little rest we spent an hour or two in looking over the place and examining

tempered for the latter use by being first united with the warm stream. A short distance below the house Mr. Waterman has constructed two fish ponds, which are stocked with several thousand carp, from which, when his place is properly opened for visitors, he will obtain a supply of this finny delicacy to gratify the taste of his epicurean visitors. There is much more that we would like to say of this delightful place, and of the hospitable manner in which we were entertained; but the limits of a letter, crowded with many other matters, will not admit of it.

We would state in this connection, for the information of numerous friends and localities which we visited in our trip through southern California, and from which we have now returned, that this series of letters will reach them all in time, and that our notes are being written out in the same order in which they were taken. W. B. E.

## The Asbestine System of Sub-Irrigation.

This plan of sub-irrigation attracted much attention at the fairs during September and October last, it has already been introduced; practical working in Los Angeles, it is being discussed outside of the State as a possible means of securing considerable benefits—hence, we give upon this page engravings showing some of the leading points of the system, that it may be more intelligible to our readers who have not yet seen it.

The asbestine system is a California invention, letters patent for it having been issued to the inventor, E. M. Hamilton, of Los Angeles. We have, during the last year, recited pretty fully the advantages claimed for the system, and we grant one of our correspondents opportunity, on page 364, to summarize the views which he has gained from a study of the system in Los Angeles county. We are not prepared with the requisite evidence to fully endorse all the claims advanced, but we do not hesitate to say that we regard the system as very promising, and one which should be encouraged by thorough testing in a safe way, under all conditions of soil and growth which arise in horticultural experience.

It may be premised for the benefit of any who may have overlooked former mention of the system, that it consists in laying continuous cement pipe in trenches, through which the water runs by force of gravity from a reservoir above and is permitted to emerge here and there and saturate the earth beneath the surface, and thus irrigate adjacent trees and plants. The way in which this is done, may be learned by reference to the engravings, which are explained as follows:

In Fig. 1, A is the main pipe, supplying water from reservoir. B—Distributing pipes, laid about a foot below the surface of the ground, and about a foot from each row of trees; or, these pipes may be laid midway between the rows. C—Earth-guard, a piece of pipe, as shown in Figs. 3 and 4. H—Hydrant, or gate, as shown in Fig. 2. L—Spur from main. M, N—Connections between A and B through H, as in Fig. 2.

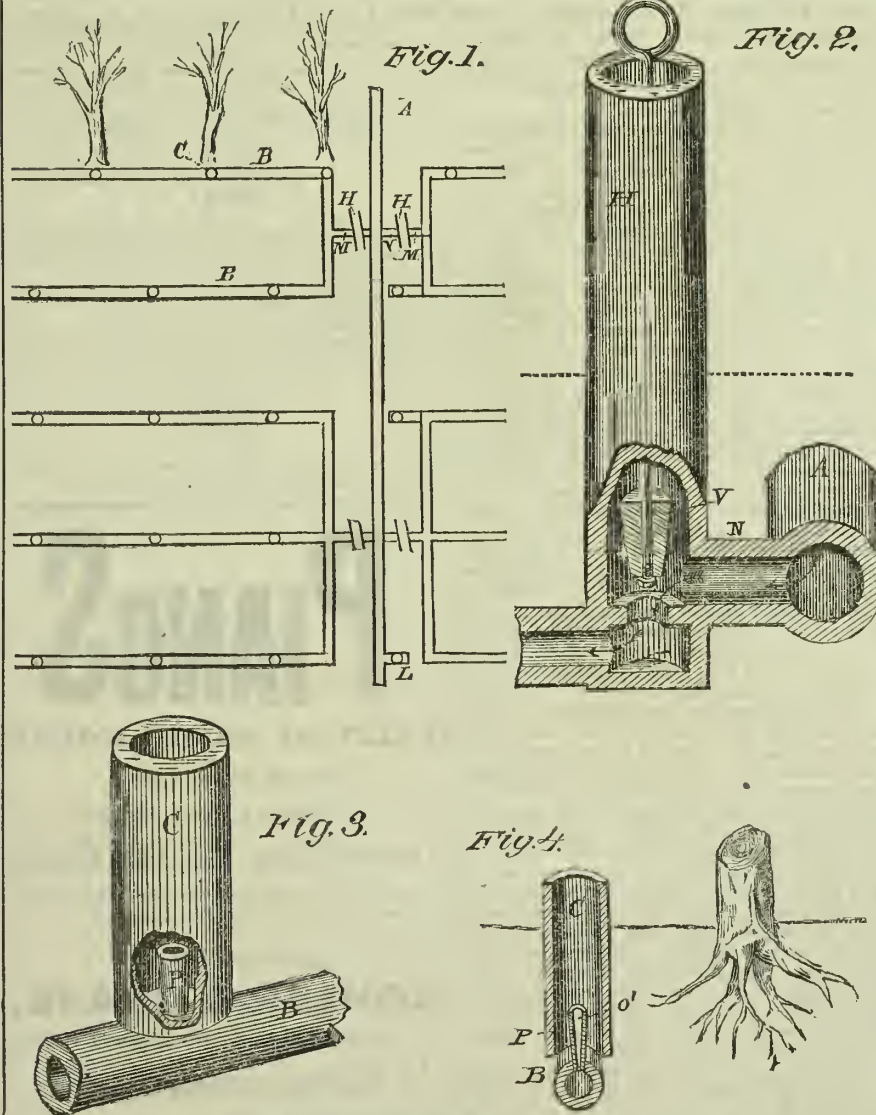
Fig. 2 shows the position of the hydrant as set. The plug-valve, V, being closed, water rises in H to level of water in reservoir; upon raising V, water takes direction of arrows, passing into B.

Fig. 3 shows the position of distributing pipe, B; earth-guard, C, four-inch caliber, set loosely on B, extending six inches above surface of ground to prevent earth from falling on plug; and plug, P. Water passes along B, flows up through the hole (O, Fig. 4) in P, and falls down on B, outside of P and inside of C, and is taken into the soil by capillary attraction.

Fig. 4 shows the relative position of B, C, P, and the tree; the dotted line representing surface of ground. The plug, P, is a tapering piece of wood, stone or metal, set in the pipe, B, having through it a tapering hole for passage of water. The reason of making it so is, that anything which can get into the hole with the water can readily pass through, and will not, by accumulation, close it.

The above, together with the engravings, will give a clear idea of the operation of the system when in place. One of the most interesting features of this system is the making of the pipe, and this is not shown in the engravings. This is done by means of an ingenious machine which works in the trench, and thus makes and lays the pipe all at one operation. This machine consists of a cylinder or case, which is laid horizontally in the trench prepared for the pipe. This cylinder is provided with a piston or plunger which is operated by hand, and which forms the pipe from the mortar or cement which is fed to the cylinder from a feed tube or hopper on top. A flexible core is attached to the end of the piston which forms the orifice through the center of the pipe; the pipe being thus made in a continuous piece without joints of any kind, so that all leakage is avoided. The operation of the lever attached to the piston, while it forms the pipe, serves also to force the cylinder or case along the trench gradually as the pipe is made and laid, by the same operation. In working the machine a man stands in the trench, at the end of the machine on which the lever is placed, and as he works the lever he moves along backwards in the trench. The cement placed in the hopper above, passes down readily through the tapering feed tube into the cylinder behind the piston. A stroke of the piston forces the cement back in the case and around the cone to which is attached the flexible core, thus forming the pipe and at the same time driving the machine ahead correspondingly, or about two inches at each stroke.

We understand that this system of sub-irrigation is obtaining introduction in different parts of the State, and thus it will be easy for all to personally examine it and note the effects obtained by its use.



ARRANGEMENT OF PIPES IN ASBESTINE SUB-IRRIGATION SYSTEM.

vated gardens, give the place more the appearance of a New England village than, perhaps, any other town we have met with in California. Artesian water is obtained here at a very small cost. The business portion of the town contains many creditable blocks, built quite generally of brick, and has good hotel accommodations. The town contains a fine court-house, several schoolhouses and churches, a theater, etc.; it also supports two newspapers.

## Old San Bernardino.

Some five miles from the site of the present town, was once the seat of a flourishing mission, which is now, we understand, but little better than a heap of ruins.

Our time was too limited to admit of a visit to the place. It is now a farming settlement, and has the oldest orange orchards in the county. This, like the site of all the old missions on this coast, was located in that part of the valley most favorable for cultivation, and its oranges are accordingly noted for their size, beauty and flavor.

## Waterman's Hot Springs.

One of the most pleasant places of resort in all San Bernardino valley, so far as we were able to learn, is Waterman's Hot Springs, about seven miles north of the town and just in the foothills. The road thither is delightful—almost level until you reach the hills, which are ascended by an easy grade, winding around projecting points and up a broad, open canyon, until you reach an elevation of about 1,800 feet above the sea level, at which point you come

and studying the extensive improvements already made or laid out, which, when completed, will make this one of the most inviting places of resort for invalids which can be found in all California.

The chief feature of the place consists of the wonderful series of hot springs which gush out just above the house from under a high bank of boulders and gravel, resting upon a granite bed-rock, the gravel having been cut through by the action of the water of the canyon. The water, as it issues, varies in temperature from 173° to 200°. Eggs have been boiled in it in three minutes. These springs appear at intervals of 10 or 20 feet along the bank for a distance of 40 or 50 rods. Their waters unite and form quite a little stream, a portion of which is taken up in pipes and utilized for bathing purposes and for hot water at the house. The banks of the stream are lined with a coarse kind of grass, and at intervals dense masses of beautiful green ferns are seen along the channel, formed by the action of the springs, and floating in rich waving masses upon the steaming water. The rocks and gravel, as well as little pieces of twigs, etc., which may chance to fall into the stream, are soon covered with a white incrustation of lime.

An analysis of the water shows carbonate of lime as its chief constituent, silica in solution, traces of magnesia, oxide of iron and phosphoric acid. A beautiful stream of cool and sparkling water runs near by, and parallel to the warm stream, which furnishes an abundance of that liquid for household and irrigation purposes—



## A Reward for An Improved Stock Car.

CONTINUED FROM PAGE 355.

ear, and flexible slatbars, forming the stalls. Some of them were even padded. Several carloads of cattle were transported successfully in them from St. Louis to Philadelphia. But, unfortunately, it was claimed that the company were infringing upon patents owned by Amos Bank, of Salem, Ohio, and John W. Gill, of Columbus, Ohio, which gentlemen had made preparations, with a capital of \$100,000, to build these same, or substantially the same kind of cars. The matter got into the courts and terminated the usefulness of the inventions, because railroad companies preferred a clear title to the patented contrivances used upon their lines, and hence would have none of them. We give this slight sketch because Mr. Zadoc Street seems to be an active member of the American Humane Association. He owns a number of patents and would undoubtedly be glad to have them put into use upon the railroads. The matter is one which would bring enormous advantages to an inventor, and we urge upon all those interested to strain a point and examine the question, although the matter of the reward of \$5,000 is a very small inducement, as the properly constructed cattle car would have the transportation of the millions of live stock annually carried from the plains of the West to the Atlantic seaboard.

The main points to be observed in a cattle car are to provide moveable stalls for each animal, allowing them freedom of action in standing or lying, and to prevent them from interfering with each other. The slats or bars composing the stalls frequently gall or skin the animals, which strike against them when the train stops or moves ahead, and this must be provided against. Means of feeding and watering from the outside must be provided, and above all, provision should be made to counteract the jarring motion of the car, which seems to have a bad effect upon the animals. This latter point has never been touched in former patents, and was suggested as a proper subject of inquiry by a high judicial officer some years ago. In the case of hogs and sheep, small pens should be provided so that danger from smothering will be avoided. The great object of the inventor in this line must be to provide a means of transporting cattle so as to reduce their shrinkage to a minimum.

## Ancient America.

Dr. J. M. Peebles, in a recent lecture in San Francisco upon the above subject, took occasion to say that his face once crimsoned in Egypt when asked by a scholarly native engaged in the Cairo Museum how the buried and half-buried cities of Central America and the pyramidal ruins of Yucatan and southern Mexico compared with those of Egypt. The lesson was: "Visit and study the wonders of your own country before traversing foreign lands." The speaker pronounced the railroad from Vera Cruz to the City of Mexico a splendid specimen of engineering. The Aztec Anahac, the vale of the Montezumas, has an area of some 600 square miles. It was the sunny home of the old Aztecs. The Aztec and Toltec relics preserved in the City Museum of Mexico were intensely interesting, inasmuch as they established the fact of maritime relations and inter-oceanic intercourse between the Toltecs and the Phenicians and Egyptians. As the Lamentian rocks, far to the north of us, constitute the oldest range of rocks in the world; as Cholula is considered the oldest pyramidal structure known, why may it not be true that this is the old world, and that the Egyptians learned pyramid-building from the ancient Americans of this continent? "I saw," said the speaker, "carved upon templed ruins in Yucatan, hawks' and other birds' heads similar to those upon the temples, tombs and obelisks of Egypt. Among the ruins of Uxmal and Palenque I saw the carved cross and the same phallic symbols so common in India, Phenicia and the East; and I further saw the chiseled serpent, the mummy-shaped sarcophagus, the winged rod and the lamp immortal, so frequently seen in Egyptian tombs and temples. Few men of research doubt the existence and sinking of the Atlantis Isle; doubt that there were commercial relations in ancient times between this country, Toltecs probably, and the old nations of Europe and Asia. Strabo, living before Christ, said 'that the art of night-sailing was taught in ancient Tyre.' This indicates a knowledge of the mariners' compass. Possibly the second expedition sent out by Necho II, an ancient Egyptian king, reached this continent. The first expedition of this king sailed down the Indian ocean, doubled the Cape, and entered the Pillars of Heracles. The ancients in some respects equalled if not excelled us. The Aztecs conquered the Toltecs and then adopted more or less of their arts and sciences. The calendar stone that now rests against the side of the Roman Catholic Cathedral in the City of Mexico is a Toltec rather than an Aztec production. Is it asked, 'Who were the Toltecs?' They were the descendants of the Nahuas, and this was a conglomerate nationality, made up of the autochthonic races and the remnants of those who peopled the Atlantis Isle. Traveling in Yucatan is hardly safe and very inconvenient. Merida, the capital, has but one hotel, and that is kept by a Spaniard. It is 65 miles from Merida out to Uxmal. The Maya Indians in these regions are friendly, but the southern tribes are warlike."

## An Important Engineering Scheme.

While our exchanges are full of the international project of connecting the waters of the Atlantic and Pacific oceans by means of a canal, a scheme is on the cards for effectually draining and reclaiming the fertile marsh lands of Yolo, Solano and Sacramento counties by means of a canal fifty miles long, which will also control the Sacramento river during floods.

Col. Smith, Chief Engineer of the Harbor Commission, and also engineer of the Sacramento River Drainage District, to which he was appointed by the Board of Commissioners established by an act of the last Legislature, approved April 1st, 1878, is at work upon his report to the latter Board, which was established for the purpose of draining the surplus waters of the Sacramento river and the waters flowing from the east side of the Coast range of mountains, in the counties of Yolo and Solano, into Suisun bay—an object to be effected by the construction of a main canal, leading from the Sacramento river at Charleston, or Gray's bend, in the vicinity of Knight's Landing, Yolo county, running in a southerly and southwesterly direction to the basin of Nurse's slough, in Solano county, and thence to Suisun bay, through Montezuma slough, an entire length of about 50 miles, and at a distance of from five to ten miles northwest of the Sacramento.

The waters from the Coast range of mountains from Cache creek southerly are to be diverted and turned into the canal; and an auxiliary canal, leading from the Sacramento, near the mouth of the American river, to the main canal, is to be constructed if necessary. The Commissioners appointed are, Mr. Egbert, of Oakland, and Messrs. Cary and Knox, of Sacramento. According to the terms of the act, the engineer must make a preliminary survey and reconnaissance for the purpose of ascertaining the feasibility and effectiveness of the proposed work, and its probable cost, and make a full report to the Board. An appropriation of \$10,000 was made for the purpose of paying the expenses incidental to this survey. The estimated cost of the undertaking is placed at \$2,000,000, or an assessment of not more than \$5 an acre on the total amount of lands to be benefited in the district, which is roughly estimated at about 400,000 acres. In the event of a favorable report, bonds for the amount are to be issued, payable in 20 years and bearing 7% interest per annum, payable semi-annually. Col. Smith has devoted much time to the consideration of the scheme, and has consulted every authority of note upon the subject of rivers, which is found to be one of the most difficult that engineers are called upon to wrestle with.

Whatever may be the difficulties they will undoubtedly be overcome. The skill of our engineers has never been at a loss to accomplish calculated results. As one of our daily exchanges says, however, "the feasibility of constructing a canal large enough to receive all the superfluous waters of the Sacramento during flood seasons, and also the waters from the Coast range through Putah and Cache creeks, is a consideration that will tax the mind of the best engineers for solution, especially when it is borne in mind that the only available data at all reliable are observations of the State Engineer, which extend over a period of little more than a year. This difficulty once overcome and the greater portions of Yolo, Solano and Sacramento counties will be effectually reclaimed and enhanced in value many millions of dollars.

The main canal will be above the level of the surrounding country nearly its entire length, and must be built securely enough to hold all the waters of the district without danger of overflow or breakage, which would inundate the land and reduce it to its former condition, thereby rendering the entire project a failure. The bed of the canal will be on a level with high water at the point of junction with the Sacramento, so that when the river rises the water will rush into the canal. On reaching the Montezuma hills, a cut will be made through them nearly four miles long. Thence, the canal will extend to Montezuma slough, through which it will flow to Suisun bay. It is improbable that any injury will result to the land in the vicinity of Montezuma slough, because it is at present subject to tidal overflow. On the contrary, it is quite probable that the velocity of the waters flowing through the canal will be so great, that when they enter the slough they will broaden and deepen it, thus affording better facilities for draining Grizzly island, preparatory to building levees for protection against the tides. The matter of damage to the land in the vicinity of the mouth of the canal is a point to which the engineer's attention is especially directed by the Act.

Col. Smith is very reticent about divulging anything relative to the decision arrived at in his report, until he shall have forwarded it to the Commissioners. Nevertheless, it is quite likely that he will report favorably upon the scheme, notwithstanding the gigantic obstacles in the way. Upon due consideration, they do not appear to be absolutely insurmountable. Should he declare in favor of any radical modifications, the project would be abandoned by the Commissioners without submitting it to the people, as the act requires in the event of a favorable report.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS.

OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

PETER SAXE & SON, 520 Bush St. S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotato Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

## SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

## POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Doves, etc. Eggs for hatching. Send for price list.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hogs and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Poland-China Swine and Black Cochon Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

## BEES.

JOS. D. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## PIANOS

## LARGEST MUSIC HOUSE

On the Pacific Coast.

WHOLESALE AND RETAIL.

## Lowest Prices and Best Goods.

Write for information concerning any Musical Instrument, and terms of sale. It will be given with pleasure.

ESTABLISHED IN 1850.

## KOHLER &amp; CHASE,

137 and 139 Post Street, San Francisco.

## PACIFIC DEPARTMENT

## LONDON AND

## LANCASHIRE

Fire Insurance Company,  
OF LIVERPOOL.

CAPITAL.....\$7,500,000  
CASH ASSETS.....1,709,976  
U. S. BONDS, deposited in America 400,000

## BALFOUR, GUTHRIE &amp; CO.,

General Agents,  
316 California Street, - - - San Francisco

## THE DEAF HEAR

THROUGH THE TEETH!  
PERFECTLY, all Ordinary Conversation, Lectures, Concerts, etc., by NEW Channels, to the Nerves of Hearing, by a wonderful New Scientific Invention, THE DENTAPHONE.  
For remarkable public tests on the Deaf—also on the Deaf and Dumb—See New York Herald, Sept. 28, Christian Standard, Sept. 27, etc. It displaces all Ear-trumpets. Size of an ordinary Watch. Send for our FREE pamphlet. Address AMERICAN DENTAPHONE CO., 257 Vine St., Cincinnati, Ohio.

## Lands for Sale and to Let.

## TO LET.

THE CELEBRATED

## BARTON VINEYARD,

Situated at Old San Bernardino, in San Bernardino Co., Cal., consisting of eighty (80) acres of Mission Grapes, together with two (2) cellars, one brick and one adobe, a small lot of tubs, vats and pipes, distillery and brick dwelling house. Location good and crop sure. Would prefer to let for a number of years on easy terms. For particulars address H. M. BARTON, P. O. Box 83, San Bernardino, Cal.

## FARMING LAND

For Sale in large or small tracts, on easy terms, in the best parts of the State.

## McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

**LAND** Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

## GRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000,

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$400,000.

## OFFICERS:

G. W. COLBY.....President  
JOHN LEWELLING.....Vice-President  
ALBERT MONTPELLIER.....Cashier and Manager  
FRANK McMULLEN.....Secretary

## DIRECTORS

G. W. COLBY.....President.....Butte Co  
JOHN LEWELLING, Vice-President.....Napa Co  
J. V. WEBSTER.....Alameda Co  
UR'AH WOOD.....San Benito Co  
J. C. MEYERFIELD.....Solano Co  
THOMAS McCONNELL.....Sacramento Co  
I. C. STEELE.....San Mateo Co  
SOLOMON JEWETT.....Kern Co  
C. J. CRESSEY.....Stanislaus Co  
SENECA FWER.....Napa Co  
A. D. LOGAN.....Colusa Co

The Bank was opened on the first of August, 1874, for the transaction of general banking business. CURRENT ACCOUNTS are opened and conducted in the usual way.

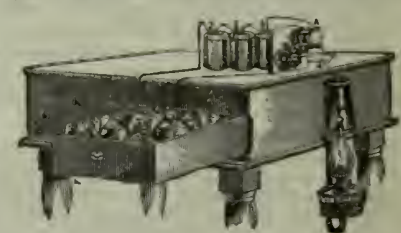
GOLD and SILVER deposits received. CERTIFICATES OF DEPOSIT issued for Gold and Silver. TERM DEPOSITS are received and interest allowed as follows: 6% per annum if left for 3 months; 7% per annum if left for 6 months; 8% per annum if left for 12 months. EXCHANGE on the Atlantic States bought and sold.

## ALBERT MONTPELLIER,

Cashier and Manager.

San Francisco, Oct. 15th, 1879.

## MONEY in CHICKENS



## If You Want to Make Money

By raising any number of Chickens at any season of the year without setting hens, procure an

## ECLIPSE INCUBATOR

(E. A. SAMUEL'S Patent).

In both public and private trials on this coast as elsewhere, the "ECLIPSE" has proved itself a perfect and successful Egg Hatcher. It may be examined and its merits proven to customers before they make purchases. Write for particulars and circulars to

G. G. WICKSON, 319 Market Street, S. F.  
Agent for the Pacific Coast.

## ROOMS TO RENT.

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

50 Per/used, gilt edge & chromo Cards, elegant case, name in gold, 10c. ATLANTIC CARD CO., E. Wallingford, Ct.

## RED CROSS OIL!

The Safest and Most Reliable Illuminating Oil. Water White and High Test. Brilliant, Pure and Economical.

C. T. RAYNOLDS &amp; CO., Sole Agents, No 9 Front Street, San Francisco.



## Seedsman.

## SEEDS!

Thomas A. Cox &amp; Co.,

Importers and Dealers in

Vegetable, Flower, Field, Grass  
and Tree Seeds.

We wish to announce to country merchants and the trade generally that we are ready to supply all descriptions of Seeds of the New Crop of 1879.  
Special prices on application.  
Vegetable and Flower Seeds put up in small packets for the retail trade.

## FRESH AND TRUE TO NAME.

We will send the following Seeds, postpaid, on receipt of price. Remit by P. O. Order or postage stamps:

Beets, per oz.....10c	Parsnips, per oz.....10c
Carrots, per oz.....10c	Radish, per oz.....10c
Cabbage, per oz.....25c	Spinach, per oz.....10c
Lettuce, per oz.....15c	Turnip, per oz.....10c
Onion, per oz.....15c	Tomato, per oz.....25c

We will mail to any address a collection of 20 packets of choice Flower or Garden Seeds for \$1.

Fruit and Ornamental Trees at Nursery Prices.

THOMAS A. COX &amp; CO.,

409 Sansome Street, San Francisco.

J. P. SWEENEY &amp; CO.'S

SEED WAREHOUSE,

409 &amp; 411 Davis St., San Francisco.

ESTABLISHED IN 1853.

Keep constantly on hand the largest stock of FIELD, ARDEN, CONIFER, or

## CALIFORNIA TREE SEEDS,

On the Pacific Coast. Seeds all FRESH and GENUINE. Our Stock is large, especially of the following varieties:

## ALFALFA, BLUE GRASS,

Red and White Clover, Red Top, Timothy, Australian Rye Grass, Mesquit Grass, Lawn Grass and Millet Seeds

Of different varieties. Field Seeds, Mangel Wurzel and Sugar Beets, Rutabagas, Carrot Seeds of all varieties, Peas, Beans, etc. Our assortment of GARDEN and FLOWER SEEDS are full and complete. Also, FRUIT and ORNAMENTAL TREES at Nursery Prices.

## Trees For Sale at Lowest Market Rates.

For Catalogue, Price Lists, etc., apply as above.

SEVIN VINCENT &amp; CO.,

Importers, growers of, wholesale and retail dealers in

SEEDS

Field, Grass, Flower and Tree Seeds.

## CLOVER, ALFALFA,

BULBS, FRUIT, ORNAMENTAL TREES, ETC.

We call the attention of farmers and country merchants to our unusually low prices. Trade price list on application.

We issue the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is handsomely illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

SEVIN VINCENT &amp; CO.,

607 Sansome Street, S. F.

SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.

EXOTIC  
GARDENS.

F. A. MILLER & CO., Mission St., opposite Woodward's Gardens. Send for Catalogue and Price List.

## KEATING'S COUGH LOZENGES!

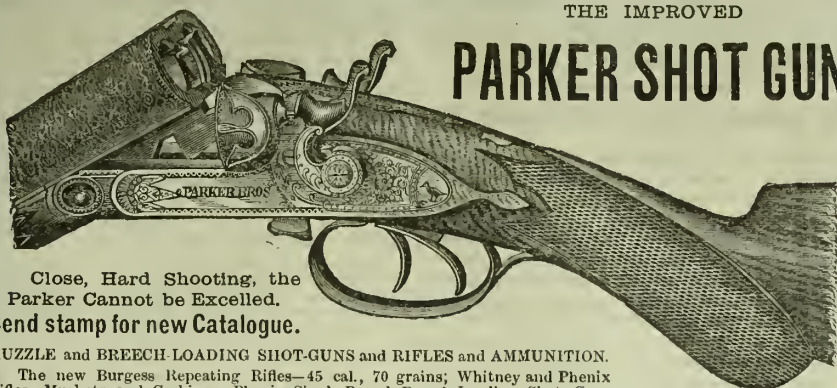
The Great British Remedy. There is unquestionably no other remedy so certain in its effects. ASTHMA, WINTER COUGH, BRONCHITIS and DISORDERS of the THROAT alike yield to its influence. The highest medical testimony states no better cure for these complaints exist (now proved by over a half a century's experience.) They contain no opium, morphia, or any violent drug. KEATING'S COUGH LOZENGES prepared by THOMAS KEATING, London, Britain, are sold by all Druggists.

## The New Beekeepers' Text Book.

By N. H. and H. A. KING. The latest work on the Apiculture, embodying accounts of all the newest methods and appliances. Fully illustrated. Sent by mail, postpaid, for \$1. DEWEY & CO., 202 Sansome Street, S. F.

THE IMPROVED

## PARKER SHOT GUN.



Close, Hard Shooting, the  
Parker Cannot be Excelled.

Send stamp for new Catalogue.

MUZZLE and BREECH-LOADING SHOT-GUNS and RIFLES and AMMUNITION.

The new Burgess Repeating Rifles—45 cal., 70 grains; Whitney and Phenix Rifles, Muskets and Carbines; Phenix Single-Barrel Breech-Loading Shot Gun; Allen Rifles, 22, 32, 38 and 44 caliber, rim fire, very cheap; Lovell & Sons Revolvers, the best and the cheapest.

E. T. ALLEN, Agent for Pacific Coast,

NO. 515 MARKET STREET, - - - - - SAN FRANCISCO, CAL.

## THE PLANTING SEASON!

THE RAINS CALL TO THE GARDEN!

Timely Hints May be Found in the

# PACIFIC RURAL HANDBOOK.

Containing a series of brief and practical Essays and Notes on the Culture of Trees, Shrubs, Vegetables and Flowers, adapted to the Pacific Coast. Also, Hints on Farm and Household Economy.

Embracing One Hundred and Twenty Original Pages—Written in Plain and Pleasing Style.

By CHAS. H. SHINN,

An able author, and practical California Nurseryman and Cultivator. Prepared especially for the publishers of the PACIFIC RURAL PRESS. It is purely a California book, fresh and interesting to rural readers at home and abroad.

Sold in substantial cloth binding (post paid) for \$1.00.

DEWEY &amp; CO., Publishers,

"Pacific Rural Press" Office (No. 202 Sansome St.) San Francisco.

## Thoroughbred Poultry.

LARGEST STOCK OF  
IMPORTED FOWL

ON THE PACIFIC COAST.

Bone Meal and Poultry Supplies  
Always on hand.

General Pacific Coast Agent for the

AMERICAN POULTRY FOOD.

It will make your hens lay, and prevent disease. For raising young chicks it is almost indispensable.

Letters of inquiry, enclosing stamp, cheerfully answered. Address

WILLIAM NILES, Importer and Breeder,

P. O. Box 250.

LOS ANGELES, CAL.



My yards contain choice strains of the leading varieties, including Langshans, Plymouth Rocks, Pekin Ducks, etc.

Eggs for Hatching Packed to go any Distance. PRICES ALWAYS REASONABLE.

Safe Arrival of Fowls and Eggs  
Guaranteed.Importer and Breeder of the Improved Short  
Nose, Dish-Faced

BERKSHIRES.

Also, Magie Poland-China Pigs.

## LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature thus,

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosbie and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS &amp; CO., San Francisco.

## Nurserymen.

## Berries and Small Fruits.

The most certain and best paying Market Berries and well tried sorts.

## Monarch of the West

STRAWBERRIES,

Most Productive, Largest Berries and Healthiest Grower.

English Red Antwerp, Naomi &amp; Hersteine

RASPBERRIES,

Best paying for market, and are perpetual bearers when irrigated.

## KITTATINNY BLACKBERRY,

The most prolific, largest and most popular sort.

I offer also a large assortment of new and old varieties of

STRAWBERRY, RASPBERRY,

Blackberry, Gooseberry and Currants.

For full Price List send for a Catalogue.

To secure a crop of Berries the first season it is important to plant very early.

JOHN ROCK,

San Jose, Cal.

THOS. MEHERIN,

516 Battery St., San Francisco.

## Seeds, Trees and Plants.

We offer for sale the present season the largest and best collection of Fruit and Ornamental Trees ever offered on the Pacific Coast, at REDUCED PRICES. Also,

## Vegetable and Flower Seeds,

KENTUCKY, AUSTRALIAN and ITALIAN RYE GRASS, RED and WHITE CLOVER, Etc.

Agent for the

Nurseries of B. S. Fox.

Send for Price List. 516 Battery Street, San Francisco

1,000,000

Strawberry, Raspberry, Blackberry and  
Cranberry Plants.

STRAWBERRY PLANTS.—The Essex Beauty, Crescent, Cinderella, Forest Rose, Glendale, Juemda, Monarch of West, Langforth Prolific, Triomphe d' Gaud, Wilson Albany.

RASPBERRY PLANTS.—Cuthbert Early, Early Prolific, Reliance, Pride of the Hudson, Brandywine, Herstine, Philadelphia Red, Clark, Henrietta, Hornet, Belle de Fontenay, Delaware Bristol.

BLACKBERRY PLANTS.—Deering Seedling. Early and the most productive of all. I will give satisfactory proof that these Berries have realized \$750 per acre. It paid more than twice as much as the old varieties; also the Early Cluster, the Vina Seedling, Kittatiny, the Mammoth Cluster, Missouri Mammoth, Dorchester and Lawton.

CRANBERRY PLANTS.—The Cherry Cranberry Vines at \$10 per 1,000, by mail 64 cents more. I will sell to responsible parties on time, part cash, 10-acre field of Cranberry vines under cultivation. Can be seen at the place. Send for Catalogue.

H. NYLAND,

Boulden Island, San Joaquin River.

## Phylloxera-Resisting Vines.

Vineyard proprietors desiring to plant American Grape Vines, which resist the attacks of the Phylloxera, either as Grafting Stock, or for direct production, which proves to be the only salvation and means of reconstructing the destroyed Vineyards of France, will do well to address

BUSH &amp; SON &amp; MEISSNER,

Bushberg, Jefferson Co., Mo.

## PEPPER'S NURSERIES.

(Established 1853.)

For sale at reduced prices, a general assortment of Fruit Trees and Small Fruits; also choice Ornamental Shrubs, Roses, etc. A limited supply of Cook's Seedling Apple, one and two years old. Catalogue and list of prices furnished on application. Address

W. H. PEPPER,  
Petaluma, Sonoma Co., Cal.

## PLANTS GROWN

for transplanting, and Fruit for the market.

100 Varieties of Selected Fruits 100

See New Catalogue for what sorts to plant. Sent free.

JOHN S. COLLINS, Moorestown, N. Jersey.

BUSINESS

COLLEGE,

24 Post Street.

Near Kearny,

San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

60 Chromo, perfumed, Snowflake & Lace cards, name on all 10c. Game Authors, 15c. Lyman & Co., Cloutville, Ct



### Will the Breeding of Percheron-Norman Horses Pay as a Future Business?

The people throughout the whole country begin to turn their attention toward the production of large horses, from both necessity and profit. They no longer find sale for the kind of horses they bred a few years ago, while there is an active demand for large, compactly-formed horses, at splendid prices.

Every man knows this to be a fact, but we doubt whether many have taken the trouble to inquire into the cause. The fact that large horses are readily sold at highly remunerative prices, seems to be sufficient to warrant men in breeding to first-class stallions; yet a man who intends to invest very much money in the business should look for some more substantial reason than the mere fact of a good present demand. If small horses are low, and large horses are high, there is some good reason why it is so.

Whatever the causes are that have contributed to produce this effect, we ought to know in order to intelligently direct our future course of breeding. On investigation we find this condition of the horse market is not confined to the United States alone, for go to what country we will—England, Ireland, Scotland, France, Belgium or Germany—you find that draft horses, during the last twenty-five years, have doubled and trebled in value. Many men who have come from Europe within that time will remember that a good work horse would only command from £25 to £30—\$125 to \$150; and now \$300 to \$400 is looked upon as only a fair price for a good, serviceable, large horse, and often \$500 is realized. But a short time since the entire lot of work horses upon a farm were sold at auction at a trifle over \$500 each. This advance in price is not because they are breeding less of the large kind—quite the contrary; for under the stimulus of constantly increasing prices their production has been largely increased, and many of the most practical men of the time have become interested in the improvement and breeding of them; besides, in some of the countries, the governments have adopted an organized system of encouragement. Yet, notwithstanding their rapidly increasing numbers, the prices continue to advance, plainly showing that the supply is not adequate to the demand, and that there are needed and being used a larger number of draft horses than ever before.

Why is it? A few words will tell. From the commencement of the application of steam as a motive power a new commercial era began, which has changed all things. Railroads have superseded the stage coach and diligence, and gradually thrown out of employ a vast number of small horses. The breeders of these were forced to find markets in other directions. The enlarged facilities for rapid, safe and cheap transportation has swelled commerce to an extent never dreamed of under the old order of things, and opened a hundred new channels for the use of the heavy, muscular and active horses. In the large cities, railroad centers, factories, foundries, mills, machine shops, quarries and the lumber woods, thousands more are now annually purchased than were needed years ago. The American farmers are also beginning to find deep tillage and a more systematic and economical method of cultivation necessary, in which a larger class of horses are indispensable. Thus, on every hand, we see the plane of usefulness of the large, strong work horse extending, while that of the smaller family is yearly becoming narrower.

Our late war partially relieved us of our surplus light stock, and for a time restored the confidence of light-horse breeders, who permitted themselves to believe that if they could introduce the element of speed they would still be in the ascendancy. They have found to their sorrow their mistake, and thousands of farmers are to-day doing their work with animals utterly incapable of performing their labor properly, and if, from any chance, they have a large horse, he is sold, not from choice, but because he will sell and the others will not. This practice must soon cease, for all feel that it is a ruinous economy, and will gladly welcome its end. The people are now ready for the change, and, if we are not mistaken in our conclusions, they are right in demanding it. If in Europe, where every country has a basis of pure bred draft stock to breed from—encouraged by high prices, fostered by powerful private enterprise and governmental patronage—they are unable to keep pace with the increasing demand of the country, how much less will we here in our own country, without any fixed types of draft blood of our own, dependent largely upon foreign importation for our supply of the necessary stallions for breeding purposes? We say, how much less chance have we, of being able for years to come, to supply our own wants on our farms and have sufficient numbers left to meet the demands from all other sources.

There is nothing that we, as farmers, can do that seems to give promise of better returns than from breeding to the best Percheron-Norman stallions that can be found, possessing size,

symmetry and action, and with the energy of our people turned in the right direction, as it is, we will, in a few years, possess the finest class of general-purpose horses in the world.

### The Asbestine System of Sub-Irrigation.

EDITORS PRESS:—Underground irrigation has been practiced to a limited extent for many years back in southern California and Mexico, by digging trenches and laying either brush or the Mexican adobe roof tiles in trenches and covering with earth. The water flowed through the trench and was probably the primitive effort at sub-irrigation on the American Continent, though it was very expensive and only partially effective. Sub-irrigation has been practiced in Santa Clara valley by using wood pipe, but it proved to be expensive, and the wood decayed within from three to ten years.

In the Asbestine system of sub-irrigation the pipe is made of concrete, and, for a time, at least, grows harder and better by age, and the expense of making and laying pipe has been reduced to \$25 to \$50 per acre. This system of sub-irrigation has been in use in Los Angeles county in several places for from one to three years now, and has demonstrated the following advantages over surface irrigation:

- 1st. It requires only one-fourth to one-tenth of the water necessary in surface irrigation.
- 2d. Hilly and uneven lands can be thus irrigated without leveling or grading.
- 3d. Land can be saved and noxious weeds that invariably cover the banks of open ditches can be avoided by using sub-irrigation pipe.
- 4th. Owing to a dry surface by sub-irrigation no weeds spring up as in surface irrigation; hence, there is no need

of crops. Under date of November 10th, Mr. Blowers answered as follows:

"Your note of 3d inst. at hand. I perfectly agree with you; the sub-irrigation system is just the thing for fruit and vegetable cultivation in the dry summers of California. A perfect and profitable crop is rare without irrigation. In passing through southern California I was impressed with the immense resources of the country if water was more plenty. Now, the farmer who has enough water to irrigate one acre well, superficially, by sub-irrigation skillfully applied can raise an equally good crop on six or eight acres, and thus have enough to make his business profitable.—R. B. BLOWERS"

Mr. Briggs returned the following answer to our letter of inquiry, under date of November 13th:

"Yours of the 3d inst. at hand. My opinion in respect to the Asbestine sub-irrigation system is of little worth till I have had some experience in using it. I hope to be able to put some down during the coming winter; and if it should meet my expectation, I shall put it down in all my vineyard—something over 400 acres, also in my orchard of about 100 acres.—G. G. BRIGGS"

As was stated in the RURAL of November 11th, Mr. Blowers has purchased a farm right and Mr. Briggs has bought the right for Solano and Yolo counties, and they purpose using this system on their ranches to save water and secure better results than can be obtained by surface irrigation. Santa Clara and Placer counties have been bought by Messrs. Pierce and Gould, and we learn that the beautiful grounds of Mr. Pierce, near San Jose, consisting of 140 acres, are soon to be laid down in this system of pipe. Messrs. Overhiser, Beecher and others, have purchased the right for San Joaquin county; J. R. Browers, of Marysville, has bought Colusa county, and the system will soon be introduced into Alameda county and other parts of the State.

This system will enhance the water supply of the State

### PATENTS AND INVENTIONS.

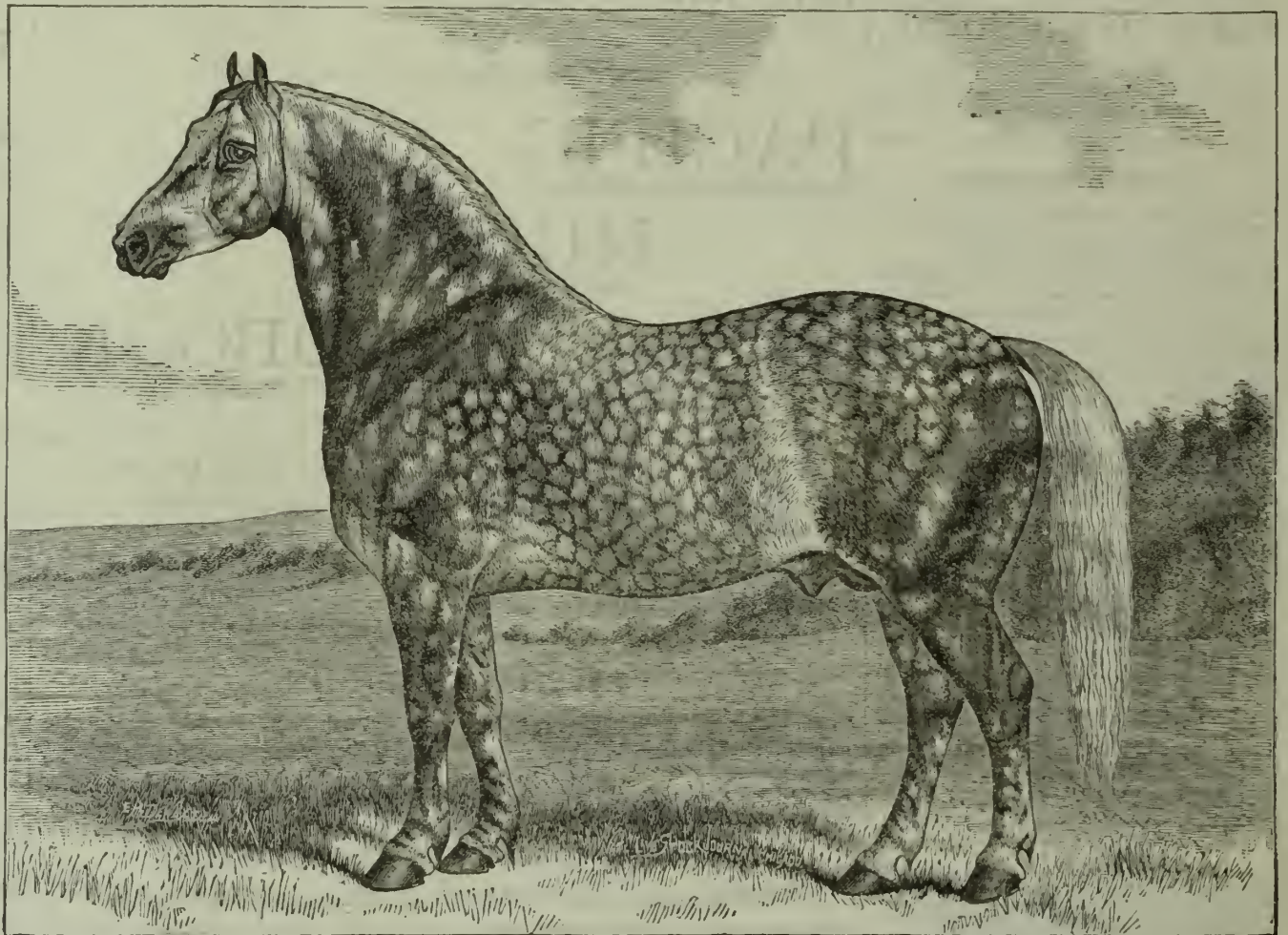
#### List of U. S. Patents Issued to Pacific Coast Inventors.

[From Official Reports for the "Mining and Scientific Press," Dewey & Co., Publishers and U. S. and Foreign Patent Agents.]

- FOR THE WEEK ENDING NOVEMBER 18TH, 1879.
- 221,659.—SYRUP CAN.—O. J. Backus, S. F.  
 221,773.—ORE-REDUCING APPARATUS.—W. Brunner, S. F.  
 221,663.—COMPOUND FOR DRAIN TILES.—H. F. Bundock and E. T. Mapel, Sacramento, Cal.  
 221,778.—WATER ELEVATOR.—R. M. Catlin, Tuscarora, Nev.  
 221,719.—DEVICE FOR APPLYING COLOR TO EYE LASHES.—R. Clinton, Portland, Oreg.  
 221,724.—WHIP.—J. E. Curtis, Ukiah, Cal.  
 221,728.—FINOKE RING.—C. M. Halsey, S. F.  
 221,816.—VALVE.—T. Hennessy, Oakland, Cal.  
 221,829.—BREK FAUCET.—C. Karstens, S. F.  
 221,841.—PAINT AND ROOFING COMPOUND.—T. E. McKinstry, Portland, Oreg.  
 221,733.—CAMP FOR STAMP MILLS.—L. A. Moore and J. Dykes, Oregona, Nev.  
 221,742.—MINING SLUICE.—J. M. Robinson, Eureka, Cal.  
 221,751.—MIDDLING SCOURER AND PURIFIER.—G. Swinerton, S. F.  
 221,756.—PARLOR MANTEL GRATE.—J. L. Tressler and W. H. Loomis, Alameda, Cal.

We have read the "Handbook" with much pleasure and can cheerfully recommend it to all who wish to adorn, beautify and make their homes attractive.—*Salinas Index.*

The "PACIFIC RURAL HANDBOOK," written by Chas. H.



Percheron-Norman Stallion, "Romulus," winner of the First Prize and Gold Medal at the Paris Exposition, 1878. Imported by M. W. Dunham, Wayne, DuPage Co., Illinois.

of continual cultivation, the surface never baking but remaining loose and mellow.  
 5th. Under this system the soil is never excessively wet or dry, the flow of water being regulated perfectly by a motion of the hand. The soil in consequence remains at a nearly uniform temperature, promoting a long-continued summer's growth.

6th. It induces vines, trees and plants to root deep, and make a more vigorous and healthy growth, and prevents drying out so easily and uprooting by heavy winds as in surface irrigation.

7th. By raising two or three valves in the pipes or hydrants, the water can be turned on acres of land, and is under such perfect control that a child can do the work. There is no chill night air as in surface irrigation, and the exhausting and debilitating effects of slopping around nights in ditches is done away with.

8th. It is well known that surface irrigation in alkaline soils draws the alkali to the surface, hence, sub-irrigation on such lands will be found invaluable as a corrective and preventive of such deleterious effects.

9th. The objection that surface irrigation in some localities induces fever and ague does not apply to sub-irrigation.

10th. Anything which the soil lacks as plant food, as manure, lime, etc., can be easily, directly and economically applied in a liquid form.

11th. The ground never forms a "hard-pan" near the surface with sub-irrigation as it has done in some orchards with surface irrigation.

12th. Frost may be prevented in orange, lemon and lime orchards by throwing a jet or fine spray into the tree from each plug during the night.

The saving in water, land, cultivation, labor of irrigation, freedom from noxious weeds, insects and vermin, the increased growth and healthfulness of the trees or plants, and the increased yield of the crop and its uniform size and appearance and superior flavor will in the first two years more than pay the expense of making and laying the pipe.

Desiring to learn the opinion of practical men as to the value of the sub-irrigation system, we recently wrote Messrs. Briggs and Blowers, of Yolo county, who have had much experience in surface irrigation for a variety of

from eight to ten times, reclaim our deserts, bring the foothill region under thorough cultivation and stud our valleys with orchards, gardens, lawns and alfalfa meadows. Every farmer who has a tract of land with a well and windmill or other apparatus for raising water can double the value of his property, at a moderate expense, by putting down a few acres of Asbestine pipe and save the bills he now pays for hay pasture, meat, vegetables and fruits, and which many times equal the difference between profit and loss in his operations. By the use of this system our orchardists and viniculturists can grow fine shipping fruits to a uniformity and perfection that will place competition with others at defiance, and produce brands of dried fruits and raisins that will lead the world. A gentleman, prominent in the Riverside Raisin-Growers' Association, recently stated his belief that in ten years from now there will be 10,000 acres of land laid down in the Asbestine system of sub-irrigation in Riverside Colony.

Mr. Schuyler, of the State Board of Engineers, spent a day in examining the system last Summer at the home of the inventor, in East Los Angeles, and approved it. He took notes and figures which may appear in the State Engineer's report.

We recently saw this system where it has been in use from one to three years, but have only room here to say that we found it as satisfactory as represented.

Any one desiring information may obtain it by addressing "The Asbestine Sub-Irrigation Company, Los Angeles," and will be promptly answered by the Secretary of the Company, C. N. Earl, Esq. Mr. M. P. Grove, one of the members of the Company, is now visiting San Joaquin and Yolo counties, where he may be communicated with in person.

Los Angeles, Cal.

H. E. HALLITT.

Shinn for the publishers of the PACIFIC RURAL PRESS, will be sent, post-paid, in substantial cloth binding for \$1; in full leather, \$1.50; in cloth, interleaved with fine ruled paper for memoranda, \$1.50. Address

DEWEY & CO., PUBLISHERS,  
No. 202 Sansome Street, San Francisco.

THE RIVERSIDE HOUSE is pleasantly located in the center of the town in Riverside Colony, San Bernardino Co. It is a new two-story brick building, containing some 40 rooms. Health-seekers and other visitors to this most favored climate will find good boarding accommodations at favorable rates. For further information address the proprietors, CUNNINGHAM & MOONY, Riverside, San Bernardino Co., Cal.

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoograpicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

How to STOP THIS PAPER.—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate the copy sent.

EXTRA COPIES can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.

THOMAS DUNSON will oblige us by sending his P. O. address to this office.







## Agricultural Articles.

## The Famous "Enterprise."

PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babitted boxes.

Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

**HORTON & KENNEDY,**

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

**MATTESON & WILLIAMSON'S**



Took the Premium over all at the great plowing Match in Stockton, in 1870.

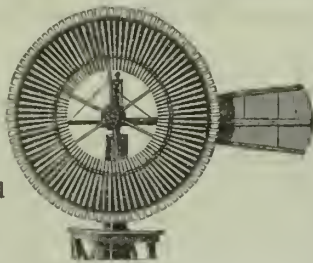
This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

**MATTESON & WILLIAMSON,**  
STOCKTON, CAL.

**\$50.**

The New  
**Worthington**  
Windmill

Manufactured  
by



**W. D. PARSON,**  
1364 San Pablo Avenue, Oakland, Cal.  
Also, maker of the "Colorado Wind Engine," Wind Grist Mills, Town Water Works, Irrigating and Drainage Pumps. A very heavy and superior pattern of Deep Well and Artesian Lift Pump Cylinders. Circulars free.

### The Boss Pruner.

Patented Jan. 3, 1873.

**ENTIRELY NEW!**

Works on a cog principle. Smallest size cuts one inch, and largest size two inches in diameter. Has been thoroughly tested, and given perfect satisfaction. Sold by

**GEORGE LARKIN,**  
Newcastle, Placer County, Cal.

### BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

**JOHN RIDER,**  
15th and A Streets, Sacramento City, Cal.

**DO**

NOT FAIL to send for our NEW PRICE LIST. More complete than ever. Contains descriptions of every thing required for personal or family use, with over 1000 Illustrations. Send nine cents for it. (Stamps will do.) We sell all goods at wholesale prices in quantities to suit the purchaser. The only Institution in America who make this their special business. Address,  
**MONTGOMERY WARD & CO.,**  
227 & 229 Wabash Ave., Chicago, Ills.

**Patents**

OBTAINED IN U. S. AND FOREIGN COUNTRIES; trademarks, labels and copyrights registered through DEWEY & CO.'S MINING AND SCIENTIFIC PRESS Patent Agency, San Francisco. Send for free circular.

## Nathaniel Curry & Bro.,

113 Sansome Street, San Francisco,



Sole Agents for the

**Sharps Rifle Co., of Bridgeport, Conn.**

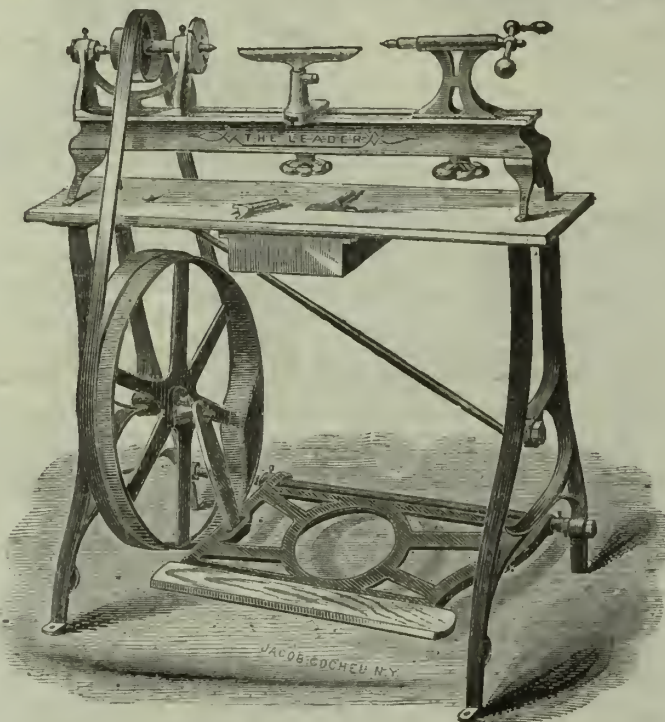
FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO.

Also Agents for W. W. GREENER'S Celebrated Wedgefast, Chokebore, Breech-loading DOUBLE GUNS; and all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America. AMMUNITION of all kinds in quantities to suit.

## Dunham, Carrigan & Co.,

Nos. 107, 109 & 111 Front Street, S. F.

**Lathe Without Saw Attachments.**



This lathe has been made especially to meet a want felt by many for a really good and substantially made Foot-Lathe at a reasonable price, and we think that we can safely say that it is by far the best Lathe ever placed on the market at the price asked. The bed, head, and tail stocks are of iron, the spindle of steel. The bearing of the head stock is conical, so that the wear can be easily taken up.

Material eighteen inches long and eight inches in diameter can be turned upon it. The pieces that accompany this Lathe without extra charge are two T rests, two plain centers, one spur center for wood turning, and one face plate.

Price of Lathe without Saw Attachments.....\$45. Price of Lathe with SCROLL Saw Attachment.....\$5  
Price of Lathe with both Scroll and Circular Saws, \$70.

## Trump Drill Chuck.



Chuck for drills  $\frac{1}{2}$  and under,  
Price.....\$1.50  
Chuck for drills  $\frac{3}{4}$  and under,  
Price.....\$2.25  
They are made on solid steel plug, centered and readily fitted to Lathe or Drill Press.  
**SEND FOR CIRCULAR.**

## WELLS, RICHARDSON & CO'S PERFECTED BUTTER COLOR

Gives Butter the gilt-edge color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. **WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.**

### PLEASANT SUMMER READING.

#### THE NEW PENELOPE

— AND —

#### Stories of California Life.

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. Agents wanted for this popular work. Easy sales and large commissions. Address

**MRS. F. F. VICTOR,**  
721 Market St., S. F., Bancroft's Building, top floor.  
**PRICE, \$2 00.**

### FRICK DROUTH-PROOF BARLEY

For Sale,

**AT FOUR CENTS PER POUND.**

By **SALZ & CO., Agents.**

Centerville, Alameda County, Cal.

### MONEY TO LOAN

AT LOWEST RATES

On Country Real Estate and Grain in Warehouse.

**McAFEE BROTHERS.**

202 Sansome Street, San Francisco.

**JOHN ROGERS & SONS,**

**GENERAL STOCK AND SALE YARD,**

Corner Market and 9th Sts., San Francisco.

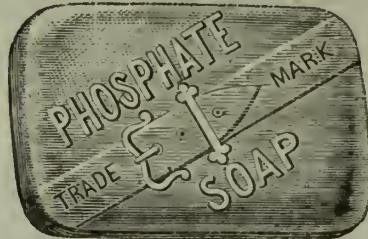
**HORSES and MILCH COWS** sold on commission. Also, dealers in **HAY and GRAIN.** Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

### Engraving.

Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the **MINING AND SCIENTIFIC PRESS**, San Francisco at favorable rates.

50 Perfumed, Snowflake, Chromo, Motto Cards, name in gold and jet 10c. **C. A. SPRING, E. Wallingford, Ct.**

## PHOSPHATE SOAP



**THE BEST** soap for toilet use ever manufactured. **BEST** because it contains all the excellencies of the most expensive foreign or American soaps without their defects. **BEST** because it combines strength with delicacy in such a way that its strong detergent qualities do not injure the skin. **BEST** because it is the result of years of study and experiment in the soap manufacturing business, assisted by modern chemical discoveries. **BEST** because it contains ingredients beneficial to the skin, which unite chemically with the soap in such a manner as to increase its saponaceous qualities. Every chemist familiar with soap manufacture knows that some ingredients which are in themselves beneficial to the skin cannot be saponified; some are partially neutralized, while others injure the quality of the soap. There are soaps in the market which are to some extent beneficial to the skin, but they are inferior articles for toilet use. **PHOSPHATE SOAP** is the **ONLY** article offered to the public which combines all the best elements of toilet soap with medical ingredients beneficial to the skin.

If you wish to make your hands soft buy a cake of **PHOSPHATE SOAP**, and when that is gone you will buy a dozen and recommend your friends to do the same.

Ladies who wish to make the skin look beautiful and natural should use **PHOSPHATE SOAP.**

For chapped hands the constant use of **PHOSPHATE SOAP** will be recommended by all who give it one fair trial.

#### TESTIMONIALS.

SAN JOSE, September 21, 1879,

To the Standard Soap Co.—Gentlemen:

It affords me pleasure to say to the public that I have used and prescribed your **PHOSPHATE SOAP** as a remedy in various forms of cutaneous diseases with the happiest results. I am of the opinion that it is the mildest and most perfect detergent that can be used, either for cleansing the skin and leaving it soft and healthy, or for removing the feter and corroding influences of sores and ulcerations. I should be sorry to be without it in shaving my face or making my toilet, to say nothing of my good opinion of its remedial qualities.

**A. J. SPENCER, M. D.**

SAN FRANCISCO, Aug. 27, 1879.

Gentlemen:

I received a package of your soap (Phosphate Soap) and it gives me great pleasure to testify as to its superior excellence. As a toilet soap I have never seen anything to surpass it. It also possesses superior remedial qualities. I have used it in two cases of obstinate skin disease, one of intolerable itching, *Pruritus*, the other an *Eczema*. In both great relief was obtained. Its emollient properties are remarkable. Respectfully,

**W. A. DOUGLASS, M. D.,**

126 O'Farrell St.

To the Standard Soap Company.

SAN FRANCISCO, July 19, 1879.

Standard Soap Co.—Gents:

I have tried your **PHOSPHATE SOAP**, and have no hesitation in saying that it is the best toilet soap I ever used. My wife has used it and is of the same opinion. I have paid as high as fifty cents per cake for an article in every respect inferior to what you sell for twenty-five cents. **HENRY H. LYNCH,**  
515 Haight street.

The genuine merits of **PHOSPHATE SOAP** and persistent advertising will force every druggist, groceryman and general dealer to order it by the gross sooner or later. Ask for it in every store. The retail price is 25 cents per cake. We wish to sell it only at wholesale, but in case you cannot find it we will send a nice box of three cakes by mail, postage paid, on receipt of 85 cents in stamps.

Address **STANDARD SOAP CO.,**

204 Sacramento St., San Francisco



Popular Music Books.

**Temperance Jewels.** New Temperance Songs of the best quality. 30 cts. (Nearly ready.)

**White Robes.** The Sweetest Sabbath School Song Book ever made. 30 cts.

**Gem Gleaner.** Superior collection of Anthems for Church Service. \$1.00.

**Prodigal Son.** A grand Cantata. By SULLIVAN. Commended to Musical Societies. 75 cts.

**American Glee Book.** Mixed Voices. One of the very best Glee and Chorus Books. \$1.50.

**Emerson's Vocal Method.** For Voice Training. One of the very best. \$1.50.

**Dr. of Alcantara.** Fine Opera. Good Music and easy to give. \$1.50.

Specimens of these or any other books, or any piece of Sheet Music mailed anywhere, post free, for the retail prices.

OLIVER DITSON & CO., BOSTON.  
C. H. Ditson & Co., 843 Broadway, N. Y.

**MONEY | FOOD**  
**For Farmers. For Hogs.**  
**CHEAP PORK.**  
**The Brazilian Artichoke.**

Is the cheapest and best food for Hogs, being ahead of anything in existence for that purpose. 600 to 1,000 bushels to the acre. Little trouble. No harvesting. No feeding. The Hogs will help themselves if allowed to do so.

I have eight acres of Artichokes this year, and will furnish seed for half the price of last year, when my seed cost me 25 cents a pound.

PRICE—I will send by Express or common freight, 50 to 300 lbs. at 3½ cents a pound. Over 300 lbs., 3 cts.; 1,000 lbs. and over, 2½ cts.; 3 lbs. by mail for \$1. I will send a circular with each package giving all information. Send all money in draft on San Francisco or P. O. Order on Hollister Post-office.

150 lbs. plants an acre.  
For further information send for circular. Address  
J. H. F. GOFF,  
San Felipe, Santa Clara County, Cal.

P. JONES. J. THOMPSON.  
**JONES & THOMPSON,**

Wholesale and Retail Dealers in  
**Hay, Grain and Feed.**

Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,

1535 Mission St., San Francisco.

M. COOKE. R. J. COOKE

**PIONEER BOX FACTORY,**

Corner of Front and M Streets, Sacramento  
ALL KINDS OF

**Fruit and Packing Boxes Made to Order, AND IN SHOOKS.**

Communications Promptly Attended to.

COOKE & SONS, Successors to COOK & GREGORY.

**FREE GIFT!** A copy of my **Medical Common Sense Book** will be sent to any person afflicted with **Consumption, Bronchitis, Asthma, Sore Throat, or Nasal Catarrh.** It is elegantly printed and illustrated. 144 pages, 12mo, 1879. It has been the means in the providence of God of saving many valuable lives. Send name and post-office address, with six cents postage for mailing. The book is invaluable to persons suffering with any disease of the **Nose, Throat or Lungs.** Address **Dr. N. B. WOLFE, CINCINNATI, O.**

**A Card to Grangers and Farmers.**

**HAY, GRAIN, HORSES and CATTLE.**  
The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nos. 11 and 13 Bluxome St., San Francisco.

TRADE MARK.  

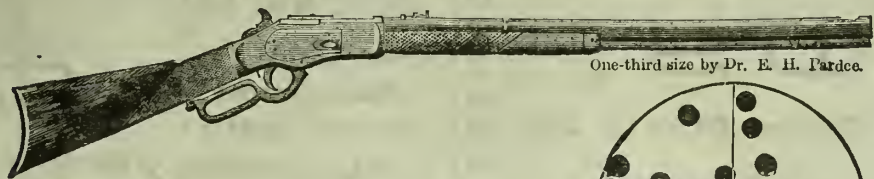

**LITTLE'S CHEMICAL FLUID.**  
The New Non-Poisonous Sheep Dip and Disinfectant. Price reduced to \$1.60 per gallon. For directions and testimonials apply to **FALKNER, BELL & CO.,** Sole Agents, 430 California Street, S. F.

**Agricultural Books.**

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.

**Winchester Repeating Rifle,**

MODEL 1873.



**The Strength of All its Parts,  
The Simplicity of its Construction,  
The Rapidity of its Fire,  
The Power and Accuracy of its Discharge,  
The Impossibility of Accident in Loading,**

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carabines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

String measuring from center of target to center of each shot, 32 inches. Average distance of each shot, 1 9-100 inches.

String measuring from center of target to center of each shot, 32 inches. Average distance of each shot, 1 9-100 inches.

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carabines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder.

**JOHN SKINKER, No. 115 Pine Street, San Francisco.**

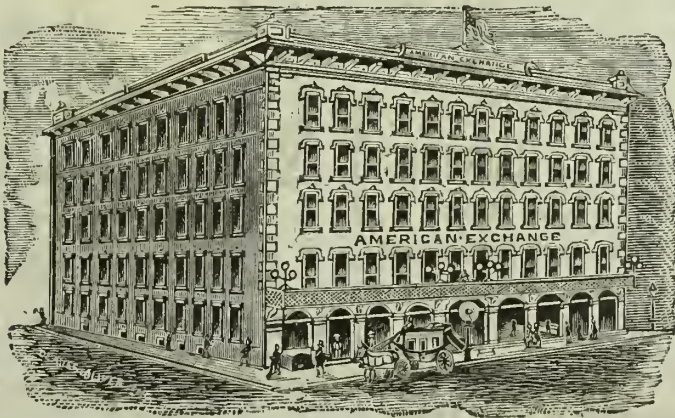
SOLE AGENT FOR THE PACIFIC COAST.

**The American Exchange Hotel,**  
SAN FRANCISCO, CAL.,

Is situated on Sansome street, next adjoining Bank of California, and is in the very center of the great city.

Sansome Street is one of the finest and principal business streets in S. F.

The Hotel is situated within two blocks of the U. Land Office and U. S. Surveyor General's Office; also within



two blocks of the City Hall, Supreme Court and all the District Courts; within two blocks of the Postoffice and Custom House. All places of amusement are convenient to the Hotel. Street cars for all parts of the city pass the Hotel every minute.

**THE AMERICAN EXCHANGE HOTEL**

Having been recently renovated and refurnished throughout is in every respect the BEST FAMILY HOTEL San Francisco. It has Two Hundred Rooms, well ventilated and neatly furnished, and being easy of access, fire-proof and sunny is decidedly the Hotel for comfort and convenience for the traveling public.

— OFFICE OF THE —

**BLACK POINT PACKING AND SLAUGHTER HOUSE.**

MERRY, FAULL & CO., Proprietors.

**TO OWNERS OF LIVE STOCK!**

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

**SQUARE DEAL and FULL MARKET PRICES**

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices. Please address our

Principal Office, No. 125 & 127 California Street, San Francisco.

60 Elegant Perfum'd Cards, Chromo, Motto, Lily, Etc. 15c. Gift with each pack. H. M. SMITH, Clintonville, Ct. YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

**THE WILSON ADJUSTABLE CHAIR,**  
With 30 Changes of Position.

Patented in the United States and Foreign Countries. BEST CHAIR IN THE WORLD.

Parlor, Combining  
LIBRARY, Beauty,  
Invalid Chair, Lightness,  
Rocker, Strength,  
BED or Simplicity  
LOUNGE. and  
READING POSITION. Comfort.



Same Chair in Cane Seating, very desirable for summer. Manufactured of the best of wrought iron and rivets. Castors made purposely for the Chair. Everything to an exact science. IT WILL LAST A LIFE-TIME. Has been awarded Medals, Prizes and Diplomas for its superiority and merit wherever it has been exhibited. Orders by mail promptly attended to. Goods shipped to any address, C. O. D. Send for Illustrated Circular. Address the WILSON ADJUSTABLE CHAIR MFG CO., 535 Washington St., Boston

**ARITHMETIC MADE EASY  
BY ROPP'S  
EASY CALCULATOR.**

This valuable work is used by thousands of farmers, mechanics and business men, and is highly recommended for its practical utility and convenience.

It embodies an entirely new system of calculation, by which a vast amount of figures and mental labor—required by the ordinary methods—and fractions with their complexities, are absolutely avoided.

It is so simple and easily comprehended that even the most illiterate is enabled, in a few minutes, to reckon with absolute accuracy and speed; while its original and rapid methods, benefit and delight the most scholarly.

It shows at a glance the accurate value of wheat, corn, rye, oats, barley, cattle, hogs, hay, coal, lumber and merchandise, from one pound to a car load, and for any price the market is likely to reach.

It gives the interest, simple and compound, on any sum, or any time, at six, seven, eight, and ten per cent.; the exact measurement of boards, scantlings, timbers, saw logs, cisterns, tanks, walls, granaries, bins, wagon beds, corn cribs, etc., the wages at various rates, for hours, days, weeks and months; besides numerous other important methods, rules and tables.

It is printed on fine tinted paper, is well and elegantly found in pocket-book shape, and accompanied by a silicate slate, pocket for papers, and memorandum, which can be replenished in the two latter styles.

It answers the purpose of a pocket book and diary, and costs no more, although it was gotten up at great expense and labor, and is unquestionably one of the most useful publications ever issued from the press.

Price, bound in Fine English Cloth, \$1.00.

Sent direct from the Eastern publisher, postpaid, on receipt of price, by P. O. order, registered letter or receipted by express. Address

DEWEY & CO., San Francisco.

**ST. DAVID'S.**

A FIRST-CLASS LODGING HOUSE.  
CONTAINS 113 ROOMS.

715 Howard St., near Third, San Francisco.

This House is especially designed as a comfortable home for gentlemen and ladies visiting the city from the interior. No dark rooms. Gas and running water in each room. The floors are covered with body Brussels carpet, and all of the furniture is made of solid black walnut. Each bed has a spring mattress, with an additional hair top mattress, making them the most luxurious and healthy beds in the world. Ladies wishing to cook for themselves or families, are allowed the free use of a large public kitchen and dining room, with dishes. Servants wash the dishes and keep up a constant fire from 6 A. M. to 7 P. M. Hot and cold baths, a large parlor and reading room, containing a Grand Piano—all free to guests. Price single rooms per night, 50 cts.; per week, from \$2.50 upwards.

R. HUGHES, Proprietor.

At Market Street Ferry, take Omnibus line of street cars to corner Third and Howard.

**SEND FOR THE  
\$1.50**

**Homœopathic Medicine Case.**

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address

BOERICKE & TAFEL,  
Homœopathic Pharmacy, San Francisco.

**AMERICAN  
MACHINE AND MODEL WORKS.**

Experimental and Fine Special Machinery, Planing, Gear Cutting, Patterns, Models for Inventors, etc.

Printing Press and General Machine Repairing.

Punches, Dies, Taps, Reamers, etc., made and repaired

I. A. HEALD, Proprietor.

514 Commercial Street, above Sansome, San Francisco.

**Wanted Immediately.**

Five tons first-class Hroom Corn, delivered at Cloverdale. Parties wishing to sell will please communicate immediately, as to lowest terms.

THOS. McCOWAN,  
Ukiah, November 19th, 1879.

**CARP FISH FOR SALE**

— BY —  
LEVI DAVIS,

At Forestville, Sonoma County, California,  
IN LOTS TO SUIT.

GILES H. GRAY. JAMES M. HAYEN.

**GRAY & HAVEN,**

Attorneys and Counsellors-at-Law,

In building of Pacific Insurance Co.,  
Corner California and Leidesdorff streets, San Francisco.



**Geo. F. Silvester,**

IMPORTER, WHOLESALE AND RETAIL DEALER IN

**SEEDS,****Fruit and Evergreen Trees, Plants, Etc.****ALFALFA, GRASS AND CLOVER SEEDS**

In large Quantities and offered in Lots to suit Purchasers.

GREAT REDUCTION IN PRICES.

Seed Warehouse, 317 Washington Street, San Francisco.

**DEWEY & CO.'S****Scientific Press****Patent Agency.**

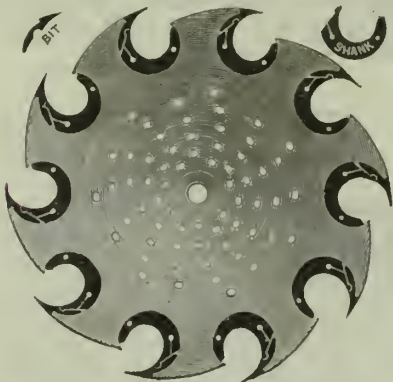
[ESTABLISHED 1860.]

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old, experienced, first-class Agency. We have able and trustworthy associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other Agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., 202 Sansome St., S. F.

A. T. DEWEY.

W. B. EWER.

GEO. H. STRONG.



Entirely different from other Saws. When dull, sharp teeth, which only cost a trifle, can be inserted in a few minutes, without taking the saw off of the mandrel, and no skill is required in doing it. Send for Catalogue showing their vast superiority. More of them are being sold than of any other kind, and we are altering all other kinds to the Chisel Tooth.

**TATUM & BOWEN,**

329 Market Street, 3 Fremont Street.

**CALIFORNIA****SUGAR REFINERY,**

Cor. Brannan and Eighth Sts.

Office, 215 Front Street.

This Company manufactures all grades of

**HARD AND SOFT SUGARS,**

And a Superior Quality of Syrup known as

**DIAMOND S****SYRUP.**

Supplies only Exporters and Jobbers.

**SITUATION WANTED.**

A Mechanic, 41 years of age, desires a situation on a Farm. Wages not so much of an object, for the first six months, as a wish to remove from the city for the winter, and to gain some general information of farm work, before going into the farming business for himself. Address,

J. SHOERS,  
No. 639 Mission St., S. F.

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 120 Sutter St., S. F.

**Baling Fencing Telegraph Telephone Galvanized****WIRE****Barbed Fence Wire.**

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the Trademark.

**A. S. HALLIDIE**

Wire Mills.

Office, No. 6 California St.

SAN FRANCISCO.

**WIRE ROPE and CORDAGE**

Of every kind on hand or Made to Order.

**THOROUGHbred POULTRY.**

SAFE ARRIVAL OF

FOWLS

AND

EGGS

Guaranteed.



UNLIMITED RANGE

Healthy Stock

116 ACRES

Devoted to the

Business.

LANGSHANS. I now breed this justly celebrated Fowl. Send 3c. stamp for price list and circular describing the different breeds I keep. Incubators.

M. EYRE, Napa, Cal.

Send Pamphlet on Breeding, Hatching, Diseases, etc., adapted especially to Pacific Coast, sent for 15c.

**Los Angeles Nursery.**

The undersigned will furnish Fruit Trees of all kinds at low rates. We offer an unusually large stock of Apple, Peach and Apricot Trees; also Orange and other Fruit Trees. Our Trees are free from Disease or Blight of any kind.

We have WOOD'S EARLY APRICOT, that bears four weeks earlier than any known variety. We also have new Apples and Peaches of much promise.

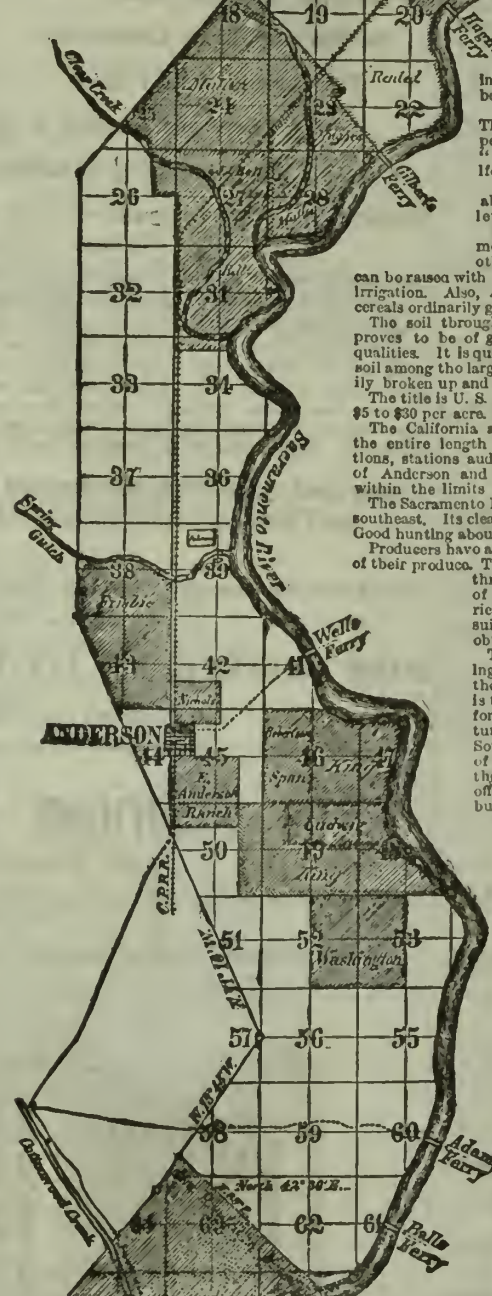
Send for catalogue at once.

MILTON THOMAS,

Los Angeles, Cal.

**READING RANCH,**

Shasta Co., Cal.

**Good Land!****Sure Crops!****HEALTHY CLIMATE!****Prices Low. Terms Easy.****TITLE PERFECT.**

can be raised with success on most of the tract without irrigation. Also, Alfalfa, Vegetables, Corn and all other cereals ordinarily grown in the State.

The soil throughout the tilled portions of the ranch proves to be of great depth and enduring in its good qualities. It is quite free from foul growths. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

The title is U. S. patent. Prices range principally from \$5 to \$30 per acre.

The California and Oregon railroad traverses nearly the entire length of the tract. There are several sections, stations and switches, besides depots at the towns of Anderson and Reading, all of which are located within the limits of the ranch.

The Sacramento River borders the whole tract on the southeast. Its clear waters are well stocked with fish. Good hunting abounds in the surrounding country.

Producers have a local market, which enhances the value of their produce. The railroad transportation route is level throughout to San Francisco. A portion of the land is auriferous and located near rich mines now being worked. Land suitable for settlers in colonies can be obtained on good terms.

Town lots are offered for sale in Reading, situated on the Sacramento river, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

Purchasers are invited to come and see the lands before buying here or elsewhere. Apply on the ranch, to the proprietor.

**EDWARD FRISBIE,**  
Anderson, Shasta Co., Cal.

P. S.—Send postage stamp for illustrated paper containing information about Shasta county and these lands, and say advertised in this paper.

**Location of Shasta County.**

Shasta County lies not far from midway between the two most important ports on the Pacific shore, i. e., San Francisco and Portland, Oregon, and directly on the overland route, which in the future will become the grand thoroughfare from Mexico to British Columbia. The town of Reading, at present, and probably for years to come, the head of railroad transportation on the California side of the mountains intervening below Oregon, is distant from San Francisco by railroad (via Vallejo) 255 miles; from Sacramento City, 169 miles; from Marysville, 117 miles.

**LAND FOR SALE OR RENT IN SUB-DIVISIONS.****R. J. TRUMBULL & CO.,**

SUCCESSORS TO

**R. J. TRUMBULL,**

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

Guide to the Vegetable and Flower Garden will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL &amp; CO.,

419 and 421 Sansome Street, S. F.

**Mission Rock Dock and Grain Warehouse.**

San Francisco, Cal.

40,000 tons capacity. Storage at lowest rates.

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. Proprietors.

Office—318 California Street, Room 3.

**Napa Valley Poultry Farm.**

Headquarters for all the

leading varieties of

PURE BRED POULTRY.

WHITE and BROWN

LEGHORN'S,

PLYMOUTH

ROCKS,

AYLESBURY

DUCKS, BRONZE

TURKEYS, TOULOUSE

GEESE, ETC., ETC., ETC.

Price of Fowls and Eggs as

low as the high standing of

R. G. HEAD.

Napa, Cal.

**HANNAY'S NURSERY.**

San Jose, Cal.

I offer for sale this season, a large and well assorted stock of

Fruit, Shade and Ornamental Trees.

My trees are WELL GROWN and HEALTHY, and of the

**Best Known Varieties.****JOHN HANNAY**

Successor to Hannay Bros.,

San Jose, Cal.

Dewey & Co. 202 San- } Patent Ag'ts  
some St.



# PACIFIC RURAL PRESS

Volume XVIII.]

SAN FRANCISCO, SATURDAY, DECEMBER 13, 1879.

Number 24.

## The Langshans.

The interest of a number of our poultry readers having been manifested in the Langshan breed by the questions they have sent us concerning them, we secured the engraving of typical representatives of the breed which appear upon this page. The origin of the Langshans was in Northern China, and thence the first birds were taken to England in 1872. Since their arrival in England they have been the subject of much controversy among poultry experts, some claiming that they are from the same stock that the Black Cochins sprang from, others that they are in fact a new, pure and distinct breed of fowls. Into the merits of this controversy we have not space to enter at this time. It seems to be agreed that they resemble the Black Cochins, that they are vastly superior to the Black Cochins as it is commonly known.

The Langshans shown on this page were bred by Benson, Maule & Co., of Philadelphia, from imported stock. They enumerate the good qualities of the breed as follows: "They are hardy, withstanding readily even severest weather. They attain maturity quite as early as any of the large breeds. They lay large rich eggs all the year round, and are not inveterate sitters. Being of large size, with white flesh and skin, they make an excellent table fowl; more especially so on account of the delicacy of flavor which the flesh possesses. They consider the breed is worthy the attention of all. First, because they come from a part of the world which has given us many of our most excellent breeds; and second, because their popularity is in the ascendancy, and they seem to combine in themselves nearly all the valuable characteristics that go to make up a practically useful fowl."

An English writer in the *Poultry Bulletin* gives the question of similarity between the Langshans and the Black Cochins a very careful review, and seems to favor the idea that the breeds are identical. He has no difficulty in finding good points in the Langshans, and gives the following description of their traits and characteristics: They are tall, bulky birds, large of body and long in limb, combs single, always erect in cocks and generally so in hens, but occasionally overhanging in the latter, wattles and ear-lobes long and flabby, pendulous, and of a bright, uniform red color; loose skin or dew-lap from beak to throat full and conspicuous, neck long, full and profusely feathered; back short and fairly broad, rump high, tail very full and flowing, carried rather high and forward, and furnished with good-sized sickles which wave in the breeze as streamers. Stern thick, deep, heavy and fluffy feathered, breast hollowed, being light and narrow through from keel to back, legs long, decidedly leggy, yet free from knock-knee or rickety gait. Shanks scantily feathered, entire plumage of a uniform, glossy black and full of luster. The beak and legs are, for the most part, black, with flesh-colored variations along the line of mouth, the lower part of toes and sole of foot. The eye is dark, with but little difference in shade of pupil and iris. These, then, are the points, the outward and visible characteristics of the majority of Langshans which have come under my notice. As to other peculiarities, they are active, agile and impetuous, and have fair sized wings, therefore with useful legs and wings (although large birds) they are, by means of good locomotive powers, enabled to move about and forage with freedom and ease. They are very prolific, grow quickly, mature early and lay well, their eggs being brown-shelled (like the Cochins and Brahmas), their skin and flesh are white, and as a table fowl, they are said by epicures to be "delicious." The Langshans have been said by some to be a non-sitter, and by others to be untrustworthy, but I happen to know that they are, as a rule, good sitters and good mothers.

**THE PERSISTENT AUSTRALIANS.**—Australia appears determined to send meat alive or dead to English markets. We read that: "A Liverpool firm of cattle importers have at present on the way a shipment of live cattle from Melbourne, as an experiment."

**GIVE A PLANT A GOOD BREAKFAST.**—The advantage of good seed is an old text among agricultural preachers, and our only excuse for taking it up is the discovery of "new evidence" for the conviction of those who are still thoughtless about the quality of parentage which they select for their crops. In most farmers' experience there have arisen so many instances of the benefits from a choice of good seed and the ill effects from poor seed, that exhortations upon general principles are hardly required. Passing by, then, the results in growth which are most commonly observed, we will return to the seed itself. It is well known that every seed contains not only the germ, but a certain amount of other matter which gives the plant its push into the world and sustains its life until it is able to board itself by means of its roots. It is an interesting point, then, to see how much better fitted a good seed is to give its offspring a good breakfast on the morn-

## The Santa Barbara Cork Oak.

As the growth of the cork oak is attracting the attention of our readers, it will be well to put on record the condition of the solitary but thriving tree at Santa Barbara. Our correspondent, S. P. Snow, writes to the *Germantown Telegraph* that it has grown very fast in the past four years. It is three feet in circumference five feet from the ground, where it branches and forms a large spreading top like a huge apple tree. The leaves are dark green, small, resembling those of the live-oak. The bark looks slightly riven or rolled apart in several longitudinal lines from the roots to the limbs, resembling somewhat a fleece of wool on the back of a Merino sheep when pulled apart slightly. The bark gives very readily to the pressure of the finger, and quite a large quantity of cork could be taken from the tree now. Even several of the large limbs have the ap-

## Bamboo Piping.

**EDITORS PRESS:**—I recently saw an item in the *Press*, that Mr. Doss, of Caluenga, was using bamboo for water pipes, and that it was very cheap and durable. Can you tell where the canes can be had?—J. G. FLOYD, Alma, Santa Clara Co., Cal.

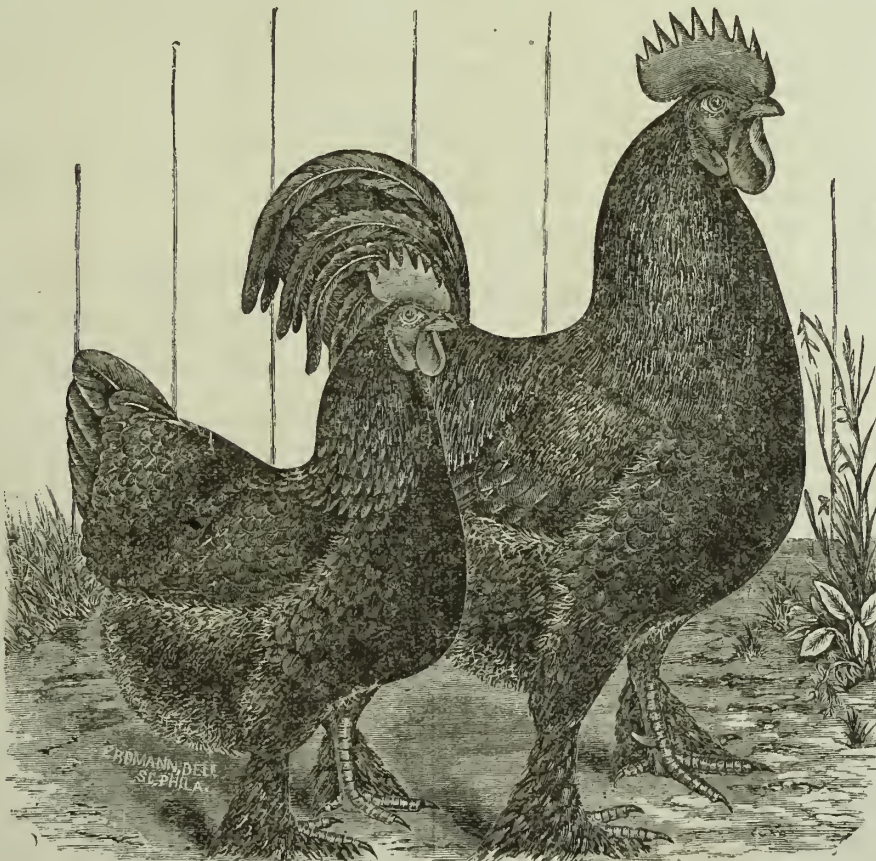
We cannot tell who has the canes for sale, but perhaps some of our Los Angeles readers can inform Mr. Floyd by letter. It grows in Los Angeles county most luxuriantly, and is, we believe, used to a considerable extent for piping. It will also grow in many other parts of the State, as we have heard of its doing well in Sonoma county and elsewhere. The bamboo, because of its many uses, should be more generally introduced in this State. In the *Press* of January 28th, 1879, we printed an article detailing the many uses to which the canes can be put. We should like now to describe its growth and the conditions under which it thrives best in this State. Will some California bamboo grower oblige us with his observation and experience?

We notice that the bamboo, as a useful plant, is attracting considerable attention in England, chiefly with a view to its growth in the Colonies. A book has just been published, entitled "The Bamboo and its Treatment," by Thomas Routledge. We have not seen the work, but it is said to contain information concerning cultivation and other points of value to growers. It is also said that a company has been formed in England, with a large capital, for the extensive and various utilization of this plant in the arts of industry, the enterprise having its origin in the multitude of uses for which the material is and for a long time past has been employed in India. A late report of Dr. Schlich, Conservator of Forests in Bengal, says that there are about 1,800 square miles of pure bamboo forests in the Arrakan division of British Burmah, within a moderate distance of the coast, and all accessible by navigable streams. All these bamboos have flowered several years ago, and the ground is now covered with seedlings which makes the forest impassable.

**MANNA IN WASHINGTON TERRITORY.**—This is not the manna upon which the Israelites fed in the wilderness, but a substance valuable to the pharmacist and sometimes called fir sugar. It is a cream-colored flaky substance with a sweetish taste, containing mannite, which has a mild laxative effect upon the system. It is the concentered juice of a tree, and the supply now comes wholly from Sicily, being derived from a small native tree, *Fraxinus ornus*. A sample of manna was lately sent from Yakima, W. T., to the Smithsonian Institution at Washington, and referred to the Department of Agriculture for analysis. It is reported to be an excellent article. It occurs as an exudation upon the branches of a species of fir tree and is said to be in such quantities as to break down the branches. It will also doubtless break down the manna market unless some enterprising man should start a manna pill factory or a manna cake bakery. We will accept a royalty of one per cent. on the profits as a recompense for this suggestion.

**THE OLIVE.**—We learn, from the last report of the Commissioner of Agriculture, that the olive is receiving the special attention of the department. A valuable selection of the varieties best known to commerce has been secured, and will be propagated at Washington as rapidly as means will allow. The Commissioner says: "Much interest is felt in the culture of this product in the various States where it succeeds, and as the plant is not sensibly injured by less than a zero cold, it can be made a subject of experiment over a large portion of the country." From this it seems that the country is waking up on the subject of olive culture. California has certainly a good lead in the industry and a disposition to go forward.

**"Loco" WEED.**—The "loco" poison weed was analyzed by the chemist of the Department of Agriculture according to the last report, and no poisonous principle was discovered. We are therefore apparently just as far as ever from knowing just what it is in the "loco" which produces such violent effects.



LANGSHAN FOWLS, BRED BY BENSON, MAULE & CO., PHILADELPHIA.

ing of departure than a poor seed is. Prof. Collier, of the Department of Agriculture, has made selection of the best and poorest corn, beans and peas, from different lots of seed, and analyzed them; comparing the composition of the best with that of the poorest specimens from the same lots. The result is that of the two constituents which are of the most importance in plant growth, potash and phosphoric acid, there was but 71% in the poor seed to 100% in the good. The conclusion, therefore, from the analysis is that the young plant would receive from the better seed the same kind of food as from the poorer, but would enjoy about one-third more of it. This is doubtless of much importance to a young, hungry germ, and would indicate that to get a full-sized and vigorous plant it must be fed well from the start—a point which all breeders know is of great importance in the development of their animals.

**AN ERROR IN PRICE.**—Our attention is called to a serious error in the estimated cost of constructing a house according to the design printed in our issue of October 18, 1879. The cost of such a structure would probably be three or four times as great as the estimate given. In the printing the leading figure was omitted, hence the error.

pearance of being well corked. It is growing in the city, on rich bottom land, but has had little if any cultivation since I have known it. The peculiar color of the bark, about that of ordinary cork, gives the tree rather a striking appearance.

**GOVERNMENT SUGAR BEETS.**—The last report of the Commissioner gives the analyses of samples of sugar beets grown from seed sent out by the Department of Agriculture in several States. There is one report from California, viz., some of the "white green-top," were grown by H. B. Sheldon, of Covelo, Mendocino county. Prof. Collier's analyses of samples from this crop show a percentage of sugar in juice of 11.52, and percent of sugar obtained from the root 6.66. This is not up to the standard of a workable beet. Out of about 70 lots analyzed, and grown in different parts of the United States, only four were pronounced by the chemist to be fit for sugar-making. The best beets of all were the smallest in size, averaging about one and one-third pounds in weight; the poorest averaged two and one-third pounds in weight.

**SIR WILLIAM BOXALL,** the eminent English painter, is dead.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—EDS.

### Fruit, Grain and Weeds.

EDITORS PRESS:—Many of your readers will remember that I have been from time to time endeavoring, through the PRESS, to "show up" the many solid and pleasing natural advantages that exist in Santa Cruz county; and for fear some disappointed persons may accuse me of "over-drawing" in my relation of those advantages, I must tell you how some folks have misused them. I have been traveling lately over that portion of Santa Cruz county known as the Pajaro valley, an extremely fertile and very beautiful region, and grandly picturesque withal; being surrounded on three sides by beautiful hills, and on the other by the placid waters of the Bay of Monterey.

I said "fertile" and won't take it back! "You had better," says one, "for I have not raised enough grain, hay and potatoes for the last three years to pay my rent, let alone making wages; and I am going to leave, and see if I can't find some place where I can make a living."

Well, it is said that some folks will grumble at being hung, and I believe it, for it is evident to every observing mind, in passing over the valley, that the fault is entirely with the people and not the country. Now I have no doubt but I shall get many a "blessing" for this accusation, but I can prove it and won't take it back. Now, see if I don't! Well, when I made inquiry about the manner of "cropping," and about the yield of grain and potatoes in early days, I was told that 100 bushels of wheat and 300 and 400 sacks of potatoes to the acre was common, with less labor than is required now to get one-quarter or one-sixth of that amount. Now, why is this? Is it because the soil was thin and quickly worn out, or the climate has changed? No, neither; for when I make inquiry of the old settlers, I find that they generally agree that the seasons have been quite uniform and favorable, and referring to the rain tables for the last 20 years, we find the rainfall quite uniform—at least enough so to insure good crops (I mean in Santa Cruz), if other things were favorable.

Here I will note a circumstance that will bear on the subject. Three years ago this winter about as little rain fell as in any previous winter for a long time, and the following season was unusually dry, but notwithstanding the dry season, I succeeded in making three and one-half tons of barley and oat hay to the acre, and a good crop of corn among my young fruit trees, which also made a good growth and were planted that winter. Now this is the way in which I did it. I had learned the value of saving the early rains, and as soon as the ground was wet deep enough to plow lightly, I stirred it and pulverized it well with harrow and drag, which soon started the weeds to growing and retained the moisture till the next rain, which, with the moisture already in the ground saved from the first light rain, put the land in good order for deeper plowing and seeding, which I did in good order, and obtained the results already noted. While I was doing this, some of my neighbors said I was plowing too early—January was early enough to plow and seed, after the weeds had got well started. But as a rule, they had left their plowed land so rough and cloddy in the spring previous, that there was not enough rain in the fore part of winter to soak the clods and moisten the land enough to sprout the foul seeds very much; and the result was, that when the rains came sufficiently to make good plowing and seeding, the weeds came with the wheat, and took their share of the fertilizers; and all the early rains having been lost, in consequence of the neglect to stir the soil, the moisture gave out before the grain was matured, and short crops followed.

But that was not all, nor the worst of it. The habit has been to seed the land, year after year, with the same kind of grain (generally wheat) for the last 25 years. Now where on this broad earth is there to be found a soil that will stand that kind of treatment? And there is not one acre in a hundred in the whole valley that ever had any manure applied to it.

The first winter I stayed in Santa Cruz county, a neighbor asked me to sow his grain for him, and going to the field to sow oats one day, I noticed that the stubble on the unplowed land looked like oat stubble, and spoke of it to the boys that were plowing, and they said the field had been seeded with oats for six years past, successively, and I was sowing the seventh crop.

Now, where is the fault, that this fertile valley does not yield 100 bushels to the acre, as it did 25 years ago? Those engaged in growing potatoes have pursued the same policy, until the yield has dwindled down to 50 sacks per acre; but they have a full crop of weeds. Now, my prophecy is, that unless the present occupants adopt a different mode of farming, they will soon be compelled to give place to another order of farmers, who have learned to give the land some rest, and rotate in cropping; and not depend upon one certain kind of crop year after year, but "mix up" a little.

But notwithstanding the falling off in the grains, the land produces such a luxuriant

growth of weeds that many farmers have to cut them out of the way before they can plow, and this proves to me that, with proper treatment, the land would yield as of yore.

Leaving the field and going into the orchard, we find a style of cultivation similar to that in the field, for here the plowing is put off until the grain land is all plowed and seeded, and the ground has become so dry that it breaks up in clods, and frequently left in that condition for the season, or possibly run over with a harrow, just enough to break some of the larger clods in two so as to make a few more in number. Then the trees are left to go at will, and, as a rule, they have three times the amount of fruit they can mature; and the result is a large amount of unsalable fruit—and then "fruit don't pay."

But some do better in cultivating, but in gathering and storing they seem to think that it makes but little difference in the quality of the fruit when it is gathered, where it is put afterward. So we find such apples and pears as hang on well still on the trees in December, and those that have been gathered after half had fallen off are either in boxes or piles in the open air, exposed to the sunshine and wet and changes of temperature, and the result is that the latest keepers get ripe before January. The other day I picked from a neighbor's tree an Easter Beurre pear that had become ripe and mellow on the tree, which would have kept until March if properly cared for, as they are good keepers, but December is rather late for gathering pears. This is enough of our neighbor's faults for this time. M. P. OWEN.

Soquel, Cal.

### Ferndale and Eel River Valley.

EDITORS PRESS:—A stranger who arrives in Ferndale after dark on a rainy night is poorly qualified to judge of the beauty of the place or of its surroundings. In my last I only spoke of the country between Eureka and Ferndale as seen from the stage coach. The rainy night was succeeded by a clear morning, and when I went out to survey the beauties of the town, I was surprised to find that the long road which we had traveled came to an abrupt ending a few hundred yards from the hotel where we stopped. Ferndale has crawled away over to one side of the valley, and has backed herself up against a mountain range whose sides are too steep to allow the road to go any farther, therefore the people have wisely cut off the end of it, and made it up into cross streets, which are more easily constructed and of far more value to the town. As I looked up to the great fern-covered hills, I realized at once how appropriately the place had been named, and I feel as though thanks were due to the person who selected it, both for its fitness and for its euphony. It is truly surprising to see what quantities of fern grow upon these mountain and hillsides. The valley is not free from it, and wherever it is not under careful cultivation it grows with the blackberry bush and other bushes to a great height. I saw ferns over 12 feet high, and was told by old residents that I had not yet seen the tallest ferns that grow in this vicinity.

Looking towards the ocean a large scope of country is seen, comprising level lands which appear to have been formed by deposits brought down by Eel river and its numerous tributaries. It is somewhat cut up with sloughs and creeks in which the tides back up for a considerable distance. Viewed from a distance it appears to be covered with a forest of trees, but on driving over it I found that the greater portion had been cleared and is in cultivation. The parts not cleared have immensely large trees, logs and underbrush, so thick that it is difficult to go through it. The brave old first settlers have had hard labor in carving out the homes which they now enjoy, and it is very interesting to hear them tell of their trials and privations during the first years spent in the wilderness. Deer, bears and monstrous elk were then very plentiful, and bow the elk managed to get through the almost impenetrable thickets with their large branching horns is a mystery, unless we answer, as the darkey did the conundrum, that "it was their business, not his."

The road leading up the valley from Ferndale skirts the mountain for a few miles, and between it and the river on the right is a very rich, handsome country. Five miles out is the valuable farm of Mr. Church, which deserves more than a passing glance. This farm consists of valley and bench lands beautifully located, well fenced and adapted to raising any kind of crops, or for grazing. Here I saw the finest fruit in the valley. I found spacious granaries groaning under the weight of the choicest wheat, barley and oats. Large quantities of beans were on the barn floors unthreshed, and in all there is a thrifty look about this place which is a pleasure to behold. I almost forgot to state that prominent among the books on his reading table was the PACIFIC RURAL PRESS, which undoubtedly accounts for a share of the thrift that is seen on this handsomely improved farm.

Farther on the road crosses Eel river at a wide gravelly ford. People tell us of the mighty waters that rush down this wide bed at times, but the monstrous redwood trees which have floated whole and have lodged on the sloping banks, speak plainer than words to demonstrate the fact more clearly to a stranger. After crossing the river the road branches, the left hand

leading to Springville and the right to Hydesville.

Hydesville has one of the finest locations in the county. This little town is located nearly in the center of a valley of almost level land. It slopes gently to the river and is surrounded by great mountains densely covered with forests of redwoods. The owners of these redwood lands, as well as the State, have great wealth in them. This timber is so far from the coast that it will be held in reserve until demanded by the exhaustion of more accessible building materials. The little town of Hydesville and its valley is said to be the handsomest spot in the county. Of its tidiness and neatness as a farming section, and of the pleasantness of its dwellings much could be said which would not apply to other sections. H. W. R.

### Dried Grapes and Egyptian Corn.

EDITORS PRESS:—The light crop of grapes in the valley during the past season has caused the demand of common Mission dried grapes in our market. All the finer qualities of table variety have been easily disposed of or converted into raisins, the surplus being sent to the winery. An item in one of your late issues speaks of large vineyards in lower California left untouched rather than dispose of the grapes at the winery. The evil growing out of wine making is often seen, and its placing temptation in the way of others should be avoided; but there are other ways that the grapes can be convertible into hard cash than crushing them for wine, and they will leave the conscience clean of any ill effect. If the owners of the Southern vineyard had taken a second thought, and dried the grapes, they could find a ready sale at any moment.

#### White Egyptian Corn.

Having read of the white variety being far superior to the brown, I planted some last spring. It made a good growth, but before the seed fully matured who comes along but Mr. Blackbird, in large flocks, and did it up brown, leaving the bare stalks for fodder. Says farmer A, they served me the same way. First the coddling moth played sport with my fruit, the blackbirds shelled my corn, the bugs cleared my squash vines, my potatoes took the rot, my wheat caught the rust, my oats the cheat, and next we hear of the ravenous locust coming to wipe us clean out. I have a good orchard and vineyard, a vegetable garden, some small fruit, and would like to enlarge each, but the general idea is that next spring California will be eaten out. What shall I do? Go join the State Horticultural Society, take the RURAL PRESS, and have faith in the unknown future that all will be well. GEO. RICH.

Sacramento.

### "Preservative Compound" Humbug.

EDITORS PRESS:—Last summer (in June) a man and his wife traveled for wool in Los Angeles county, and sheared the farmers and fruit growers at \$1 per head. They astounded the non-scientific and delighted the progressive by exhibiting preserved fruit that defied time and decay, by the aid of a recently-discovered compound. It consisted of a black powder in cans holding about one gill, each of which would preserve four bushels of fruit, and was sold at the remarkably low price of \$1 per can, carrying fame, honor and riches into the homes of its happy possessors. Holgate & Tupper's suave representatives sold \$3,000 worth, it is said, in this county, and then left for fresh fields and pastures new. A large circle of warm friends are left behind to mourn their untimely departure, and have built numerous pyramids of preserved (?) fruit to their memory in backyards and other out-of-the-way places. If the chemical gentleman of compound notoriety should still travel, please preserve him for future reference to the Los Angelanos. H. E. H.

Los Angeles.

[This imposition was fully exposed by Prof. Hilgard, in the PRESS of September 27th, in his analysis of a sample can sent us by one of our Los Angeles county readers. People should never allow themselves to be caught by the vendors of such nostrums.—EDS. PRESS.]

### Farmer's Pap.

EDITORS PRESS:—It is simply astonishing what very washy pabulum some city papers present to their rural readers, under the heading "Agriculture." In one of the San Francisco papers week before last, the editor gave his views about flax and flaxseed, and wound up by giving his readers a bit of wonderful experience and prescience or nesience. He had seen at some farmer's, before the war, a sample of "flax-cotton" and found it a most admirable, long and lustrous fiber. Moreover, verily, there "is a future for flax-cotton." Is it possible that the paper employs a Mongolian as its agricultural editor? We know the Chinese are tip-top farmers! Any decent white man must, surely, for once in his life, have slept between linen sheets, dined off linen damask, wiped on a linen towel, or worn a linen duster! If this editor has been thus long in scraping acquaintance with flax, any further airing of such

crass (crash, Russian) ignorance, might merit an introduction to "hemp!"

In the same paper was an extract from some Los Angeles weekly on the hog question. A day's rations for a growing hog was put at four pounds of squash. In Carmel, my friend Mr. Hatton, tells me, a sow with a litter of pigs can put away about 100 lbs. of squash and 60 lbs. of skim milk in 24 hours. My own experience corroborates his statement.

EDWARD BERWICK.

Monterey, Cal.

## HORTICULTURE.

### Fig Growing.

A writer for the New Orleans Times has been studying up the fig as grown in that State and abroad, and from his article we shall quote certain portions which may interest some of our readers:

#### Varieties.

The Celeste is probably the best known variety in Louisiana. It can be grown in almost any situation. Nearly every garden and back yard of the city of New Orleans can boast of one or more specimens, and it is more valued for family use than any other species that we know of.

The Sumatra is double the size of the Celeste, very sweet and excellent for drying or preserving. The green Smyrna is also valuable on account of its earliness. This is the common summer fig of Palestine, and although rather coarse and dry, will, by its extreme earliness, command a good price in the market.

The Green Ischia—Skin of a light green when ripe, flesh of a bright strawberry color, and so sweet when in that condition, that if punctured the juice exuding will crystallize in a few seconds.

The Large White Genoa—Color yellowish white, the inside of a golden yellow when ripe. In that state it is an excellent table fruit, and one of the most valuable for preserving and drying. Size, very large, equal to a medium pear, which it much resembles. We consider this variety a great acquisition, and should be in every collection.

The Black Genoa—Size very large, of an oval shape, and when allowed to ripen perfectly on the tree, of fine quality. We consider this very valuable on account of its keeping qualities, and have no doubt, if properly packed, would stand forty-eight hours' trip by rail.

The Brunswick is also of a mammoth size, and from its fine appearance, always draws a premium at our fruit fairs. With us it is a very shy bearer, shedding most of its fruit before ripening. However, the quality is excellent, and it will be popular on account of its beautiful appearance. Among other varieties brought to our notice, we will mention the Brown Turkey, Black Ischia, White Smyrna and several others not named—All good, and succeed nearly everywhere.

#### Propagating and Culture.

The fig is so easily grown from cuttings, that we rarely use any other method. It has been our practice to plant in nursery rows about two and one-half feet wide, setting the cuttings about twelve to fifteen inches apart in the rows. This is generally done in the winter season. Nearly every cutting grows. The young trees should be well cultivated during the spring and summer, and in the fall it was our practice to remove them from the nursery rows, tie them in bundles, and heeled in where they could be protected from the cold of the first winter. During the month of February they may be transplanted into the permanent orchard, the ground previously well prepared and fertilized, should it be necessary, the young trees planted in shallow furrows which may be laid off with a plow, leaving the trees standing at least twenty feet apart. We give them ample space for the reason that the fig is a rampant grower, and will soon, if well cultivated, fill the intervening space.

We advocate low training. A tree should not be allowed to branch higher than four to five feet from the ground; this will shade the trunk and be more convenient for gathering the fruit.

It is only within a few years that we have noticed any disease among our fig trees, but with a little care they can be easily combated. First, the cocoon or species of scale insect, similar in many respects to the insects which infest our orange trees. Secondly, a species of borer, commonly known in our pine woods as the sawyer worm from the noise it makes while working beneath the bark. The former is easily extirpated by washing the limbs with a cheap alkali, or by the use of a whitewash made of lime and soft soap. For the latter, digging them out with the knife or searching for them with a probe, as long as you can see evidences of their presence; afterwards a coat of whitewash may be used on the trunk of the trees which will prevent any farther ravages.

#### Drying Figs in Smyrna.

Will be of interest to our readers. The soil in the vicinity of Smyrna is of volcanic origin, and the climate much colder than ours, being surrounded by high mountains covered with snow. There are three varieties in cultivation: one a large purple, also a large yellow, and smaller one, which is not much thought of and never shipped.

The trees average the size generally seen in our gardens. The fruit is very dry and insipid, and when fresh, not used by the natives.

The crop ripens about the 23th of August.



They are shaken from the trees, and thrown on the ground in the sun, where they are allowed to remain a few hours. They are then packed into hampers and brought on the backs of mules to the bazaar or market, and thrown into piles 10 or 15 feet high. The fruit is selected into three classes by women and children, and packed without further preparation in boxes and cartons. It is a common sight to see a woman dig a hole in a pile of figs and place her child therein for safe-keeping.

Figs are generally shipped on sailing vessels; the hold is kept well ventilated by wind sails and the hatches left open. There is also a small maggot or worm which bores a hole in the blossom end of every fig; these worms are in such abundance that they crawl all over the vessel and drop into everything. When the fruit arrives at its destination, if it is dry and covered with grape sugar, it is considered in good order; if dark and shining in appearance, it is in process of heat and decay.

In about three months and a half from the time of leaving Smyrna, the vessel drops anchor in the harbor of New York, and from thence the fruit is distributed over the West and South, and is sold in large quantities at big prices to a people who grow a better article, and if so disposed, have it in their power, not only to supplant the Turkish fig in the Southern States, but to drive them from the markets of the world.

Here the question naturally arises, how shall we prepare the fig for market in such a manner as to be merchantable? There is scarcely a housewife in the land but who, some time or other, had the fruit gathered and tried to preserve them by drying. They have been spread in the sun, placed in the ovens, and in many instances we have eaten a very palatable article prepared by these methods. But we have yet to see them put up in such a manner that they could be used for commercial purposes. The trade demands a certain style of goods, and that style they must have. Now, I claim that we can do this thing to perfection, and that an evaporator modified to a certain extent, will produce as good an article as the most fastidious would require. There are many machines invented which, in all probability, would answer the purpose of drying figs.

## THE STABLE.

### Anti-Horse-Thief Society.

We have known of such societies doing good work in New York State, and it is a matter of local interest that Riverside, San Bernardino county, has undertaken a similar organization. The following officers have been elected: President, Dr. Hall; Secretary, Dr. Gill; Treasurer, A. S. White; Council: Capt. Abbott, D. S. Strong and B. Derby. In order that all readers may see the plan upon which the society will work, we quote from the *Riverside Press* the articles of association, as follows:

#### Constitution.

ARTICLE I. This society shall be known as the Riverside Society for the Prevention of Horsestealing.

ART. II. Its object shall be the recovery of all stock stolen from members or subscribers, and the arrest, if possible, of the thieves.

ART. III. Members shall be divided into active and honorary members.

ART. IV. It shall be the duty of active members to obey any and all orders issued by the officers of the society. In case any member refuse to obey orders or shirk, he shall furnish some excuse acceptable to the society, or be expelled. Active members limited to 20.

ART. V. It shall be the duty of the honorary members to attend to their duties as hereafter provided. The honorary members shall be limited to six, viz.: President, Secretary, Treasurer and Council of Three.

ART. VI. Any person may receive the benefits of this society by paying 25 cents down, and agreeing to pay 50 cents each time that the active members are called out for duty. Subscribers not standing credited with all dues on the Secretary's book shall not be entitled to the aid of active members.

ART. VII. This Constitution may be amended by a two-thirds vote of all the members present at any regular meeting.

#### By-Laws.

ARTICLE I. The officers of the society shall consist of a President, Secretary, Treasurer, Council of Three, Captain and Lieutenant.

ART. II. The President, Secretary and Council shall constitute an Executive Committee, who shall solicit subscribers, transact business for the society, and perform such other duties as commonly devolve upon such officers.

ART. III. It shall be the duty of the Captain to direct the movements of the active force, and appoint Sergeants in charge of each division thereof.

ART. IV. The Lieutenant shall have all powers of the Captain in the absence of that officer.

ART. V. The annual meeting for the election of officers shall be held on the second Wednesday in November of each year.

ART. VI. All new members must be voted on by the active members of the society. A two-thirds vote in favor of any new member shall be necessary to election.

ART. VII. All elections shall be by ballot.

ART. VIII. No two members of the same family shall be required to serve at the same time.

ART. IX. Every member and subscriber shall keep on hand a written description of his stock, ready to be handed to the Captain when needed.

ART. X. These By-Laws may be amended by a two-thirds vote of the society at any regular meeting.

ART. XI. Seven members present at any regular meeting shall constitute a quorum.

THE total sales of public lands to actual settlers for the past five years range about as follows: For 1875-76-77 they reached from 3,500,000 to 4,000,000 acres each; for the year ended June 30th, 1878, 7,166,974 acres, and 8,650,119 acres during the year ending with last June. The totals of the entries under the Homestead and Timber Culture law contrast as follows: For the fiscal year of 1877, 2,698,771 acres; for the fiscal year of 1878, 6,238,799 acres; for the fiscal year 1879, 8,026,685 acres.

## THE FIELD.

### Is There Anything New Under the Sun?

EDITORS PRESS:—I hasten to purge myself of the charge of unprogressiveness, by assuring Dr. Simms that it never entered my mind to imagine that he or others after him might not invent very useful improvements in the construction of the plow.

I regret that he should be unable to understand the difference between his *facts*, which nobody disputes, and his *proposition*, which purports to explain them on what he supposes to be a new theory. In reality, it is as old as the worn-out hills of Greece, Italy and Spain—those sunshiny countries, which, to the present day, have failed to adopt the turning plow. Yet famine and depopulation have overtaken them, as has been the case wherever, for any length of time, the husbandman has relied upon rain and sunshine, "nature's own remedy," to maintain the fertility of soil. In assuming that sunshine is nature's mode of maintaining fertility, Dr. Simms quietly ignores the fact that nature, when let alone, also invariably *returns to the soil, in course of time, whatever was taken from it by vegetation*, and returns it with interest, at that. The average American farmer ships his grain to Liverpool, and *returns nothing*; and wherever this has been done the result has been the same, despite all efforts to make sunshine perform the recuperative part. It was really that which sent Columbus on his mission of discovery—the Old World had ceased to nourish its population, as is already happening in the older parts of the New. The progressive science of agriculture has taught us the cause, and the means of avoiding the evil in the future, and has restored fertility to those portions of the Old World where its teachings have been put into practice. It is this dearly-bought experience that Dr. Simms would have us exchange for the belief in the efficacy of sunshine, and the stirring of the surface soil only. We are not only to learn nothing from experience, but also to forget that the same idea has been exploded, over and again, in the history of agriculture.

I am surprised that the Doctor should have failed to hear of "too much sunshine" during a residence of 50 years at the South. During a residence of 18 years only, I have both heard and seen a great deal of it; and if the Doctor were to give me the honor of a visit when he comes this way, I think I could remind him of things in the cotton States that savor strongly of too much burning-out of the humus in the soil. I doubt that either of us knows just what the Creator intended to do in these matters, but imagine the best way to find out is to observe the facts closely and comprehensively, tracing them to their causes, and thus gaining control of nature, instead of letting it control us. Probably neither the Doctor nor I would have created the Mohave desert if we had had our way about it, yet it is there.

E. W. HILGARD.  
University of Cal., Berkeley.

### Dr. Simms' Right-side-up Doctrine.

EDITORS PRESS:—Dr. Simms, in the *RURAL* of November 22d, gives us some new-fangled ideas of cultivating land for crops without plowing; in other words, without turning over the surface soil—in regard to which Prof. Hilgard sufficiently answers him. After telling us that "our first effort at cultivation reverses that of nature," he goes on to say that "the nature and composition of our soil is such that it is inexhaustible if we only follow nature and not violate her laws." Which position he attempts to prove by giving "a sample," as he calls it, but whether supposed or real he does not say:

"Mr. A., by continuous wheat growing on a certain piece of land for 10 years, has reduced the yield something like one-third to one-half of what it yielded in grain when the soil was new. He takes a crop of corn, or summer-fallows one year, and the next year he gets as good a yield as when the land was new. Why? Has he manured it? No; but without knowing why or how, nature has fertilized his field and he gets a full crop off of his 'worn-out' fields. And so would it continue to yield (how long?), but instead of aiding nature, he commences to reverse her laws as soon as he commences to plow for the next crop."

Farmers do not "follow nature," and do not intend to. "Nature" does not "cultivate" the soil, in the strictest sense of the word. "Nature" does not grow wheat and barley, beans and peas, cabbage and beets, beside a thousand and one other things, as farmers have to grow them in order to get a profitable crop; and so we "reverse her laws" by cultivation of the soil; turning a little fresh soil up occasionally for nature to fertilize, but which nature, or what the good Doctor seems to attach so much importance to—and that rightly—viz., the sun's rays, unfortunately cannot get at till it has been turned up. And thus it is, that when we summer-fallow, or prepare for a crop of corn, or any other green or root crop, we plow a little or a good deal deeper, according to soil and circumstances, than it is either necessary or advisable to do for an ordinary grain crop. By so doing we aid nature in fertilizing our fields "and turn up soil that has not seen his rays for years." As well might the Doctor tell us to leave nature's coal beds undisturbed and expect warmth and light from them where nature put them, as that we should expect our fields to yield crops continuously without occasionally

turning up afresh a little of that inexhaustible soil which nature has "for ages" been preparing. Farmers cannot wait for "ages," what we do must be done year by year and day by day.

I hope the Doctor's new combined plow and pulverizer will answer his expectations, but his idea of the horses not walking on the plowed ground is not altogether new, as I have been using a plow with a subsoil tine for some years, that breaks up the subsoil without the horses walking on the subsoiled ground after it. I never had any idea of taking out a patent for it, as it is not an invention of my own, or of California, but all who wish for such an implement can obtain one as I did—by purchase.

ROBERT ASHBURNER.

Baden Farm, Nov. 28th, 1879.

### Live or Dead Fences.

EDITORS PRESS:—Next to a comfortable, well regulated dwelling and its surroundings, there can be no question that a good permanent fence forms one of the most important parts in either a garden or farm, but particularly the latter.

There are two kinds of fences, a live one, consisting of some kind of the various shrubs or trees, and the dead fence of boards and posts, which, unlike the former, keeps retrograding and is a source of increasing expense—the weather, both summer's heat and winter's wet, affecting it materially. Cattle rubbing themselves upon it or bipeds awkwardly jumping over it, etc., burst it, and various other calamities happen, so that it needs looking after more and more, and finally it gets so broken down that it becomes a despairing job to repair it. A live fence keeps getting more permanent, and will not in the end cost as much as the dead fence.

The sweet-brier rose is very well suited for a garden fence and so are several dwarfish shrubs, but for the farm, in my observation for years in this State, the osage orange supersedes all other fences. I have seen it in Placer county on a farm that had been merged into a larger one, and where it was completely neglected; still it battled on and lived. Around San Jose, Santa Clara county, there are some fine osage-orange hedges, as at Rock's nursery. Dr. Bascombe had a splendid seven-foot osage-orange fence, that never after it left the nursery got water, except from the heavens, but had at the start been kept clear of weeds and cultivated a little, and trimmed judiciously.

A good osage-orange or live fence is a pleasure to see, independent of its great utility as shade to the cattle from sun and hot, low winds. It bears trimming well, or may be left to grow to a tree and made so close that almost a bird cannot easily go through it, nor can it be broken down as other fences, as the thorns protect it.

Those interested in a good fence should be reminded that the first cost of an osage-orange hedge is actually less than the dead or lumber fence, as the plants can be easily got at a nursery, or parties can grow them on their own places.

Merced, Cal.

M. J. O'BRYNE.

## SHEEP AND WOOL.

### Merinos for the Great Ranges.

We notice that many Eastern writers upon wool-growing are continually urging the production of combing wools instead of the short fine Merino grades. This advice is doubtless wise for certain locations, and if our California wool-growing is to take the form of small bands of sheep on small ranches, then the exhortation to produce combing wools is worthy of attention. But in this State, where the flocks are to be still kept on the old style of ranging, and in the newer wool-growing regions of the great plains, the Merino wools must still occupy the attention of the flock owner. We notice that this distinction is well drawn by a correspondent of the *Montana Husbandman* in these words:

I think wool-growers in the mountain districts west of the Missouri, will not be led to discard the Merino sheep and adopt the long-wool or combing-wool sheep. The farmers of the New England, Middle and Western States, where sheep husbandry is conducted upon a small scale, can undoubtedly obtain larger profits from sheep that produce combing-wool and which at the same time yield a large quantity of mutton. But upon the great ranges west of the Missouri, where pastoral sheep husbandry is carried on, combing-wool cannot be successfully grown, and the time has not yet come for the transportation of mutton from the Rocky mountains to the eastern seaboard. And just here I wish to state that the successful production of combing-wool has, as yet, been reached by only a comparatively few of the best wool-growers of the States. Its production presupposes great care and even feeding throughout the year. Combing-wool of the first order must not only have length, but it must possess great strength and brilliancy of luster. Such wool cannot easily be produced from flocks that get their subsistence in large bodies upon the plains. The Merino stock should predominate in the flocks of Montana, for the same reason that it predominates under English management

upon the plains of South America, Australia and the Cape of Good Hope. There is too much Cotswold blood in many of the Montana herds of sheep; for the fleece of the full-blood Cotswold, when unfit for combing purposes, becomes simply a coarse blanket wool, and commands a low price.

The wool which can be produced to advantage in Montana, and what is always wanted by the flannel and cassimere manufacturers, is a fine medium, and can be obtained by a proper crossing of the Merino and the Cotswold, Leicester or Southdown sheep. Sheep producing such wool are usually hardy, and give good weight of fleeces, where heavy-shearing, well-bred rams are employed. It would add greatly to the reputation of Montana wool if the growers would all breed their sheep up to a uniform standard, say from half to three-quarters Merino; for the more uniform the wool of a given country, the better it will be known and appreciated in market. My point is well illustrated by the wool of California, which is remarkably uniform, and is grade Merino throughout.

Articles upon sheep husbandry, written for the States, seldom apply to the plains, where the business is conducted upon an altogether different plan. I am aware that the wool growers of Montana are generally breeding for the style of wool that I would recommend for this Territory, but I have thought it advisable to submit the foregoing for the consideration of those who are about to engage in the wool-growing business here.

## THE VINEYARD.

### Grape Pomace as a Fertilizer.

The attention of Mr. Drahms, the able editor of the *Sonoma Index*, has been called to the immense quantities of pomace left to decay upon the ground, and the question of utilizing this waste, induced him to address a letter of inquiry to Prof. Hilgard, of the University of California. The Professor's reply is of much interest to vine growers, and we reproduce it as follows:

Pomace is everywhere in the Old World considered as a most valuable manure for the vine, and is conscientiously returned to the vineyard, with only the deficiency arising from the manufacture of vinegar, and of oil from the kernels; the cake of the latter, however, containing about all the important plant-food in the seeds. Similarly, all the cuttings and trimmings of the vines are put back; they used to burn them, but now know better. The lees from the fermenting vats and casks are still more valuable; for among the heaviest drafts on the soil is that made by the tartar contained in these residues, which the celebrated vineyards absolutely refused to sell off. This is of especial importance where the phylloxera is attacking the vines; the best known palliative being the free use of potash manures, potash being the chief ingredient of tartar.

If you think that an analysis made here of native material would go farther toward inducing your vine growers to husband these things than the mere example of the Old World, I will undertake to make a full analysis of pomace if you will supply the material, which should be as fresh as possible, from some definite variety of grape, and not have been rained on, or used for vinegar-making or distillation. The examination of the residues from distillation would form another separate analysis, the value being quite different in the two cases, though high enough in both to deserve most serious attention. Suppose you send both, and I will get one of my Agricultural Seniors to make the investigation the subject of his graduating thesis, under my direction.

ARGOLS.—Los Angeles Express: We advertised a few days since, to the advantages possessed by Los Angeles to establish a new industry here—that of the manufacture of cream of tartar. This valuable article of commerce is produced from a mineral salt precipitated from wine while in the course of fermentation, known by the scientific term of *argol*, and is now in great demand, as the supply has fallen off prodigiously since the devastation of the vineyards of Franco by the phylloxera. One house alone in San Francisco imports \$30,000 worth of this article every year. We now learn through *L'Union Nouvelle*, of this morning, that the industry is not new to Los Angeles, but was introduced here in 1863 by the Vache brothers, then and now well known wine manufacturers of our city. During a number of years they manufactured large quantities of cream of tartar, and took the first medal for the same at one of our State fairs. The wines of California contain this mineral salt in even larger quantities than those of Franco, and this industry would now be an established fact if the cultivation of the wine had been more fully developed at that period. Now that the price of tartar has greatly advanced and that the grape production has greatly increased, together with the important fact of labor being far cheaper than it was in 1863, when the Vache Freres first introduced the industry, why should not Los Angeles offer irresistible inducements for its re-inauguration? If the large wine manufacturers would lend it their countenance, the industry would be certain soon to flourish here.



## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### The Thirteenth Session of the National Grange.

#### First Day.

The thirteenth annual session of the National Grange was opened, at 11 A. M., Nov. 19th, in the village of Canandaigua, New York, by W. M. Samuel Adams, of Minnesota. The officers were all present except the L. A. S. The attendance was unusually large for an opening meeting. A committee on credentials was appointed, and adjournment had until 1:30 P. M. At the afternoon session an appropriate address of welcome was delivered by W. M. W. G. Wayne, of New York, to which response was made, on the part of the Grange, by Bro. J. N. Lipscomb, of South Carolina. The next order was the

Annual Address of the Master, Bro. Adams, from which we make the following extracts:

Through a close, compact, intelligent organization, a revolution has commenced—slow it may be, yet it will be sure, healthy and just. The American farmer realizes now that agriculture must be lifted up to the place where it properly belongs; that he has interests to be promoted and rights to be protected; that his calling must be raised to the rank of a recognized power. For this purpose have we this day convened, and I trust plans will be projected whereby the desired ends may be attained. Coming as you do from the various parts of our common country, doubtless you have policies and designs to submit, which, when reduced to practice, shall result in the upbuilding of our Order and the permanent advancement of that class which comprises seven-tenths of the people of our republic.

#### Memorial Service.

By referring to page 55 of the Proceedings of the last session, it will be observed that Bro. Lipscomb, of South Carolina, introduced a resolution instructing the Committee on Ritual to prepare a ceremony for planting "memorial trees" to be published with the proceedings, which was referred to the said committee.

Observing this, our Rev. Bro. J. A. Wallace, Master of Arhur Vite Grange, Alabama, wrote me in June last that he had, upon request, some years ago prepared a service which was used at the grave of a sister, and was published in the local papers. This formula was also adopted by the County Grange. Believing that any ceremony calculated to render the Order dearer to the hearts of its members, and to make them more faithful to their obligations and to each other, would be eagerly sought for and gladly practiced, I replied it would give me great pleasure to peruse the same. Our worthy brother forwarded the service, hoping it might be at least suggestive to the committee who will have the matter in charge. I find it chaste, devotional, pure in thought and diction, and replete with consolation, and conclude that it will afford an excellent foundation for a ceremony which has long been desired in our Order. It will add another gem to the collection of beautiful and impressive rites, which we are exceedingly fortunate already to possess.

#### Want of Lecturers.

The attention of the National Grange is expressly directed to the fact that competent, zealous lecturers are needed now more than ever before. The cry from all quarters comes up to the Master's office—send us lecturers. More than half of the entire correspondence pertains to the want of efficient, earnest members to go out as missionaries and labor in the good cause. Political mountebanks do not seem to be required, for they have done more harm than good, and our members know it.

Those only need apply, who are willing to be dedicated to unceasing toil for the "good of our Order, our country and mankind." To-day hundreds of reporting, or thousands of dormant Granges, are still anxious to listen to the voice of fraternal encouragement; are still thirsting for social and intellectual refreshment; are still hungering for tidings from afar.

#### What Shall be Done.

If the pulpits were vacated and the ministers were withdrawn from their congregations, a relapse into barbarism would surely follow. If political harangues were discontinued, and politicians ceased to ply their vocation, party spirit would soon become extinct. So, if our Granges are destitute of the services of fervent, skillful, upright lecturers, enthusiasm ceases, and the organization dies out.

This is well illustrated by the condition of the Order in those States where their donations and accumulations were saved, so that their Masters and Lecturers are paid sufficient salaries to enable them to visit and lecture in the interest of this Society throughout their respective jurisdictions. Here the Order thrives; their revenues are well kept up, and their State Agencies do a remunerative business. Here, "Line upon line, precept upon precept, here a little and there a little," have been and are now constantly repeated. They act upon the motto, "Keep it before the people."

On the other hand in those States where loans were effected, where their means were absorbed in doubtful business enterprises, where their

lecture system was abandoned, the Order languishes, and the subordinate Granges cease to assemble, fearing their members will be held individually liable for the debts of the State Grange, or still meeting, ignore their State Grange and petition to the National Grange for permission to pay their dues direct into the National Treasury. What shall be done?

And in this connection it may be proper to add that the unrepresented States need looking after. It would seem of more importance than a session of the National Grange, because our constitution, our digest, and our established rules, meet all the ordinary requirements of our members, and the solitary amendment submitted at the last meeting did not elicit ratification.

It must be obvious that if we desire the existence of this body in point of fact, the States as far as possible should be reclaimed and restored to the fold, otherwise our reputation as a national organization is false, and our potency for national weal is lost. As this republic would dwindle into insignificance, when confined to a few States, so would this body amount to but little as a national organization if a half dozen States only were represented.

Texas and Maine, Oregon and Florida, are all bound together by the ties of agriculture, and it is the grand mission of this Order to rivet indissolubly this tie by Faith, by Hope, by Charity, by Fidelity and by Perseverance.

But State Granges are formed and supported by subordinate Granges. The very existence of the Order depends upon vigorous, healthy Granges everywhere, and it has become self-evident that in most of the States they require more fostering care, more encouragement, more strength. Perhaps in the more populous States little national aid is necessary; but in those States where material interests have been regarded of paramount importance, and little or no account has been made of social, moral or intellectual advancement, and in the smaller and weaker States, a moderate sum might be judiciously expended. To appropriate money for this purpose would be of little avail, unless the State authorities rendered all the assistance possible in funds, time and labor, and unless the missionaries employed were inspired in their work and gave little heed to scrip or purse.

I firmly believe the States would co-operate in this laudable endeavor, and that successful lecturers could be found to enlist in this revival whom vain glory or cupidity could not sway—lecturers who would be "honest with the brethren, faithful to their pledge, and diligent in their work."

The present condition of the Order is neither surprising nor discouraging—it is simply the result of natural laws. The membership is composed of non-associative material. The farmer's vocation of itself tends to isolation, which has become part of his very life, and from which this generation will never fully recover.

Nevertheless, the Order is an educator of its faithful inmates. It brings the husbandman into contact with others. Each learns from the experience and knowledge of others. Each section has interests in common with those of other parts of our country. The true Patron exerts a salutary influence on those outside the gate, and confidence slowly but gradually takes root. A decade has accomplished much, but the next decade of years will effect still greater results.

#### Woman's Mission.

Moreover, we have an important element, which will remedy eventually this dissocial characteristic, and tend more than all else beside to make the Order live forever. I allude to our mothers and daughters, our wives and sisters.

In the language of another—to our mothers we are indebted for the first impulses of virtue, for the first lessons of gratitude, prayer and praise. To our mothers are we indebted for our earliest and best education and preparation for instruction. Like a bright star in the dark pathway of life, she points the road we should travel, aids to unfold our intellects, molds our character for happiness here and hereafter. It is woman who first teaches us to fear and reverence a power, which has framed us with a never-dying spirit; a spirit which by well doing, aspires to the eternal rewards of virtue and goodness. It is her influence which in infancy gives direction to this spirit; in youth encourages it to useful and honorable pursuits; in manhood teaches the bosom to glow with social tenderness. And when gray-haired old age overtakes us, she gives consolation to the bending, tottering form by her tears of sympathy, her pure devotion, her constant virtue, her hopes of a blessed immortality.

It is indeed well for us that we have such helpmates, such advisors and such comforters, through our lives of wearisome toil. We are truly thankful that this Order has been so wisely devised that her presence among us shall cheer us onward in our duties, and may our strength and integrity be ever her shield from harm and means for support, while her purity, tenderness and delicacy shall grace our Grange gatherings until the word Patron shall be a synonym for intelligence, sociability, refinement and honor throughout the land.

#### Decisions.

The following are some of the decisions made by the Master:

If a State Grange has not reduced its representation, the only voting members of the State Grange are the Masters of subordinate Granges, and their wives, who are Matrons. No substitutes can be chosen delegates entitled to vote. When the representatives are reduced in num-

ber by the action of the State Grange, then the delegates elected must be selected from those entitled to membership in the State Grange.

No dues should be exacted for any period prior to the date of reorganization or revival of a Grange.

Each State Grange establishes or frames its own regulations for the government of its County or District Granges, restricted only by organic law. And when the necessary rules have been so made, it devolves upon the State Master to supply deficiencies until the next meeting of the State Grange.

So long as there are nine men and four women desirous of retaining a charter, a vote of the Grange to surrender the charter is without force and void.

By a careful examination of our Digest, I find that a farmer's wife is eligible to the degrees conferred in a Grange though he may never take them; that the wives, if Matrons, of the Masters of subordinate Granges, are eligible to seats and votes in the State Granges unless the representation is reduced, and in this case even the wife has the same right to a seat and vote as her delegate husband; that wives of the members of State Granges become representatives and voting members in the National Grange, by virtue of their husband's positions; that these rights to wives inhere in consequence of their husbands; that change of occupation in a member works no forfeiture of membership, no modification or reversal of status, so long as his conduct is not hostile to the interests and objects of our Order, and hence, I am clearly of the opinion that the wife of a good and worthy member of our Order is eligible to receive the degrees, although the brother, her husband, may have changed his vocation.

Besides it is not fair to presume that the thoughts or deeds of the wife of an exemplary member would be inimical to the best interests and purposes of our organization; but should such a case ever arise, an ample remedy is provided in our laws. One of the chief objects of our society is to inculcate a proper appreciation of the abilities and sphere of woman, and our rules nowhere require the sundering of any ties between husband and wife.

The seal of a subordinate Grange should never be used for private or individual purposes.

The Secretary is the sole custodian of the same, and is responsible for its use and preservation. The chief purpose of a seal is to authenticate the returns, reports and records of a Grange after receiving the signatures of the Master and Secretary.

After the address of the W. M., the reports of the various officers of the Grange were received. We will present the leading points next week.

#### Election of Officers.\*

ALHAMBRA GRANGE, MARTINEZ, CAL.—Election Dec. 3d: Dr. J. Strentzel, M.; H. Hollenbeck, O.; B. R. Holiday, L.; E. B. Barber, S.; James Kelley, A. S.; James McHarry, Sr., C.; H. Raap, T.; Mrs. M. B. Lander, Sec'y; Daniel McHarry, G. K.; Miss Ellen Frazer, Ceres; Miss Marietta Bent, Pomona; Miss Lulu Holliday, Flora; Miss Nellie Carothers, L. A. S.; Thos. A. Griffin, M. R. Barber, F. M. Warmcastle, Trustees.

PLACERVILLE GRANGE, No. 242, EL DORADO COUNTY.—Thomas Hardie, M.; F. M. Dickert, O.; John Bryan, L.; Leo Hart, S.; N. T. Carpenter, A. S.; Frank Gogan, C.; J. P. Allen, T.; William Wiltse, Sec'y; R. W. Sarzant, G. K.; Kate Allen, Ceres; Kate Sansom, Pomona; Minnie Bryan, Flora; Kate Taylor, L. A. S.; Charles Hart, Trustee.

\*Secretaries of Subordinate Granges are invited to send, for publication, lists of officers as soon as they are elected; also dates of installation.

WALNUT CREEK GRANGE.—We learn by the correspondent of the Martinez *Gazette* that Walnut Grange voted to hold an open meeting on Saturday, the 20th of December, 1879, at which Hon. Zach Montgomery and C. H. Dwinelle will address the Grange on the "school question," and "economy in agriculture." The public will be invited to attend. A spacious hall will be provided for the occasion, admittance free.

WHEAT PRICES AND FREIGHT RATES.—On page 380 of this week's PRESS will be found a very valuable table giving Liverpool prices for California wheat and ocean freight rates to that port. This compilation was made with great care by Mr. Montpellier, manager of the Grangers' Bank, and is another evidence of his valuable work in the interest of grain growers.

ALHAMBRA GRANGE.—We received just too late for publication an interesting account, by Mrs. Lander, of the Alhambra Grange celebration of the Grange birthday. It will appear in our next issue.

AN ENGLISH ROT-PROOF POTATO.—The excessively wet summer of 1879, in England, was trying on the health of potatoes, but we read that the Champion potato remained sound, and was of good quality, when older varieties were diseased or so water-sodden as to be well-nigh uneatable. This variety has risen from being a local celebrity, into almost every county in England and Ireland, and good results have followed its introduction everywhere. Many farmers find that, by planting this variety, they have this year insured a big profit, and escaped a disastrous loss.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### ALAMEDA.

ALMONDS.—Haywards Cor. Oakland Times: Almonds have astonished everyone this year. They have been very scarce for the past two seasons, and were considered of no profit whatever, but this year they swarmed on the trees and are very profitable.

USING WASTE LAND.—Of late years the hills that were accessible, have been cultivated, and in every case yielded excellent crops. Through Crow, Redwood and other canyons, nearly all the harvest land is very hard to farm, and sleds are necessary to haul the grain to some flat for stacking. Portuguese are cutting away the undergrowth of late years, and the result is that they are growing rich off of what was considered waste land by Americans.

#### FRESNO.

SANDERS ITEMS.—Total rainfall, 2.63 inches. Have had five light frosts. Total time from the last frost of last winter to the first one this autumn, 295 days. Last year the "frostless" season was 307 days; year before 327 days; year before that, my first year here, 322 days.—S.—, Dec. 2d.

CANE-SUGAR ENTERPRISE.—Expositor, Dec. 3: Last week we were informed by George H. Eggers that he had about completed arrangements for planting out 100 acres of sugar cane, with a view to testing the adaptability of this section to its growth. For the purpose of making the test he has secured the assistance of Paul Steck, a gentleman who has given the subject much study and attention in the United States, and also in the Sandwich Islands. He will be here in January for the purpose of preparing the land, putting in and attending to the crop. Seed of both the red and white cane will be planted. Mr. Steck thinks that there is no question but what sugar cane can be grown successfully, provided it has proper cultivation. The summers in this valley are long and warm, and are well calculated to produce an abundant and luxuriant growth of vegetation on properly irrigated lands, while the winters are not more cold than those of northern Louisiana, where the finest of sugar plantations exist, nor colder than the uplands in the Sandwich Islands. In latter country, Mr. Steck informs us, some of the largest sugar plantations are located on stretches of white ocean sand. Here the soil is a rich, sandy loam, well adapted to irrigation. Should the experiment prove successful, Mr. Eggers will in future devote a large acreage to its growth, and will endeavor to induce others to do so. He has had extensive experience in the manufacture of sugar in this State, having been, until recently, one of the largest stockholders in the sugar refineries at San Francisco. If he succeeds in growing the cane here, he proposes to put up machinery and engage largely in the manufacture of sugar from California-grown cane, using the diffusion process, and thus keep at home some of the many millions of dollars that are now annually sent away in payment for foreign sugar.

#### KERN.

THE BAY STATE APIARY.—Courier: Mr. George C. Doherty, the proprietor of the Bay State Bee ranch, near Bakersfield, came to Kern county four years ago, and established the Bay State Bee ranch at the farm of W. I. Souther. After three years experience at that place he found that the dryness was an objection, and moved his apiary to the riverside adjoining the town of Bakersfield. Though the past season has been exceptionally dry, the movement has proved an entire success, and the honey shipped from this place has found a market all about the Pacific coast. The bees are what is known as hybrid, being bred from imported Ligurian and Italian queens, celebrated for their working qualities, better than pure stock of either. The value of alfalfa has been thoroughly established for bee food. The honey-dew found on the cottonwood, willow, and on the wild grass, is not considered valuable except as furnishing subsistence for bees. The flavor of the honey is affected unfavorably by it, and, fortunately, the bees only resort to it when flowers fail. Mr. Doherty has 237 hives; about the number he finds it prudent to keep in one place. He has not been able to fill the orders from a distance, because of the demand for his refined honey, which takes the place of syrup, and is largely consumed here. Messrs. Haggin & Carr have encouraged the enterprise by taking 150 gallons per month. The honey-syrup is made by a process of evaporation which leaves the honey absolutely pure, and the most healthful adjunct to the luxuries of the table. It is supplied at the current price for the best quality of syrup and certainly is an improvement upon it. It is put up in five, one, and one-half gallon cans with screw top, the most convenient form possible for preservation and use.

#### LAKE.

JAPANESE PERSIMMON.—Lower Lake Bulletin: We were shown some Japanese persimmons this week, which we believe to be the first, and only first, of that kind grown in Lake county. These were grown by A. F. Morrell, our Supervisor, on his ranch at Hunting valley, from grafts introduced into the common persimmon tree two years ago. These grafts bore 18 persimmons this year, and present a thrifty, healthful appearance, with the promise of an abundant yield next year. Many trees of this species were set out a few years ago, but we believe



being unable to stand the frosts of winter died. Mr. Morrell's experiment of grafting should prove a benefit to our fruit-growers, who can grow this delicious fruit by grafting much easier, cheaper and more successfully.

#### MENDOCINO.

**HOPE IN HOPS AND WOOL.**—*Press*, Dec. 5: The high prices obtained for wool and hops, and fair sale for grain, has brought half a million of money into the county in the past year, and the probabilities of 30 cents for both wool and hops the coming year, is making our people feel as though Eden might yet be located in this county. We have seen several looking for sheep, but complaining that no one wishes to sell. What few have been sold have changed hands at two dollars per head. The same sheep could have been bought last August and September with the wool on for that price. But our sheep men should have a care that their enthusiasm does not get the better of their judgment, and their ranges again get overstocked. Were we to have a couple of hard winters—no early rains, coupled with hard, long and continued frosts—the experience of four years ago might be repeated, and one-third of their flocks die on their hands. Keep your stock down so as to save some old feed every year, have your lambs drop early, and you are safe from any serious loss.

**PERSIMMON.**—*Dispatch*. We were shown the fruit of a Japanese persimmon by Judge Bond. It was about the size of a large peach, and is probably the first ever produced in the county. The Judge informs us that the tree on which it grew was set out by him about 18 months ago, is thrifty and seems perfectly adapted to this climate.

#### NAPA.

**GAS LIME.**—*Reporter*, Nov. 28: There is quite a demand for the refuse lime of the gas works from vineyardists in this vicinity. It is a good fertilizer, and by reason of the amount of carbonic acid, sulphur, and other chemicals with which it becomes impregnated in the manufacture of gas, it prevents the ravages of insects on vines around which it is placed.

**LATE GRAPE.**—*J. J. Sigrist*, who purchased the grape crop on the Fleming ranch in Brown's valley, has not picked the fruit from the vines yet. From the present appearance of the crop it will be in good condition for the market several weeks hence.

#### PLACER.

**TEA GROWING.**—*Herald*: C. C. Ames has handed us a sample leaf plucked from his tea plants, the seed of which was put in the ground last April, plants are now about six inches high and quite thrifty in appearance, being thick with leaves from the ground up. This leaf is a dark green and about two inches long by one inch wide. Mr. Ames has from 60 to 70 plants, and his neighbor, L. A. Gould, with whom he divided his seed, has about 100. As an experiment, their success in tea raising in the foothills thus far is quite satisfactory.

#### SACRAMENTO.

**LEVEEING BY MACHINERY.**—*Sacramento Bee*: A few days since a representative of the *Bee* visited the new swamp district lying west of the Sacramento river and between Babel's slough and Clarksburg, which is being reclaimed by Wm. Gwynn, of this city, and others, for the purpose of witnessing the operation of a new levee-building machine and dredger employed by them. It is a ponderous piece of machinery, taken altogether, but does the work splendidly. It consists of an immense barge, on which are placed two engines of 20-horse power each for operating the derrick, and embraces quarters for workmen, etc. The barge draws but 18 inches of water, and can therefore be operated in very shallow streams or canals. The dredger runs night and day, and requires three shifts of three men each. It is so simple in its operation that any man with a week's experience is capable of handling the engines by which the ponderous dipper is governed. Mr. I. D. Vandecar, the builder, is very proud of his machine, and declares he can make better and cheaper levees with it than can be constructed by any other means. The dipper raises from two to four cubic yards of mud, and is capable of depositing about 100 yards per hour, at a cost of about four cents per yard. The mud can be raised to any desired height by regulating the hoisting gear, and by falling several feet it packs much harder than if it were rolled or beaten down by ordinary methods. This machine was got to work about the 1st of July, and has already raised the levee to about its former height, so that if no greater floods come this winter than last, it will stand the pressure. The dredger will be kept at work, however, the winter through, as it is the intention of Mr. Gwynn and his associates to make the best levee in the State.

#### SAN BERNARDINO.

**RIVERSIDE RAISIN FIGURES.**—*W. B. Russell in Press*, Nov. 15: I have on my own place, aside from the vineyards under my charge, 880 3½ year old vines from cuttings, which cover 1½ acres of land, and which this year yielded me 230 boxes of raisins, which sold as follows:

100 boxes, (halves) @ \$1.85.....	\$185.00
152 boxes, @ \$1.60.....	243.20
28 boxes, 2d class, @ \$1.00.....	28.00
Total.....	\$456.20
Expenses of picking and packing:	
100 boxes, (halves) 55 cts. per box.....	\$ 55.00
152 boxes, 40 cts. per box.....	72.80
Total.....	\$127.80
Total receipts, \$456.20; less expense of picking and pack-	

ing, \$127.80, leaving a balance of \$328.40. Average proceeds per acre, \$246.30.

#### SAN DIEGO.

**A DAIRY RANCH.**—*Union*: We had the pleasure of an interview recently with Mr. John Treat, of the celebrated Cuyamaca dairy ranch. Mr. Treat has just returned from a trip up the coast. As everybody knows, Mr. Treat's specialty is fine blooded stock and butter. On his ranch he is now milking 115 cows, most of which are full-blooded Durhams, Devons and Jerseys, the balance being half Jerseys. The amount of butter produced on his ranch the past season reaches the handsome figure of 10,000 lbs., all of which finds a ready market in this city and Julian. The present season he expects to increase the product to six tons or 12,000 lbs. During the best of the season his daily product reaches 85 lbs.

**NOTE ON TREE PLANTING.**—In an interview with Mr. Asher, the nurseryman, he said that many persons, especially new-comers and those from the East, almost invariably make the fatal mistake of using *unrotted manure* about the roots of their trees. The manure taken from barnyards which has been tramped over by stock until it is completely pulverized is often mistaken for manure that is thoroughly rotted. But herein lies the error, for the very contrary is the fact. When such manure as this is placed in the holes prepared for the young trees, and afterwards irrigated, it is sure to *burn to death* the healthiest trees which can be planted. Where this is the case the first indication of injury is the drying up of the leaves, etc. Mr. Asher informs us that he has been frequently severely censured by his patrons whose trees have been literally "killed by kindness" in the manner here shown. Too much care cannot be taken to avoid future errors of this kind. The *cause* being shown, the remedy suggested we hope will be applied. In most of the soils of this county, especially where the same is deep, trees will undoubtedly do better with no manure at all than that which is but imperfectly rotted.

**THE OLIVE CROP.**—*Union*, Dec. 6: Hearing nothing to the contrary, we had supposed that the olive crop of this year would at least be sufficient for the home market, and somewhat larger than last season. In conversation with Mr. Frank Kimball, however, we are sorry to hear that but very few olives have been raised this season. The hot, dry winds early in the season blighted the young fruit seriously, leaving but very few berries on the trees to reach maturity. The trees themselves, however, have made a splendid growth, and if no misfortune happens similar to that of the past season, we may confidently expect a very heavy crop next year. We also note the few olives in market are much inferior to those of last year.

#### SAN JOAQUIN.

**BUHACH AND WEEVILS.**—*Independent*: Not long since a quantity of Buhach insect powder (made from *Cineraria pyrethrum*) imported from Dalmatia, and raised in this county by G. N. Milco, was stored in a building containing a lot of wheat in which weevil was found. A recent examination disclosed the fact that this plant proved a complete and effectual destruction to the insect. Upon the outside of almost every sack of grain in the building dead weevils by the hundred could be found, and the quantity that lay upon the floor was simply enormous. We understand that a gentleman whose wheat was affected with weevil procured and applied a few pounds of Buhach, with the most satisfactory results.

**SUB-IRRIGATION COMPANY.**—A number of gentlemen met in Pioneer Hall yesterday for the purpose of organizing, to inaugurate and carry out the Asbestine system of sub-irrigation, sewage and drainage in San Joaquin county; the right having been purchased. The company organized by the election of W. L. Overhiser, President; L. M. Cutting, Secretary; who, together with H. S. Sargent, Samuel Meyers and W. B. West, constitute the Board of directors. The meeting adjourned to convene at the call of the President. The company numbers some twenty members, viz: W. L. Overhiser, L. M. Cutting, H. S. Sargent, Samuel Meyers, W. B. West, J. H. Tone, P. G. Sharp, J. H. Dodge, W. D. Ashley, J. K. Meyers, Thos. E. Ketchum, J. W. Johnson, C. T. Elliott, Chas. Grupe, S. Dunham, J. N. Woods, F. B. Clowes, W. G. Phelps, B. S. Langford, George West.

**A TREE WITHOUT A ROOT.**—*Herald*: At the residence of William Colton, on Poplar street, a fruit tree was taken up a few days ago which had absolutely no roots at all. Instead of roots there was a globular shaped growth about a foot in diameter, gnarled like a knot. This extended into the ground about a foot. When the gardener took hold of the tree before digging about it, he found to his surprise that it appeared to be loose in the ground. A slight shake brought it down. Strange to say, the tree was growing luxuriantly.

#### SAN MATEO.

**WORKING ADOBE.** *Journal*, Dec. 4: Plowing is being quite extensively done in the adobe lands around Redwood. Adobes are the eccentric class of lands, and correspond in this respect to many individuals. They can be worked only when they will be. Like the great Searsbury strider, in the hands of green trainers, everything must be just so, or "no go, not so much," measuring off the length of his fingers. Just now, however, adobes go well, and it is wise to plow them when they will.

#### SANTA BARBARA.

**THE BEES.**—*Press*, Nov. 29: The bee men are beginning to look after their little honey-makers, and Mr. Temple goes over the moun-

tains in a day or two to look after his stock. He has not been compelled to feed his bees this year, and says there is enough honey in the hives to last until the new food is ready. Out of over 300 stands he only lost two this year, which might have occurred in a good year.

#### SANTA CRUZ.

**SOQUEL BEET SUGAR.**—*Courier*, Nov. 28: The Soquel Beet-Sugar factory will close operations for the season in the course of two or three weeks. The beet crop this year was very far below that of last, but the manufacture of sugar this season, in view of the appreciation of that commodity in the market, must have been profitable to the lessees or contractors under them, we are not advised which.

**EDITORS PRESS.**—The Farmers' Association met at the court-house at 1 o'clock P. M., President J. S. Mattison in the chair. Minutes of last meeting read and approved. The amendment to Article IX. of the Constitution was read for the second time and adopted. Section 10 of the by-laws was suspended and the following was adopted: That all delinquent and former members by paying one dollar into the Treasury shall be squared on the books of the association. W. W. Waterman was proposed and elected a member of the association. Dr. C. L. Anderson, T. W. Wright and W. W. Waterman were appointed the Library Committee for the coming year. R. Conant presented specimens of the new variety of potato called the Burbank potato, and stated that one year ago he sent to Mr. Burbank, of Santa Rosa, or one pound. From this pound he cut 27 eyes, and planted one eye in a hill. The yield from these 27 hills was 100 pounds and 12 ounces. The soil in which they were planted was heavy adobe, and to a certain extent worn out, and would not be considered good potato land. The largest potato weighed 2½ pounds. The three potatoes presented here as a specimen weighed 2½ pounds. The potatoes generally were of good size, very white and of fine flavor. The association then adjourned to the first Saturday in January, 1880.—*REPORTER*, Santa Cruz, December 6th.

#### SONOMA.

**THE WOOL INTEREST.**—*Healdsburg Flag*: The good price of wool has changed the herds of cattle in the mountains to flocks of sheep, and many grain fields in the valley into alfalfa pastures. Thousands of acres of additional hillsides are being added to our grape vineyards, owing to the excellent prospects for good prices.

**OPIMUM.**—*Index*, Nov. 27: The culture has actually been initiated in our valley with success. A. V. La Motte, of our valley, two years ago, obtained the seed of the genuine white and black poppy (*Papaver somniferum*) of the Orient, and planted two acres with the seed. By careful and intelligent experiments, he readily mastered the art of cultivation and incision, and succeeded in producing opium beyond all anticipations. The soil and climate of Sonoma is peculiarly adapted to this culture, a sandy or delta soil perhaps being preferable. The seed is sown by drilling, and requires no further cultivation. The plant is an annual, and produces sixteen capsules when planted in the fall and four when planted in the spring, according to Mr. La Motte's experiment. He generally preferred lateral incisions in the unripe capsules, these to be made in the morning and the exuding juice gathered in the evening, as the sun will evaporate the water, leaving the exudation in the form of a resinous substance. Specimens of the opium thus produced were submitted to our inspection, together with the black and white seeds. Submitted to an experienced chemist, it contained 20% of morphine, but little inert residue, and is of superb quality.

#### STANISLAUS.

**POULTRY SHIPMENTS.**—*News*, Nov. 28: Modesto is fast becoming a market for poultry. During the first three days of the present week there were shipped from this place by three business firms, 11,350 lbs. of dressed poultry, mostly turkeys. Mr. Armstrong sent down 1,600 lbs.; Maddux & Brown, 5,200; and J. Brussie, 4,550 lbs.

#### SUTTER.

**GENERAL ASPECT.**—*Banner* Nov. 28: The general aspect of affairs in Sutter county just now is favorable. In spite of the adverse decision of the Court in the debris case, our ranchers are making every necessary preparation for a large crop next year. Considerable plowing is going on, seed wheat is being prepared, and a large acreage will be sown. Much of the summer-fallow grain is showing green above the ground. Confident in the strength of their levees to keep out for at least one more season the slickens from the mines, and hoping that a regularly organized, competent and responsible Supreme Court will yet give them a decision supported by justice, our citizens pursue the even tenor of their way, unawed and confident. The advent of the plowing season has taken from our levee work some teams, but enough are left to insure the completion of the embankments if we have a few more days of the excellent weather now prevailing. The weather has been very pleasant for about two weeks, the nights and mornings being cold, and the days bright and warm.

**SUTTER COUNTY RAISINS.**—*Appeal*: S. R. Chandler, who has been cultivating a large vineyard of foreign grapes for many years, will sell this season about 50 tons of sun-dried raisins. Two carloads have been shipped to the Eastern market, and for the remainder there is a brisk demand at San Francisco.

**BROOM CORN.**—Recently, J. C. Donohoe, of

Sutter, delivered in Marysville six tons of first-class broom corn to Thomas Freeman, of Freeman's Crossing. Price, \$80 per ton. Mr. Freeman is a mountain manufacturer of brooms.

#### ARIZONA.

**COTTON.**—*Citizen*: I send you a sample of Chinese cotton grown near the mouth of the Rio San Pedro, upon my husband's ranch. The seed was brought by myself from Shanghai, China, about four years ago. It was not planted until June of this year, yet it fully matured and far surpassed my most sanguine expectations. You will observe that the staple is coarse and long and resembles the Sea Island cotton of the Gulf States. Mr. C. expects to cultivate a large area with this article next year, and thus it may be hoped that a new industry will be propagated in Arizona that shall rival its many other wonderful agricultural resources; and while silver is the undisputed king, why may not cotton aspire to be queen?—*Mrs. W. A. Cunningham*.

#### News in Brief.

IN Upper Silesia 150,000 persons are suffering from famine.

The ship *Eugenie Leonie* is a total wreck at Dunkirk, France.

PRINCE ALEXANDER has dissolved the Roumanian Assembly.

JAMES M. EDMONDS, Postmaster at Washington, D. C., is dying.

FURTHER distress is reported from Hungary, owing to inundations.

The total rainfall in Shasta county up to Dec. 9th has been 19 inches.

CONGRESSMAN LAY, of Missouri, died in Washington, December 9th.

TIME of amnesty to Cuban insurgents has been extended to Dec. 15th.

MULES and sleighs are to be used on the Santa Fe stage line, N. M. Territory.

A MANUFACTORY of soaps, soap powders, etc., has been established at Logan, Utah.

THE force of the Tiptop mine, Arizona, is to be increased to 200 men in January.

A MICA mine was sold recently in the Rochfort district, Dakota, for \$5,000 cash.

PIÑOS ALTON, of New Mexico, continues to turn out about \$1,200 in gold each week.

THE chapel in London founded by John Wesley was nearly destroyed by fire Sunday.

A NEW line of steamers is to be established between Havre, France, and New Orleans.

SEVERAL persons were injured and two killed by a railroad accident in England, Dec. 9th.

C. T. GETTING & Co., merchants of London, Buenos Ayres and Montevideo, have suspended.

THE President has nominated Owen N. Denny, of Oregon, to be Consul-General at Shanghai.

SILVER in London is 52½d; consols, 97 10-16; 5% United States bonds, 105½; 4s, 106½; 4½, 109½.

THE Deer Lodge school district, Montana, has 800 children, of whom 585 draw school money.

A LONDON dispatch announces the death of William John Scott Bentinck, fifth Earl of Portland.

KING JOHN of Abyssinia is moving forward with the main body of the Abyssinian army and forty guns.

AT Liverpool wheat is quoted at 10s 7d tolls 6d for average California white, and 11s 6d to 11s 10d for club.

THOS. H. MERRY, formerly Lecturer of the State Grange, is mentioned as one of the candidates for Speaker of the Assembly.

A BOILER explosion on board the British war ship *Pelican* killed three persons and wounded a number of others.

THE new Dakota salt springs are 45 miles from Deadwood. The supply is immense, says the *Deadwood Press*.

CHIEF OURAY agrees to deliver up the Indians engaged in the Meeker massacre, provided they are tried in Washington.

IN San Francisco half dollars are quoted at par; trade dollars, 95 buying, 96½ selling; Mexican dollars, 96 buying, 96½ selling.

THE storm and freshet of the 19th of November and subsequently was the severest ever known at Panama, doing immense damage.

A BATTLE occurred recently between the Montenegrins and Albanians, in which the latter were repulsed, great loss being inflicted on both sides.

THE mass-meeting to excite public interest in the World's fair of 1883 has been postponed for a month, in the hope that Gen. Grant may then be able to attend.

IN New York Government bonds are quoted at 103½ for 4s of 1907; 102½ for 5s of 1881; 105½ for 4½s; sterling, \$4.83 @ 4.85½; silver bars, 114½; silver coin, ½ @ 1 discount.

GROSSWARDEIN, Hungary, inundated by the overflowing of the Koros river, is now out of danger. Since Sunday, other floods have been reported in Transylvania.

THERE is a well-founded suspicion that one of the principal men concerned in the plot against the Czar's life, by the explosion last week, is a returned convict from Siberia.

THE *Ethiopia*, from New York November 22d for Glasgow, and the bark *Geflon*, from Hamburg for Philadelphia, have been damaged by collision, the former in the Clyde and the latter at Cruxhaven.

SEVERAL thousand pounds of jack-rabbit ears were burned last week at Boise by the County Commissioners. Ada county pays five cents per pair for this kind of crop, and it was an unusually large one this year.





### Not Knowing.

I know not what will befall me;  
God hangs a mist o'er my eyes;  
And o'er each step of my onward path  
He makes new scenes arise,  
And every joy He sends me comes  
As a sweet and glad surprise.

I see not a step before me,  
As I tread the days of the year,  
But the past is still in God's keeping,  
The future His mercy shall clear;  
And what looks dark in the distance  
May brighten as I draw near.

For perhaps the dreaded future  
Has less bitterness than I think;  
The Lord may sweeten the water  
Before I swoon to drink,  
Or if Marah must be Marah,  
He will stand beside the brink.

It may be there is waiting  
For the coming of my feet,  
Some gift of such rare blessedness,  
Some joy so strangely sweet,  
That my lips can only tremble  
With the thanks I cannot speak.

Oh, restful, blissful ignorance!  
'Tis blessed not to know;  
It keeps me quiet in those arms  
Which will not let me go,  
And hushes my soul to rest  
On the bosom which loves me so.

So I go on not knowing:  
I would not if I might;  
I'd rather walk in the dark with God,  
Than go alone in the light,  
I would rather walk with Christ by faith  
Than walk alone by sight.

My heart shrinks back from trials  
Which the future may disclose,  
Yet I never had a sorrow  
But what the dear Lord chose;  
So I send the coming tears back,  
With the whispered words "He knows."

### Nell's Experiment; or Must the Girls Leave the Ranch?

[Written for the Press by Mrs. Rancher.]

#### CHAPTER II.

Nellie's record did not always tell of success, however. One remark of Mrs. Hildreth's had counseled her not to raise many turkeys until she had gained some experience, and Nellie had gone contrary to this. She could not resist the temptation to have a large flock of the birds. Accustomed to the chickens, she did not realize, though her mother warned her, that the same care would not do for young turkeys. Out of the 100 turkeys she purposed raising, but 28 lived. But the chickens thrived amazingly.

One evening her sister Belle, with husband and children, were looking at her farm, when Belle said to Mrs. Hildreth: "Mother, I can't understand how Nellie manages to raise so many of each clutch of young ones that hatch out. Why, I don't expect to average more than five or six, and I believe Nell averages 11 or 12."

"The reason is plain to me," replied her mother. "It is because you and I make children raising and housekeeping our chief concern, and fowl raising a side issue. With Nellie, poultry is a regular business, and as a consequence she succeeds. Not that you can help it, Belle," added her mother; "when girls marry they have the comfort of their homes, and husbands, and children, and they must not expect the freedom and independence that girls have."

"There is another thing," added her husband. "You have no such skunk-proof coops as these are, Belle. Why, if we've lost one chick by the skunks this year, we've lost 100; and 100 partly grown chicks would pay for making some fine coops."

"See, Frank," said Nellie, "these are made with a false bottom, like a bird cage, and I scrub it off occasionally. It takes but a short time and keeps the coops clean."

Nearly a year had passed, when one day Mr. Hildreth said to his wife: "Mattie, I was over to see neighbor Willis this morning, and met Ned. He has finished his course at the University, and is home now to settle among us. He told me that he is satisfied now to take up the life of a rancher."

"Now that is pleasant," replied his wife. "I'm heartily glad to hear it. When he was so anxious to go away, three years back, Mrs. Marston said to his mother, 'You'll rue the day Mrs. Willis if you let that boy go. Much learning ain't no good for a farmer, and his head'll be that turned with his books an' his Professors, that he'll never be willin' to do a day's work.'"

"Mrs. Willis was not a little disturbed in her mind; but I told her that Ned always had been a good boy to work, they had brought him up in that way, and I didn't believe intelligence would make him a shirk."

"Yes," said Mr. Hildreth, "and Jemmie

Marston wanted to go with Ned. Marston put his foot down on all that kind of nonsense, but he can't put it down hard enough to keep Jim from the saloons. I'm afraid the harder he stamps, the more Jim stays away from home. By the way, wife, don't you want to go out and take a look at that new plow? It goes a little ahead of anything I've seen yet."

Nell did not volunteer to go too. She had grown used to these walks of her parents, and knew that when her father asked her mother only to go, it was because he had some project to talk over with her alone.

"I didn't tell you Mattie," began Mr. Hildreth, "when we were talking about Ned Willis, but he said he would call around if we were all to be at home this evening."

"All meant Nellie, I suppose," replied his wife drily.

"I reckon so; anyway I suppose the young folks might like a chat by themselves."

All unconscious Nellie sat on the doorstep watching the setting sun, when a quick, firm step caused her to look around.

"Why, Ned," she exclaimed, a trifle frustrated, "who ever would have expected to see you?"

"Didn't you expect to see me?" queried Ned. "No, indeed, though father said at tea that you were home."

"Yes," he answered, "I told him this morning that I would be over to night. Where are your father and mother?"

"Oh, only away for one of their walks. I expect father wants to ask mother if she would like the plow better painted yellow or red. He's always consulting her about farm matters. I'll call them," she added, now quite composed.

"Please don't," said Ned, "I shall see them presently, and it's very pleasant here as it is. How much they think of one another, Nellie."

"Yes," replied she, "if I could find some one as good as father, I would get married right away; that is, if he'd have me."

"I wish I was as good," sighed Ned.

"Why?" asked Nell demurely.

"Because then there would be no trouble about that second if."

"Didn't you expect to find me a teacher when you came back?" said Nell, changing the subject suddenly. "I was so anxious to try for my fortune when you were here a year ago."

"But you are still in the home nest I see."

"Yes," replied Nell, "father and mother were distressed at the idea of my leaving them, and I am making my pile here raising chickens."

"You were right in staying, Nellie, and I don't doubt you make your spending money with your chickens; don't you?" said Ned.

"Oh, yes, I make a little," she answered.

Then Nellie asked Ned of his plans, for they were old-time friends; and he told her at length of his purposes, while she listened attentively, only speaking to turn his thoughts to the proper channel when his words grew tender and loving. And Ned seeing he was not to be allowed to drift around easily into saying all that was in his heart, ended abruptly with—"That is, sweet Nellie, if you'll marry me."

When Mr. and Mrs. Hildreth came up a half hour after, they found matters awaiting their decision.

"I've naught to say against it," said farmer Hildreth, "and but this one thing to propose: Make a little home of your own to take her to. There's room, and to spare, at your father's house, and there's room, and to spare, here; but, still, I say, have a little cabin of your own, and manage your own hearth stone. You're both young and can wait a bit."

So time went on. Ned came and went, and seeing Nell oft among her chickens joked her considerably about her pile; until Nell resolved to wait until her three years were up before showing him her book, and with the aid of Ned's mother she managed to keep her secret. But the next Xmas, when Kittie came home for vacation, there was a comparison of the year's work and results.

Nell's first year added up:

Eggs, dozen, 1,005 at an average price of 31 cents.	\$330.45
Full-grown roosters, 121 dozen at \$8.	102.00
Old hens, 7 dozen at \$5.50.	38.50
Turkeys, 21 at \$2.	42.00

Total.....\$521.95

The other side showed her expenses for:

Corn and corn meal.....	\$ 10.00
Wheat.....	2.50
Brass.....	3.00
Meat.....	6.00
Cayenne pepper.....	50
Insect powder.....	1.00
Lime.....	50
One-half day's work repairing roof.....	1.25

Total.....\$ 24.75

Leaving her a balance of \$497.20, which, divided by 12, gave a little over \$41 a month.

"What was the bran for Nellie?" said Kittie, scanning the items interestedly.

"Why you'll see here where I often paid mother five minutes for the water which a boiled dinner is cooked in; I would heat it to boiling, then stir it thick with bran. It made a fine feed. The meat item I'm afraid is not quite fair," continued Nell, "for a teamster had to shoot a horse just outside our gate, and the fowls picked at that a long time. Then father killed those two crazy horses that have been in the pasture for the last four years. I doubt if he would have done so but for my profit."

"It stands to reason," remarked Mr. Hildreth, "that there are always windfalls of that kind on a ranch."

"Did you work very hard?" asked Kittie.

"No, indeed. I honestly think six hours a

day a fair average," replied Nell. "How does my come-out compare with yours?"

"Well," replied Kittie, "I've taught nine months this year, for which I received \$65 a month. My boarding place was three miles from the schoolhouse, so I kept a horse. I could not do my own washing, because Mrs. Murray washed and ironed Saturday while her big girls were at home, so I paid for board \$20; horse feed, \$3; washing \$4; total \$27—which left me \$38 against your \$41, and for 9 months against your 12. Heigho! I wouldn't have believed it possible."

The third year had closed. Ned and Nellie sat once more on the doorstep talking over the future. "I expected to do more than I have in my two years' probation," said Ned, a little despondently. "There's in everything in life some friction to be overcome, and I suppose I didn't allow for it. The house is nearly finished now, but I can't paint it this year, nor furnish it as I want to. I suppose, too, you really will want a chicken-house for your poultry; but I'm afraid that too must wait, for you know we've resolved not to incur debt."

Nell felt her time had come, so she quietly brought her book.

Ned glanced at it carelessly at first, then with more and more interest as he saw the amounts.

The second and third year Nell's business had increased, until she counted her gains at \$2,753.80. "I have had what money I needed to spend; have been able to feel when I gave to others that it was of my own; have bought the house, keeping articles that mothers say every girl should have; have started the library that added to yours will make us a good collection to start with, and now there is \$1,000 left. I want \$100 to be put into poultry buildings, for after returning mother's I shall have enough to stock our farm. The rest is to be put into paint and painting, into a fence and young trees, and a windmill, and furniture. There is more than enough, but what is left will be very useful to have ready for an emergency."

"Nellie, dear," said Ned humbly, "I hope I have learned a lesson. I am ashamed when I remember how lightly I have always spoken of your labor."

Nor was Nellie's example without its influence. Other girls followed in her footsteps. Some with wonderful zeal at first, that cooled when the novelty wore off. Some with perseverance and patience, but no method. Some with head and hand combined, and these all reaped according to their labors. Some there were who met with no encouragement at home. One young lady who was learning the milliner's trade in the city remarked to Nell at a picnic where they met: "It must be quite ruinous to the complexion to be out in the glaring sun as you must be, Miss Hildreth." But before Nell could reply, up spoke little Billy Stiles, to whom she had shown some kindness that day, "Nell's cheeks are pretty and red and her eyes shine all the time, and her hands ain't yellor and skinny like yours."

The truth had been told. Insufficient exercise and improper food will tell their tale, as Miss Day found to her chagrin.

It was a cold afternoon in December. A keen frosty air prevailed outside, but indoors all was warmth and comfort. In the big fireplace the bright blaze leaped and sparkled and sent forth hungry tongues of flame, while beneath, the bright coals built castles and fairy lauds which sparkled and glowed in splendor. Mrs. Hildreth and Nellie bustled busily to and fro preparing the evening meal.

"How luscious those apricots look," said Nell as she poured them into the clear crystal. Then glancing down the road once more—"Here is father now; yes, and Kit is with him," and in a minute Nell was flying down the lane and climbing into the wagon.

Soon they were at the door and Kittie was kissing the dear mother, petting Bounce and Puss, running on all the while with a stream of talk that was bewildering.

"It never seemed so good to get home before," said Kittie, when a little later they sat around the table. "Please pass the butter, mother; really there is no bread quite equal to yours."

"Are you going to take the same school another year?" asked her father.

"That depends," replied Kittie. "The trustees offered it to me, but I told them I could not give my answer yet. I suspect they think I'm to be married; but I don't find my affinity as Belle and May and Nell have done. But Nell's success has set me thinking. If I had read of it I should have thought that's all very well on paper; but her exact accounts have left me no room for doubt. So if you will give me Nell's place when she marries, I think I'll change my profession."

"There, Benjamin, you see we're provided for again," said Mother Hildreth.

[The End]

TAILOR (to customer)—"I don't understand your stylo of doing things. Your salary is big enough to enable you to pay your bills."

Customer—"Well, who said it wasn't?"

TAILOR—"You don't keep your word."

Customer—"Certainly I do. I told you I'd pay you out of my savings."

TAILOR—"Well!"

Customer—"Well, I haven't saved anything."

### Are Farmers Extravagant?

EDITORS PRESS:—Again are we called upon to chronicle a supply of rain. Sunshine for seeding and the watery clement for sprouting seems to be the order of the day. Farmers could not make better conditions than have so far existed were they to try. No useless water has as yet been carried to the rivers. The ground has taken it all up, and prospects for more are favorable.

It is said by some uncharitable persons that "farmers are extravagant." If so, nature is determined to give them an opportunity for display. But it is not so, and those who think so never handled the plow or broke a colt to harness. If God ever created a class of industrious and useful men and women, it is the yeomanry of the fields and forests: the provider of provender for pauper and king. Would to God farmers had more leisure for self-improvement, and more means for a higher culture. A man's mind and morals partake somewhat of his surroundings. If refinement adds to his status in these respects, who but those void of charity would deny the farmer all the means of domestic refinement attainable. Hard indeed has been the struggle for home and hearth in California so far. It has been uphill labor, but the hour is at hand when perseverance and industry will meet their reward. And if we perchance witness a fortunate farmer broadening his phylactories, we will not begrudge him his well-earned honors.

It is not true that the farmers of California are extravagant. A few cases there may be, but like all other of nature's drones they are crushed out by the moral forces which surround them. Does man reflect on the many disturbing incidents which transpire around him, and too often exposed in the daily papers: men and women living in defiance of the laws of God and man. Ah! witness the untimely end, the darkness surrounding their latter end, and say if you will whether man may live to please eye and sense only without adding to the world's exchequer some token of goodness, use and beauty! Verily the drones shall vanish in their pride and poverty of soul. But the producers of a nation's wealth, the bread and butter manufacturers, shall occupy the highest seat of honor, enjoying health and wealth above and beyond the monied aristocracy who decry the extravagance of the farmer.

In fact, few farmers have even had the means for extravagance in this changeful climate. For a few years nature has done much to restore confidence, but a large proportion are still struggling with the misfortune of dry seasons, and are too intent upon building up a solid foundation for a permanent home to think of appearing to be extravagant among their neighbors. If there is a class of men on God's footstool I respect it is the farmers. Muscle and brain power are used for the world's benefit, and if they possibly can enjoy the comforts which health may procure, in God's name let them enjoy it, for it is deserved.

JOHN TAYLOR.

BE GENTLEMEN AT HOME.—There are few families, we imagine, anywhere, in which love is not abused as furnishing a license for impoliteness. A husband, or father, or brother, will speak harsh words to those that he loves the best, and to those who love him the best, simply because the security of love and family pride keeps him from getting his head broken. It is a shame that a man will speak more impolitely at times to his wife or sister than he would dare to any other female except a low and vicious one. It is thus that the holiest affections of a man's nature prove to be a weaker protection to a woman in the family circle than the restraints of society, and that a woman usually is indebted for the kindest politeness of life to those not belonging to her own household. Things ought not to be so. The man who, because it will not be resented, indicts his spleen and bad temper upon those of his hearthstone, is a small coward and a mean man. Kind words are the circulating medium between true gentlemen and true ladies at home, and no polish exhibited in society can atone for the harsh language and disrespectful treatment too often indulged in between those bound together by God's own ties of blood, and the still more sacred bonds of conjugal love.—Mother's Assistant.

BROWN DYE FOR SILK.—Fill a copper or sauce-pan with river water. When it gently boils, put in a quarter of a pound of chipped fustic, two ounces of madder, one ounce of sumac, and half an ounce of cam wood—if not required to be so red, the cam wood may be omitted. These should boil at least from half an hour to two hours, that the ingredients may be well incorporated. The copper must then be cooled down by pouring in cold water. The goods may be then put in, and simmered gently from half an hour to an hour. If this color should appear to want darkening or sallowing, it may be done by taking out the goods and adding a small quantity of black dye or a small piece of green copperas. When of a proper color, rinse in three waters and hang up to dry.

A YOUNG Parisian lady, after being relieved of a tormenting tooth, laid down 10 francs in payment. Looking at the fee contemptuously the dentist asked if that was for his servant. "No," responded madame, with a sweet smile, "it is for both of you."



## Chaff.

AN OLD gentleman who had been intolerably annoyed by the hideous noise made by a drove of donkeys, mildly asked: "Do not these creatures ever die of softening of the brain?"

"I NEVER turn out for scoundrels," said a bully, meeting a Quaker, and stepping up square before him to inaugurate a quarrel. "I do," said the Quaker, and placidly took the other side of the way.

At a funeral service in Slawton last week, the minister, in his remarks, was dwelling upon the loss to the husband of the deceased, when that worthy spoke up: "Never mind me. Just throw your heft on the corpse."

A LADY stepped into a store in this place yesterday, and asked the clerk if he had any "rock candy." "No, madam," he replied. "I haven't any rock handy, but here's a brick your welcome to, if it will answer your purpose."

A WOMAN who was having her first introduction to the telephone yesterday, was told by the operator to place the instrument to her ear and listen to the words the wire would speak to her. "And now," said she, in all innocence, "shall I talk with the other ear?"

NEW WINE IN OLD BOTTLES.—Facetious old party: "How long do you say that wine has been bottled, waiter?" Waiter: "Fourteen years, sir." Facetious old party: "Lor, I didn't know flies would live as long as that." Waiter: "Flies, sir?" Facetious old party: "Yes; I mean that one kicking about in the bottle."

OLD Baillie Robertson, of the Canongate, in Edinburgh, had not the advantage of as good an early education as most of his countrymen, but was a character in his way. A case was once brought before him for trial, in which the owner of a squirrel presented a claim of damages against a person who had it in charge, but who allowed it to escape. From the complications of the case, the bailie was a little bothered. At last, after collecting his faculties, he said to the defendant, "Did you clip its wings?" "It's a quadruped, your honor," said the defendant. "Quadruped here, quadruped there, said the magistrate, 'if ye had clipped its wings, it couldn't hae flown aff. I maun decide against ye.'"

AN HUMBLE HOME.—Curiosity as to the construction of an Irish cabin and its accommodation, led me to accept the invitation to enter. It certainly was the smallest place two human beings ever contrived to exist in. A mass of hether and ferns was piled in one corner, which evidently served for beds; a fire smouldered on some stones and the smoke found vent through the door, there being no chimney; a pot of stir-about hung upon a hook, secured by a rope of straw; a stool (on which stood an ancient candlestick), a curious three-legged chair, a wooden mug (called a mether), a basket (which served as a dish from which they ate their potatoes), and a cradle in families boasting of an infant, and an iron pot, completed a list of their household goods and chattels. The pointed top of the candlestick forms the snuffers, the candle being taken from its socket, which is raised in order to open the apex to cut the wick. My host looked about him with a certain pride and told me it was very warm and comfortable, as there was no windows to let the air in. The woman bent over the pot saying, "He has got used to it now, ma'am, but we had a snug home before the famine" (which seems the epoch from which they date all their misfortunes); "but we were glad to get a shelter anywhere, and the poor man takes as much care of this little place, as though it were a great house. All the family are dead or gone to foreign lands, and I stay to care for him." Here was another evidence of the love of kindred, and of patience under terrible privations, so common in Ireland, particularly in these highlands. I reluctantly bade adieu to the scene and my interesting host, in whose humble cabin I had found so much true contentment, affection and helpfulness. As I descended my friend cried after me a series of good wishes. Two of them struck me as being particularly beautiful—"May the smile of the Lord light you to glory!" "May the sun never be too hot, nor the wind too cold for you."—*Harper's Monthly*.

MUSIC.—Music has not the same charms for all ears. It is not an art which requires to be cultivated for a correct appreciation of it. There is a spontaneous outburst of natural melody which touches the soul of every created being, but this is not the harmony in which the excellence and delight of the opera consists. This harmony is the production of an artificial combination of sounds founded upon natural principles, but so intricate in their arrangement, and so scientifically accurate, that the individual who has not made the art his special study, or who has not acquired sufficient delicacy of taste by hearing repeatedly the best illustrations and examples, is very likely to be disappointed with operatic performances, though conscious himself of his subjection to the influence of sweet sounds. Even Dr. Johnson, whose moral organization was certainly not less perfect than his critical acumen and great mental grasp, had no ear for musical refinement. When asked to admire a concerted piece, very difficult of execution, his reply was characteristic of this defect in his aesthetic education. "I wish," said he, "it had been so difficult as to be impossible." There are others who have felt the same when listening to the difficult music of some of our orchestras.—*Philadelphia Ledger*.

## Young Folks' Column.

## Christmas is Coming!

"Christmas is coming!" the children cry, Counting the weeks that are hurrying by. Dear little children, who live at home, And do not guess what it is to roam From morn till night, with stockingless feet, Up and down, through the ice and sleet.

"Christmas is coming!" thinks little Tim. But what can Christmas do for him? His home is a cellar, his daily bread The crumbs that remain when the rich are fed. No mother to kiss him when day is done. No place to be glad in under the sun.

That wonderful fellow, old "Santa Claus," Who never is idle a moment, because He is kept so busy with piling the toys Into the stockings of girls and boys, No wonder he sometimes forgets, you know, Into the houses of the poor to go!

But, dear little children, you understand That the rich and poor all over the land Have one dear father who watches you do, And grieves or smiles at the things you do. And some of His children are poor and sad, And some are always merry and glad.

Christmas will bring to you many joys— Food and plenty, frolic and toys; Christmas to some will bring nothing at all, In place of laughter the tears will fall. Poor little Tim to your door may come. Your blessings are many; spare him some.

The Christmas bells will sweetly ring The song that the angels love to sing, The song that came with the Saviour's birth: "Peace, good-will, and love on earth!" Dear little children, ring, I pray, Sweet bells in some lonely heart that day.

—*Mary D. Brine, in Independent*.

## A Lesson in Arithmetic.

## An Arab Story.

Once upon a time, an old Arab, finding himself very sick and like to die, called unto him his three sons, to give them his parting blessing, and also to divide among them his possessions. His fortune, like most of his tribe, consisted principally of horses. He was the owner of seventeen very fine animals. After giving his sons much good advice, and especially cautioning them against quarreling among themselves, he proceeded to divide the horses among them in what he considered a just and equitable manner.

Now the ancient Arab was not well versed in the science of mathematics, but not being aware of his own deficiency, he plunged boldly into the bewildering mazes of vulgar fractions. To my eldest son, the old man said, I give one-half of all my horses; to my second son I give one-third of all my horses; and to my youngest son one-fourth of all my horses.

Having thus disposed of his worldly goods to his own satisfaction, as well as that of his sons, the father gave them his blessing, and quietly passed away. At the proper time, the sons proceeded to divide the horses according to their father's bequest. Much to their amazement and disgust, they found much trouble in making the division. The eldest found himself entitled to eight and one-half horses for his share, the second to five and two-thirds horses, and the youngest to one horse and eight-ninths of a horse. No one of them was willing to abate his claim, nor yet could they make up their minds to kill three of the beautiful horses which would be absolutely necessary in order to make the division. Here they were then, on the verge of that very quarreling against which their father had so solemnly warned them. In their perplexity they bethought them of neighboring Sheikh, who was also a Cadi or judge, much renowned for his wisdom, and to him they determined to submit their case, mutually agreeing to abide by his decision. They took their horses and hastened to the Cadi who listened to their story, and agreed on the following day to render a decision. The fame of the case had gotten abroad, and a large number of people assembled to hear the decision. After the appointed hour, the Cadi opened his rude court, the brothers with their seventeen horses were brought before him, and he thus addressed them:—

"Being unwilling to see you young men quarrel and also that you should be forced to kill three of your horses, I have concluded to add a horse from my own stables to yours so as to make the number eighteen, when the division as ordered by your father will be possible." An attendant here brought one of the Cadi's horses and the Cadi, addressing the elder brother, said: "Take you one half of the eighteen horses, nine; are you satisfied?" The astonished and delighted youth replied: "O most just and wise Cadi! I am more than satisfied for I was entitled to but eight and a half horses and behold I have nine." Then said the Cadi to the second son, "Take you one third of the eighteen horses, six; are you satisfied?" The second replied as the first had done that he was more than satisfied, as he was entitled to but five and two-thirds horses, and yet he had six given him. The Cadi had now disposed of fifteen horses, when turning to the youngest brother, he said: "Take you one ninth of the eighteen horses, two; are you satisfied?" The youngest replied as his brothers had done, that he was most happy in being given two horses, whereas he was entitled to but one horse and eight-ninths. Having now disposed of seventeen horses, the Cadi told the attendant to lead his horse back to the stable. The wondering and delighted crowd dispersed

to congratulate the brothers on the happy settlement of their trouble, and to marvel at the generosity and wisdom of the Cadi. Just how the thing was done they can't quite make out to this day.—*G. J. M., in Work and Play*.

## GOOD HEALTH.

## Causes of Insanity.

A table in the last report of the Utica State insane asylum, giving the occupations of the patients, shows that by far the largest number (282 in a total of 410) whose occupation was known were farmers' housekeepers, meaning, we suppose, farmers' wives, laborers and domestic servants. This illustrates that a monotonous and toilsome life, with little or no relaxation or recreation, is more liable to unsettle the mind and destroy the reason than a life of greater mental and social activity. Most of the patients were native Americans, and married. Their ages, in the main, were from 20 to 40; very few were illiterate; but few also had more than a common-school education. In 427 cases but 122 inherited any taint of insanity; 205 patients remained not over six months, and 141 not over two months, showing that the malady was not severe. Intemperance was a minor cause—11%. Female disorders caused about 12%, while the prime cause in the largest number of cases was ill-health, stimulated by overwork, grief, anxiety and sleeplessness. To the causes cited above which encourage mental disturbances, we would add dyspepsia, due to poor or ill-cooked food. In this connection we would refer to the admirable paper on the health of Massachusetts farmers, by Dr. J. F. Adams, of Pittsfield, in the report of the Massachusetts State Board of Health for 1874, in which a large amount of interesting data is given regarding the ill-health of the farmers, and especially of their wives and daughters. Overwork, exposure, poor food, unsanitary dwellings, impure water, unventilated bedrooms and insufficient recreation, are all mentioned as the chief causes of sickness among this class. It is denied that farmers are specially liable to insanity, yet it is added that causes of insanity are not altogether wanting, as shown by the 81 farmers admitted to the asylums the year before. The farmer lives amid more natural conditions than the artisan, business or professional man; but, while he escapes intellectual strain, he labors too incessantly and joylessly, and frets and worries about his crops, his stock and his mortgages. The remedy is more recreation and less work. Then the farmer may lose his reputation for chronic grumbling.—*Sanitary Engineer*.

CONCERNING THE MEMORY.—The *Medical Press and Circular* gives some entertaining statistics of memory from M. Delaunay. The inferior races of mankind, such as negroes, the Chinese, etc., have more memory than those of a higher type of civilization. Primitive races which were unacquainted with the art of writing had a wonderful memory, and were for ages in the habit of handing down from one generation to another hymns as voluminous as the Bible. Prompters and professors of declamation know that women have more memory than men. French women will learn a foreign language quicker than their husbands. Youths have more memory than adults. It is well developed in children, attains its maximum about the fourteenth or fifteenth year, and then decreases. Feeble individuals of a lymphatic temperament have more memory than the strong. Students who obtain the prize for memory and recitation chiefly belong to the former class. Parisian students have also less memory than those who come from the provinces. At the *Ecole Normale* and other schools the pupils who have the best memory are not the most intelligent. The memory is more developed among the peasantry than among citizens, and among the clergy than among the laity. The memory remains intact in diseases of the left side of the brain, and is much affected in those of the right, from which it may be inferred that the right side is more the seat of this faculty than the left. From a physiological point of view memory is diminished by over-feeding, by physical exercise, and by education, in this sense, that the illiterate have potentially more memory than those who know how to read and write. We remember, moreover, better in the morning than in the evening, in the summer than in the winter, and better in warm than in cold climates.

VENTILATING BEDROOMS.—A simple device for ventilating bedrooms is within the reach of every one having an ordinary window in his room, by which fresh outdoor air can be admitted in small quantity with such an upward current as will prevent its being felt as an injurious draft by the inmates. It is particularly adapted to sleeping rooms when the weather is too cold to admit of an open window. Thus, start both top and bottom sashes of the window half an inch, which is not quite enough to clear the rebate or stop-heads at top and bottom, but which leaves an opening of an inch between the meeting rails, through which a current enters, but diverted upward by the glass as it should be, so as not to fall directly to the floor, as its coolness might otherwise induce it to do. It thus becomes well mixed with the air of the room without being felt as a draft.—*The Plumber*.

## DOMESTIC ECONOMY.

HOW COOKING AFFECTS POTATOES.—The nutritive value of potatoes is not materially affected by the different ways of cooking them unless they are wasted in peeling. When potatoes are peeled before cooking, unless they are large and very thinly pared, the waste is about one-fourth, and as most of the mineral elements lie next the skin they are generally cut away with it. The analysis of potatoes boiled in their jackets shows that they contain double the quantity of the salts of potash which remains in those that have been peeled; besides this important fact, potatoes boiled in their jackets do not waste more than one ounce in a pound. The waste in baked potatoes, if peeled, is about one-fourth, if they are eaten in their skins there is but little waste. Baked potatoes should be served the moment they are soft; after that the steam which escapes in the bursting of the starch cells begins to condense, and is absorbed by the mealy substance of the vegetable until it becomes sodden and heavy; it baked potatoes are served at the right point of cooking they are perfectly digestible and wholesome; they should never be placed in a covered dish, nor allowed to stand an instant after they are done. It is a very easy matter to have mealy boiled potatoes. Let them be well washed with a brush and cold water, a ring pared off all around them, and then plunge them in well-salted boiling water; boil them steadily until they are quite tender, then drain off the water, cover them with a clean towel folded several times, and set them a little off the fire for five minutes. This will make them mealy; and by putting them where they will keep hot they will not grow watery if they stand for hours.—*Julia Corson, in Christian Union*.

FISH CROQUETTES.—What fish remains over from dinner one day will make croquettes for breakfast. Pick the fish carefully, removing skin and bone. Make a sauce or *liant* with an ounce of butter, and the same of sifted flour; put this in the saucepan, with a pint of boiling water, a salt-spoonful of salt, a very little white pepper, and a dust of nutmeg. Stir this thoroughly, so that it is smooth. Cook the fish slightly in this *liant*, and then put it aside in a dish to cool. When cold, flour a board and lay the fish paste on it; dust with pounded cracker, and roll out the paste. It ought not to stick, provided you have put enough pounded cracker. Have the yolks of two eggs well beaten; cut the paste in strips about two inches long and an inch wide; roll them over on themselves; dip in egg and fry in hot fat. Of course the fat must be at a high heat. The art is to let them just brown, and not break the croquettes. If they are greasy, put them on paper to absorb the excess of fat. Sprinkle a little well-chopped parsley over them.

MUTTON SOUP.—Take a shoulder of good, heavy mutton, weighing about four pounds; remove the skin and fat, then put it in about four quarts of cold water, and let it simmer for two hours; boil one yellow turnip, one medium-sized carrot, four potatoes, two bulbs of soup celery; the turnip and carrot will require one hour to cook, the potatoes and celery half an hour; when cooked, put them in cold water and peel and chop fine; remove the meat; then add the vegetables and one cup of boiled rice or barley; then let the soup simmer 10 minutes more; then add one tablespoonful of chopped onion and one of parsley; then let it cook 10 minutes more, as cooking onion or parsley too much takes from it the desired flavor; cooking the vegetables separately will add much to the flavor of the soup.

SCALLOPED TURKEY.—Pick the meat from the bones of a cold turkey and chop it fine. Butter a dish; put in a layer of bread crumbs and moisten them with a little milk. Then a layer of turkey with some of the stuffing; put on bits of butter and a little salt and pepper; then crumbs, and so on alternately. Add a little hot water to the gravy left from the turkey and pour over it. Then take an egg, one tablespoonful of milk, one of melted butter, and a little salt, cracker crumbs enough to make it thick. Spread over the top, cover, and bake three-quarters of an hour. Remove the cover, let brown, and serve hot.

WHITE MOUNTAIN CAKE.—A pound each of flour and sugar; one-half pound butter; tea-spoonful sweet milk; six eggs beaten separately; tea-spoonful soda, two of cream tartar; rind and juice of a lemon. Bake in jelly cake pans. Dredge lightly with flour before putting on the following icing: Boil together until quite thick three cups of sugar and one-half cup of water. Pour it on to the well-beaten whites of three eggs. Beat until cool; then spread.

COOKIES.—Two cups sugar; one of butter; four eggs, leaving out one yolk. Beat butter and part of sugar together; beat rest with the eggs. Then mix all and add flour to make a stiff dough. Roll thin; wet the top with white of eggs; sprinkle with cinnamon and sugar. Bake quickly.

FRUIT PUDDING.—Stew currants, or any small fruit, fresh or dried, with sugar to taste, and pour hot over thin slices of buttered baker's bread with crust cut off, making alternate layers of fruit and bread. Serve warm, with rich, hot sauce.





DEWEY & CO., Publishers.  
A. T. DEWEY. W. B. EWER.  
Office, 202 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.  
ADVERTISING RATES: 1 month. 3 mos. 12 mos.  
Per line..... .25 .80 \$2.00 \$5.00  
Half inch (1 square). \$1.00 \$3.00 7.50 24.00  
One inch..... .2.00 6.00 14.00 40.00

The Scientific Press Patent Agency.  
DEWEY & CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. G. H. STRONG.

Quack Advertising positively declined.

Our latest forms go to press Wednesday evening.

SAN FRANCISCO:  
Saturday, December 13, 1879.

### TABLE OF CONTENTS.

**EDITORIALS.**—The Langshans; Give a Plant a Good Breakfast; The Santa Barbara Cork Oak; Bamboo Pining, 369. The Week; Threading the Continent, 376. Letters from Southern California.—No. 7; The Alcatraz Canal, 377.  
**ILLUSTRATIONS.**—Langshan Fowls, Bred by Benson, Man & Co., Philadelphia, 369. Map of the Lands of the Riverside Land and Irrigation Co., 377.  
**QUERIES AND REPLIES.**—The Melon-Sugar Investigation; "Quillage" or Soap-Bark Tree; Conjunctivitis—Full Description, 376.  
**ENTOMOLOGICAL.**—Experiments with the *Ceanothus* Moth; The Mission Grape and the Phylloxera; Large White Scale on *Acacias*, etc., 376.  
**CORRESPONDENCE.**—Fruit, Grain and Weeds; Ferndale and Eel River Valley; Dried Grapes and Egyptian Corn; "Preservative Compound" Humbug; Farmer's Pap, 370. Detestable Frauds, 380.  
**HORTICULTURE.**—Fig Growing, 370-71.  
**THE STABLE.**—Anti-Horse-Thief Society, 371.  
**THE FIELD.**—Is There Anything New Under the Sun? Dr. Simms' Right-Side-up Doctrine; Live or Dead Fences, 371.  
**SHEEP AND WOOL.**—Merinos for the Great Ranges, 371.  
**THE VINEYARD.**—Grape Pomace as a Fertilizer; Argols, 371.  
**PATRONS OF HUSBANDRY.**—The Thirteenth Session of the National Grange; Election of Officers; Walnut Creek Grange; Wheat Prices and Freight Rates; Alhambra Grange, 372.  
**AGRICULTURAL NOTES** from the various counties of California and Arizona, 372-373.  
**NEWS IN BRIEF** on page 373 and other pages.  
**HOME CIRCLE.**—Not Knowing (poetry); Nell's Experiment; or Must the Girls Leave the Ranch? Are Farmers Extravagant? Be Gentlemen at Home; Brown Dye for Silk, 374. Chaff; An Humble Home; Music, 375.  
**YOUNG FOLKS' COLUMN.**—Christmas is Coming (poetry); A Lesson in Arithmetic, 375.  
**GOOD HEALTH.**—Causes of Insanity; Concerning the Memory; Ventilating Bedrooms, 375.  
**DOMESTIC ECONOMY.**—How Cooking Affects Potatoes; Fish Croquettes; Mutton Soup; Scalloped Turkey; White Mountain Cake; Cookies; Fruit Pudding, 375.  
**ARBORICULTURE.**—Nut-Bearing Trees in Fresno County, 378.

### Business Announcements.

Asbestine Sub-Irrigation Co., Los Angeles, Cal.  
James Hannay's Nursery, San Jose, Cal.  
Winchester Repeating Rifle, John Skinner, Agent, S. F.  
Agents Wanted, Thos. A. Garay, Los Angeles, Cal.  
Thornless Orange and Lemon Trees, Thos. A. Garay.  
Seed Catalogue, Jas. J. H. Gregory, Marblehead, Mass.  
Seeds, W. H. Strong & Co., Sacramento, Cal.  
Tobacco Seed, I. Oswald, Martinsville, Wis.

### The Week.

The weather bureau has effected but few "clearances." Touches of the north or east winds have chased the clouds to corners only to catch them soon returning, and indulging again in copious libations. On an average, so far as we have heard, since our last issue the season's rainfall has increased itself by a third, and, instead of twice, the amount now stands about thrice as much as has fallen thus early during recent years. The manner of its coming has been for the most part gentle, and nearly all the water has been filed for future reference, as the saying goes.

It is to be hoped that this year we shall know no dry regions, but that all parts of the State will step forward together in the grand march of successful industry. It is rather notable that each time that the Legislature has convened and the irrigation problem has been attacked the clouds have done their best work, as though they would prove false the aspersions cast on them. Thus, in 1876, we had a general irrigation discussion at Sacramento, and a heavy crop on the fields said to need water most. In 1878, there was a fierce impetus toward irrigation by the drouth of 1877, but before the Legislature got well at work there was a tremendous downpouring for weeks which sent the floods beating upon the levees of the capital city. And now before the Legislature of 1880 can get seated the rains are making the driest parts of the State bright green with vegetation. Verily the clouds are jealous.

The spinners of Oldham, England, demand 10% increase in wages.

### Threading the Continent.

The return of the sunshine of prosperity to Eastern fields and manufacturing interests is calling capital from its hibernation and warming it up for a season of activity and enterprise which we trust may be long and satisfactory. The era of magnificent enterprises which followed the war bids fair to be eclipsed by the decade which will soon open. There is reason to believe that this will be the case, because the era which culminated in 1873 was one of great inflation and grand ideas, which were but partially borne out by the logic of facts. Hence the decline and fall. We seem now to be entering a period in which sounder views will prevail; in which courage will be duly tempered with caution; in which there will be liberal expenditure no doubt, but upon a better basis of practicality and durability.

The latest advices from the eastern financial centers bring news of unusual activity in railroad enterprises. It is true that there is noticeable a most grasping spirit of monopoly, and most eager efforts to turn the tide of prosperity into certain channels for the aggrandizement of the few, but these endeavors are met by counter movements which bid fair to guard the public interest and turn the designs into schemes which will benefit the whole country. This is the present aspect of the several railroad enterprises which are now racing across the continent. Jay Gould who is reported to have done his best to control the possible approaches to our coast from the East, is now said to have been met and beaten by the Atchison, Topeka and Santa Fe corporation. This company now claims to have secured three approaches to the Pacific coast—one a new line along the 35th parallel due west to Los Angeles, and thence north to San Francisco; another to connect with the present Southern Pacific road, and another to disport into Mexico and strike the Pacific ocean at Guaymas. This is the present announcement of the matter, and work is said to be underway toward such results. Certainly there has never been a time when enterprises seemed easier to prosecute, and there is no lack of capital to carry them into effect. Then, to the north of the existing road, there is the old-time Northern Pacific enterprise, being infused with new life by the return of prosperity, and by the astonishing development of the agricultural interest along our northern boundary.

The question arises whether all these enterprises can prove enduring, and whether they are called for by the growth of the country. It seems clear enough that they are all more feasible than the existing line appeared at its inception. Each of the proposed lines has a far better show of developing local traffic and fostering the growth of the great interior of the continent. For it is fast being demonstrated that the great interior States and Territories are not nearly so worthless as they were once supposed. Agriculture is gaining a permanent hold upon areas which have been regarded as deserts, and mineral resources are being developed where the rocks were counted worthless. This changed view of the vast interior which is forced upon the outside world by the growth of the new States and Territories, is enlisting abundant capital in threading them with new avenues of transportation, and the result is that the country is advancing so rapidly that all former estimates of our national wealth and productive area must be revised and extended. Two or three years ago the man who foretold the present tendency of affairs would have been laughed at as a visionary, for it was then thought that the improvements had so outgrown the demand for them, that it would require a generation to heal the breach. It is a gratifying thought for the close of the decade that the fact seems far otherwise.

The grand producing interests of California must be greatly stimulated by the new lines of transportation to Eastern markets which are now promised. It seems indisputable that between the several enterprises there will prevail a spirit of wholesome competition which will reduce the cost of carriage to a fair figure and thus will incite the development of industries in this State which now are unprofitable. There will also be a considerable reduction of time occupied in transit, which will be a great item in the movement of our perishable products. The approach of through lines to the different parts of the State, should make our growth more symmetrical and encourage many whose present distance from centers is very depressing.

There seems every reason to look hopefully upon the new movements. The relation of railroads to the people is becoming better defined and understood, and the introduction of a "live and let-live principle" seems assured. The force of competition which will creep into the situation and the regulative action which we must hope our new railway commission will exert certainly should give us confidence for the future. It does not appear that any of the coming enterprises propose to place burdens upon the people, except such as may be voluntarily assumed; and if this be their plan, and their work be to draw California still more closely into the sisterhood of States, and her poorer products nearer to the markets which await them, surely we can all speed their progress and welcome their approach.

DE LERSERS, of the Isthmus canal scheme, has sailed from France to Aspinwall.

### ENTOMOLOGICAL.

#### Experiments With the *Ceanothus* Moth.

EDITORS PRESS:—In the RURAL PRESS of the 15th inst. I saw the picture of an old friend of mine, and a splendid picture of him it was, too. I have reference to the cut of our beautiful California Lilac moth, who feeds on the *Ceanothus*, with which a portion of my place is entirely covered. As you say that Dr. Behr has expressed a desire to experiment with the silk-producing qualities of this native insect of ours, it may not be amiss, then, to give you a synopsis of experiments made by me in 1860, upon that very insect. At that time, after having obtained eggs from a female moth, I raised about 200 worms, and this is the summing up of my observations:

The silk, as it comes out from the insect's silk holes or bags, is perfectly white, very strong, stout and glossy. The first, or outer cocoon—for the worm spins two, one inside the other—is closed only at the lower end, and opened at the upper end, the cocoon being always spun in a vertical position. To make it hold well, the worm fixes it alongside a little branch, around which he runs his silk, so that the thread is bound to break off when gathering up cocoons. Then, worse yet, after he is done spinning this first or outer cocoon, he soaks through it a kind of liquid, that renders it as waterproof as the best gum cloth; and while the silk is wet with the liquor, he draws in the threads of the upper and opened end of the cocoon, just to keep out indiscreet little birds, who may, for mischief's sake, stick their bills right where they have no business to. Of a brilliant white at first, the cocoon turns in drying to a dull gray color. Then the worm goes to work to spin another cocoon inside that one—a very nicely shaped cocoon, but also opened at the upper end, and which he does all over with the same liquid, giving it a chocolate color. The reason why this worm renders his cocoon so impermeable is because he has to remain in it, in a chrysalis form, nine months of the year, and, in fact, neither rain nor cold can penetrate its solid and parchment-like envelope.

The moth comes out in May, about the time the pretty lilacs are leafing out; two weeks after the female moth (your cut represents a male) has laid her eggs, they hatch out. The first, female moth that I caught, not knowing whether she was fecundated or not, I tied up with a thread to a plant, back in my yard, which is right in town, and sure enough, next morning she had two male companions beside her.

I had, at the time I raised 200 of these worms, taken some worms out of the cocoon before they had time to soak it with the liquor referred to above, and I sent several of them to France to have them experimented upon. The silk was found to be very strong, and would, without doubt, make very durable cloth; but, for the reasons stated above, the cocoon cannot be reeled, and consequently nothing of any advantage can be done with them. I believe that in 1871 I gave in the RURAL PRESS an account of my experiments.—FELIX GILLET, Nevada City, Cal.

#### The Mission Grape and the Phylloxera.

EDITORS PRESS:—It is asserted by some who ought to know that the Mission grape is not liable to be destroyed by the phylloxera. I should like to enquire through the columns of the PRESS whether there is truth in the assertion. Will some one give us his experience?—W. R. BARBOUR, Orange, Cal.

EDITORS PRESS:—According to all accounts, and observations made by myself in the Sonoma valley, the Mission grape is at least as liable to the phylloxera as any of the more hardy varieties of foreign grapes, and falls an easy victim to the pest. The impression conveyed to your correspondent may have originated in the statement that the native Californian grape is exempt from the ravages of the phylloxera. But this refers to the wild grape of the banks of our streams, and of this the statement is most probably true. It is, of course, well understood that the Mission vine, though now growing wild in some regions, is an imported European plant.

I hope that those who, in timely foresight of the inevitable, propose to graft their new vineyards on phylloxera-proof stock, will test the resistance of the wild vine before investing too heavily in the importation of "Taylor." It would be very handy to be able to get their cuttings on the nearest creek bank; and from specific peculiarities of the wild vine, I have very little doubt that it is really proof against the pest.—E. W. HILGARD, University of California, Nov. 25th.

#### Large White Scale on *Acacias*, etc.

The large white scale insect which was first announced from San Rafael as destroying the acacia trees, and then spreading to other trees and plants, has been determined by Prof. C. V. Riley to be a species of *Dortheia*, an abnormal bark louse of the family *Coccidae*. Prof. Riley determined it from specimens sent him by Dr. Saxe, of Santa Clara, where it has also done much damage. Prof. Riley says: "It is an Australian insect (apparently *Dortheia characiana* Westw.) and has of late been introduced of Australian plants into South Africa, where it has multiplied at a terrible rate, and become such a scourge as to attract the attention of the government." He anticipates much trouble from it also in this State, because it is free here from

the natural enemies which keep it in check in its own country. Those who are not familiar with this scale insect may recognize it from its snowy white color, and its growing nearly as large as a coffee berry. The upper surface of the scale is beautifully ribbed.

### QUERIES AND REPLIES.

#### The Melon-Sugar Investigation.

EDITORS PRESS:—Having just completed the discussion of the results obtained in the investigation of the watermelons furnished some time ago, by a reader of the RURAL PRESS at Lodi, with a view to determining their fitness for the manufacture of cane sugar, I give you the chief points for the general benefit. The details will be given in my biennial report, now nearly ready for the press.

Seven different melons were examined, a record being kept of their form, weight, degree of ripeness, etc. In two of them, also, the relative weights of pulp and rind were determined, they being opposite extremes. It was found that the thinnest-skinned, long melon had 50% of rind; while the thick-skinned round melon had about 63%. The weight of the kernels averaged about 13%; and the whole kernels contained 15.4% of oil.

The solid contents of the juice were found to be very nearly constant. The average amount of all kinds of sugar and solid matter in watermelon juice is a little over 9.1%, on an average; but of this amount, only 2.66%, or not quite one-third by weight, is cane sugar. This is far too little, in proportion to the other substances, to be made available for the manufacture of cane sugar; and the proposition to use the watermelon for this purpose is thus effectually disposed of in the negative.

Nevertheless, it appeared probable that a bright and palatable syrup, not liable to granulation, could be advantageously produced from the watermelon, especially since the amount of ash in the juice is so insignificant. But on making the experiment, it was found that whether the juice be evaporated by itself and purified only by skimming, or whether it be defecated with lime, as seems most desirable, the resulting syrup was always of so very dark a tint that, although pleasant to the taste and therefore well enough adapted to home use, it would scarcely be accepted in the general market. I hope yet to devise means practicable in the family, for obviating this unexpected difficulty. It is of course readily overcome by filtration through bone charcoal, as is done in sugar refining; but this operation is too troublesome, lengthy, and costly on the small scale, to be resorted to by housekeepers in the country.

The amount of syrup to be made from the juice will be about one-tenth by bulk, of the juice. A 25-pound melon will, on the average, make about a pint of good syrup.—E. W. HILGARD, University of Cal., Nov. 29th, 1879.

#### "Quillage" or Soap-Bark Tree.

EDITORS PRESS:—I enclose you some seed of the "Quillage tree," or soap-bark tree. It grows all over Chilo between Coquimbo and Seta upon the coast range of hills and valleys below the snow line. It grows in some places 30 feet high, according to the richness of soil, and seems to adapt its growth to all kinds of earth. The seed is fresh from the tree, and I trust will be acceptable for experimental purposes.—C. T. WARD, JR., Simache, Chile, S. A., Oct. 12th, 1879.

The seed is received with thanks, and as there is but little of it we have sent it to Prof. Hilgard for propagation in the University Experimental Grounds. If it succeeds, the plants will doubtless be sent to different parts of the State for growth.

We notice that this Quillage bark has lately been analyzed by the Department of Agriculture, in comparison with the root bark of the *lignum-vitæ*. The analysis shows that the former contains 16.75% of saponin, or the detergent principle, the latter, 21.15%; but the former is more valuable for the cleansing work to which it is adapted, because more easily extracted from the bark. It is likely then that the Quillage bark will retain its old position, and may prove valuable to grow here if the tree should be found adapted to our conditions.

#### Conjunctivitis—Fuller Description.

EDITORS PRESS:—Dr. Casewell asks for fuller details of the eye disease affecting my cattle. They have not been attacked in the same eye more than once. In some cases, after one eye has gotten well, the other eye has been similarly attacked. The attack lasts from one to three weeks, and in bad cases, at the height of it, they are totally blind in the eye attacked. The eye is entirely covered with a thick, bluish and white film, and looks as though the back part of the eye was turned out, and during all this time the eye is continually weeping. The attacks pass away precisely as they come: first the weeping stops, then the film on the eyeball gradually decreases, until only a little spot is left, which, in a few days, also passes off, and leaves the eyeball perfectly clear, but considerably swelled in both the upper and lower lids, which gives the eye a very sunken appearance.

I have had 14 head attacked out of a herd of 40. The general health of the animals, during these attacks, seems to be perfectly good, but they evidently suffer very much with their eyes.—SUBSCRIBER, Downey, Cal.

EDITORS PRESS:—The disease affecting the above described cattle is undoubtedly conjunctivitis, and the treatment recommended in the issue of November 29th, if persevered in, will have the desired effect. Care should be taken in applying the nitrate of silver solution, to dress the inner surface of the upper eyelid, to keep down granulations which will form there.—JNO. CASEWELL, M. R. C. V. S., Petaluma, Cal.

A BERLIN correspondent announces that the German government will resume the sales of its superfluous silver.



## Letters from Southern California—No. 7.

One of the most notable objects which meets the eye of the traveler as he approaches "Waterman's"—a locality described in our last letter—is the strange appearance on the face of the mountain, in the shape of an

## Immense Indian Arrowhead.

Which is said to be 300 yards in its greatest width, by 500 yards in its greatest length. It looks like an immense painting of creamy white upon a background of dark brown. This appearance is caused by a natural growth of white sage in the midst of a dense mass of chemical, at an elevation of 1,000 feet or more above the plain. This remarkable appearance has given the name of

## Arrowhead Springs

To a sanitarium which has been established near by, under the direction of Dr. David Smith. Some of the features of this place are especially deserving of quite extensive mention; but we have now merely space for a brief allusion. The water of the springs connected with this sanitarium indicate a temperature of 210° Fahr., while the vapor of the steam bath above marks 130°. We stepped upon the grating for an instant, but declined to have the door closed upon us, being perfectly satisfied with the truth of the statement in regard to the temperature without any further demonstration. Bicarbonate of soda, chloride of sodium and carbonic acid are the leading medicinal constituents of this natural steam bath. The waters are said to be invaluable for the healing of many diseases.

A "mud bath" is one of the adjuncts to this institution, where the soil saturated with the healing waters is said to be productive of even more remarkable results than the water alone. A large artificial swimming pond has also been fitted up, 100 feet in length by 75 feet in width. We may refer to this locality again at some future time.

Returning from our visit to these springs to San Bernardino, we took a carriage to Colton, from which place a stage ride of seven miles brought us to that already quite famous locality known as

## Riverside.

The most successful and best known colony enterprise ever undertaken in California, and the one best known throughout the Union, is undoubtedly that of Riverside. Ten years ago its site was a desert wilderness, where, during the summer months, there was not a single green thing for the eye to rest upon, except a few willows along the Santa Ana river, which passes through the upper or eastern section of the settlement. As will be seen by the diagram here-presented, the colony grounds are quite irregular in shape—Riverside proper being located at the eastern or right hand extremity, as shown in our diagram, while the newer settlement to the west and lower down the valley is called Arlington. These two localities are separated by a small tract of Government land, which has been located by settlers, but not very generally cultivated as yet. The diagram, as shown, represents a region about 18 miles in length, and is pretty generally settled up and improved to a point just below the town of Sayward. Three tracts of one mile square each have been reserved for town sites or villages, for the convenience of the colonists as centers for educational, religious, social and business purposes, and are known respectively as Riverside, Sayward and Alvord. These positions will be readily noticed on the diagram. Of these, Riverside is the only one that has been thus far much occupied as a town site, and that is, at present, the chief headquarters for the entire settlement. It is well provided with stores and churches, contains a fine public hall, a good hotel, and supports a well-conducted newspaper, known as the *Riverside Press*.

Each of the town sites is laid out with streets at right angles, dividing them into blocks and lots as other towns. Outside of the town sites, the land is divided into 10-acre tracts, 16 of which, or 160 acres, form a block or square surrounded on all sides by streets. These latter divisions are those designated by the small squares in our diagram. By these subdivisions six families, owning 20 acres each, and four families, owning 10 acres each, can occupy an entire block, each having a frontage on a street. Of course any one person can purchase any number of 10-acre lots which he may desire.

## Avenues and Streets.

The main street of the settlement is known as Magnolia avenue. It is 16 miles long. Start-

ing at the town of Riverside, it runs a little over one mile, when it forms a diagonal, one mile in length, across the Government tract, when it again assumes a direct line and so continues for fully 10 miles to the southern extremity of the settlement. This last stretch of 10 miles is 132 feet in width, accommodating two roadways of 40 feet each, two sidewalks of 20 feet and a central walk of 10 feet. This portion of the avenue will be planted with three lines of evergreen trees, one at each sidewalk and one in the center between the roadways. Magnolia grandifloras will be planted at the intersection of all the streets with this avenue. The eastern end of this avenue is only 80 feet wide and is planted with but two rows of trees. The trees have already been set out throughout several miles of the upper portion of the 10-mile stretch. Parallel to Magnolia avenue are other avenues from 50 to 80 feet wide, at intervals of half a mile on either side, and crossing the avenues at right angles are streets at half-mile intervals. These streets and avenues may all be readily traced upon the diagram.

## Irrigation Facilities.

It is only by an abundant and cheap supply of water that any practical results can be obtained from fruit and garden culture in southern California, and it was with special reference to this need that the founders of Riverside made their selection of this locality. The Santa Ana river, it will be observed, passes directly through the upper portion of the settlement. Just above, and near the foot of a small mountain, the line of a canal may be observed winding along the side of the hill until it strikes the southern line of the company's property. It continues along this line the entire length, and from it distributing ditches are dug

uniform, entirely free from stones, and consists of sand properly tempered by clay, formed from the decomposition of granite. It varies but little even to the depth of fifty or sixty feet. Such a soil is always considered favorable for tree growth. The price of unimproved land varies according to location and slight irregularities of soil from \$30 to \$60 per acre for farming or gardening lands, and from \$50 to \$100 per lot for village lots—one-third cash, the balance in one and two years. The climate of this valley is about all that could be desired. The atmosphere is dry, warm and stimulating. The nights are always cool and invigorating; the days seldom uncomfortably warm. Occasionally a hot wind blows down through the mountain passes from the desert, which is very uncomfortable from the heat and impalpable dust with which it is accompanied. The population of Riverside has been largely made up from invalids who have been attracted thither full as much for the health-giving influences of its climate as from the facilities there offered for obtaining a livelihood. The climate is superior for invalids to either Nice or Naples, the typical sanitary cities of Southern Europe, those cities being an average of ten degrees colder in winter and not more than three degrees cooler in summer. All the attractions for which the clear skies of Greece and Italy have been celebrated from the remotest times, are more than realized in Riverside and in many other localities in southern California. London has but sixty clear days in the year, New York, one hundred and twenty; the San Joaquin valley, two hundred and twenty, while Riverside has a fraction over three hundred, and yet its average rainfall is from seven to eight inches. As a striking evidence of the healthfulness of this locality, it

## The Nicaragua Canal.

The following resolution in regard to the above project, was introduced in the United States Senate by Senator Gordon on December 2d, viz.:

WHEREAS, The project of the construction of an Inter-Oceanic canal in Nicaragua is recognized as a necessity for the prosperity of the commerce of the world and the development of the maritime and commercial interests of the United States; and

WHEREAS, Such enterprise must of necessity be considered of international utility under the protection of the United States; therefore be it

Resolved, That the Government of the United States pledges to accord full and entire protection to the company which shall be granted a concession by the Government of Nicaragua for the construction of said Inter-Oceanic canal, and will secure to said company the peaceful enjoyment of the rights conceded by such concession.

The resolution was referred to the Committee on Commerce. Senator Burnside took advantage of the above, to call up his resolution of last session, reaffirming the Monroe doctrine in connection with the proposed Darien canal, and made a speech thereon.

A short time ago De Franco and Commodore Ammen had a long interview concerning this canal. They estimate the probable revenue for the first year at \$10,000,000. Toll would be fixed at \$2 per ton. The stock of the Suez canal, though only paying 3%, is in demand on account of the permanency of the investment. The cost of the Suez canal was nearly \$100,000,000—the same amount that it is calculated the Nicaragua canal will cost, though the general estimates do not put it above \$85,000,000. With all the inconveniences of locks, 100 vessels could easily be passed through every day, but the estimates show that if only one vessel passed through the canal every hour, or if vessels of ordinary tonnage only passed through at the rate of eight per day, the financial success of the canal would be far greater than that of the Suez route, and European capitalists would be glad to invest in it.

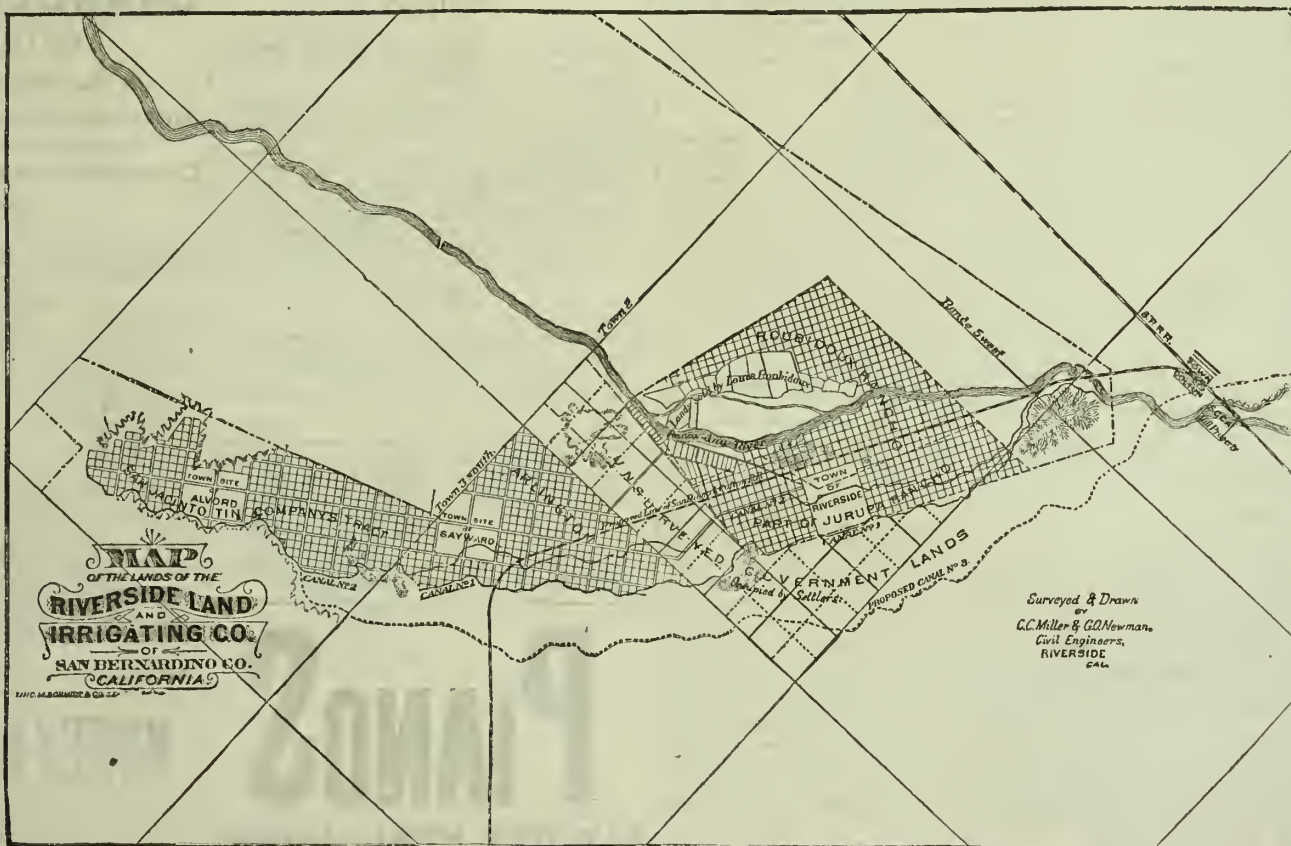
It is claimed that there will not be any difficulty in passing this resolution, which is considered the first step in the right direction, and will probably be followed by an authoritative announcement from a leading house in Europe, of its willingness to assume the subscriptions necessary for the construction of the canal. The route to be followed by this canal has been described in the report of the Commission appointed by the President in 1872, and summed up by Gen. Humphreys as follows:

Beginning on the Atlantic side at or near Greytown, running by canal to the San Juan river, thence following its left bank to the mouth of the San Carlos river, at which point navigation of the San Juan river begins, and by the aid of three short canals of an aggregate length of 3.5 miles, reaches Lake Nicaragua; thence across the lake and through the valleys of the Rio del Medio and the Rio Grande, to what is known as the port of Brito, on the Pacific coast. The length of the canal will be 180 miles, with 17 locks, requiring four and one-half days for passage.

De Lesseps, however, seems determined to carry out the programme of the Universal Inter-Oceanic Canal Company, and cut the canal at Panama, which is a level-water and deep-cut canal 45 miles long and requiring two days for passage. The cost of the two routes would be very nearly equal.

De Lesseps, in advocating the Panama route, delivered an address on the 27th of October, at the Hall on the Boulevard des Capucines, Paris, in which he declared that the climate of Panama was one of the most wholesome; that there was no fever there, and that earthquakes were unknown, which latter, operated by five volcanoes on the Nicaragua route, would interfere with the safety of vessels; and called upon the world to witness the fact that he was going to take his wife and three children with him to Panama—a positive proof that Panama was a healthy locality. But M. De Lesseps is a Frenchman, having the interests of France very much at heart. It is extremely probable that if an international canal is cut at all, it will be controlled by Americans.

PERSIMMON STATISTICS.—Let us weigh and measure these Japs this year and see who can show the best of them; also to see whether they justify the high testimonials with which they have been introduced to us. Mr. Loomis shows us the largest one we have seen yet. It was grown at San Rafael by Judge Darwin. Its circumference is 10½ inches, its weight is 8½ ounces. The variety is the "Mikado." We await other reports from growers.



in such a manner that every acre of ground may be irrigated—the country sloping both toward the river and also in the direction of the river current. By close observation of the diagram it will be seen that there are two canals running nearly parallel, and about three-quarters of a mile apart, uniting at a point just below the town of Sayward. The united stream will eventually be carried, as the lands are sold, some five miles below its present terminus into the Temescal valley. Water is distributed by the inch, according to miners' measurement, as established by the laws of California.

Canal No. 1 is about 35 feet higher than canal No. 2. It is 16 feet wide on the top, 6 at the bottom, and carries a depth of two and a half feet of water—of course gradually diminishing in capacity as it continues westward.

Canal No. 2 has a width of 20 feet on the surface, 8 at the bottom, and carries three feet depth of water, with an average fall of four feet to the mile. Both canals are substantially built. It is confidently asserted that the supply is practically inexhaustible. It has its source in the lofty mountains of the San Bernardino, which was never known to fail. The company has the right to a flow of water, at the point where it is taken out, equal to 12,000 cubic feet per minute, which, it is thought, will be abundant for the fullest needs of all the lands of the association. The water is distributed under the direction of a water agent and by a well arranged system, under which each individual or section has its turn. A small tax, of about \$3 per acre, annually, is collected to pay for superintendence and keeping the canals in order. The sale of land carries with it the water right. Water for domestic purposes is very generally obtained from wells, which are sunk to a depth of from 60 to 100 feet.

## Soil and Climate.

The soil throughout the entire tract is quite

may be remarked that out of a population of some 1,300, many of them invalids, which comprised the Riverside community during the year 1878, there were only four deaths; only one of which was a child, notwithstanding the community contained fully an average proportion of that class of population.

W. B. E.

REPORT OF THE DEPARTMENT OF AGRICULTURE.—The report for 1878 of Gen. Le Duc, U. S. Commissioner of Agriculture, is the best which has appeared for a decade at least. In this issue of the PRESS will be found frequent allusions to its contents. Aside from the matters thus cited there is an illustrated report on forage plants, especially those succeeding best in the Southern States, which should be studied carefully on this coast. Prof. Riley's studies on sericulture and an elaborate report of swine diseases we alluded to some months ago. There is also a paper by Prof. Hilgard on "The Agriculture and Soils of California," which is altogether the best review of the subject which has ever been written. This report will be in the hands of our Congressmen this winter for distribution, and our readers should each make application at once to his representative at Washington for a copy.

INTERMITTENT PHYLLOXERA.—It seems that the vine pest in Australia is manifesting some of the hesitating behavior which characterizes it in this State, and not proceeding forthwith to "occupy the land" as in France. The government inspectors of Victoria report that the insect has not been detected outside of the Geelong district, also that the ravages of the insect have been much less virulent this season than last, which fact strengthens the hope that the disease may be yet successfully stamped out.



## ARBORICULTURE.

## Nut-Bearing Trees in Fresno County.

Prof. W. A. Sanders gives the Fresno Republican the results of his experiments with several nut-bearing trees in the San Joaquin valley. He begins with these recommendations on planting. Plow out your ditches, run water through them to settle the ground, set your trees 20 feet apart on the bank, where water can be regularly run to the roots of the trees, but should never be let stand against their bodies.

California Black Walnut.—*Juglans rupestris*. This tree begins to bear here at five to seven years from the seed. Its yield of nuts is regular, having no "off years," and is immense; being surpassed only by the Mexican walnut in quantity of yield. The trees are always healthy; and they will stand more neglect, more weeds, more drouth, more wet—in short they will stand anything. They are the lazy man's tree—only set them out and they will grow while you're not thinking of them or caring for them, and in a few short years they will produce you an abundance of nuts for sale or use.

Eastern Black Walnuts.—*Juglans nigra*. This is the big, rough, black walnut of the Eastern States. That of the valuable walnut lumber of commerce. They are growing very thriftily here on my "sand plain" ranch.

American Sweet Chestnut.—*Castanea Americana*. The nuts of these are too well known to require description. The timber is also valuable. They are perfectly suited to growth here in our valley. I have thousands of them, all perfectly healthy and growing most thriftily.

Madeira Nut, or English Walnut.—*Juglans regia*. Our climate is too hot for perfection of growth of this valuable nut. But by planting trees only one year old, with but little mutilation of the roots; and planting them beside ditches where constant and abundant moisture can be supplied to their roots, without ever allowing the water to stand against their trunks in the hot weather they can be successfully grown. They yield enormously. I have seen half a ton of nuts on a single tree.

White Walnuts or Butternut.—*Juglans cinerea*. Not well suited to our climate. But where heat is less intense, will doubtless succeed, treated as recommended for Madeira nut.

Pecan Nut.—*Carya oliviformis*. This valuable tree and immense bearer when of proper age, is perfectly suited to our light soil and hot climate. I have thousands of them growing most thriftily. Future years will show pecans as a staple product of Fresno county. Set trees only one year old so as to get entire roots. Be careful to set them so that the water shall not stand around the butts of the trees in hot weather.

Shell-bark Hickory.—*Carya alba*. Our valley is too hot for this valuable tree. Though I have them trying to grow I have but little hopes of them. Plant same as recommended for Madeira nuts; they may grow and may not.

Sweet Almonds.—These trees will grow wherever the peach can be successfully grown. Planting and culture same as for the peach. I prefer to bud from the most prolific bearing and best quality of seedlings that I can find. Though my trees are better suited to our climate than any imported trees I have tried, I have not yet reached perfection. I want to find one that will bloom too late for spring frosts, will bear regularly and prolifically, have soft-shelled nuts, and be of vigorous growth. I have not yet combined all of these qualities in a single tree, but have them in different trees.

## Poisoning by Moldy Bread.

That the introduction of fungi into the human system is often attended with fatal results cannot be doubted. Moldy cheese is the delight of certain palates and is the cause of much indigestion, and moldy bread is thus alluded to by the London Miller: Some time ago, two persons out of eight who had eaten a portion of a bread pudding in a dining establishment at Bransley, died, and the deaths were naturally the subject of an inquest. Mr. A. H. Allen, a public analyst, testified that he had examined the liver and kidney of one of the victims, and the liver and lungs of the other, without finding any trace of poisonous metal. The material used in making the pudding had been carefully examined with negative results. The glaze of the basin in which the pudding was cooked had been found to be free from lead or other poisonous metals. The pudding had been very carefully examined and no deadly poison had been detected. The negative results of the chemical examinations for various metallic poisons had been borne out by the failure of either pudding to produce purging or other poisonous effects on a puppy which was fed on the suspected pudding for two whole days. There are not a few cases on record of irritant poisoning and death being produced by moldy bread. Thus, horses have been killed in a short space of time after eating such bread in their ordinary food. The symptoms were those of an irritant poison. In 1829, an investigation was made in France into the cause of illness due to eating bread, and it was found, by experiment, that bread in a particular state of moldiness or decay may not only produce symptoms of poisoning, but actually cause death; and it was impossible to distinguish the

harmless from the dangerous kinds of mold. As fungi grow very rapidly, it is quite possible for moldy bread to be quite poisonous at one date and to have lost its poisonous properties two days afterwards. One of the most poisonous of these fungi is ergot, which produces symptoms very similar to those occasioned by the pudding, and the reports of the evidence in the present case have caused an eminent toxicologist to express a very strong opinion that the presence of this fungus was the cause of the poisoning. The witness stated further, that from experiments and observations he thought it clearly shown that the pudding contained a substance which resembled ergot in all its chemical reactions. The pudding was made of bread said to be moldy, and which was several weeks old and had been in contact with ham, butter and miscellaneous scraps. Mr. Allen then submitted extracts of letters from the leading toxicologists of the kingdom whom he consulted on the subject, and all of whom agreed with him in his opinions as set forth above.

## Astronomical Causes for Rainy or Cold Summers.

In reply to an inquiry, one of our Eastern exchanges expresses its common-sense views upon the above subject: There can be no astronomical causes for rainy or cold summers, for the simple reason that they do not extend over the whole earth, but are merely local. If there were an astronomical cause, the effect would be general over the whole earth; but what do we actually find? Take the most recent peculiarities of the weather—while we in the United States had very dry and warm weather in October, there was in Spain an overabundance of rain and very destructive floods, by which millions of dollars' worth of property was destroyed and hundreds of persons perished, while in Austria it was very cold, and Vienna was afflicted with snowstorms.

A few years ago, when we had a very cold and wet summer, and some of our would-be scientists were discussing the great number of sun spots as a cause, we called attention to the fact that, according to reports from Europe, the weather there was very hot and crops suffering from want of rain. We hold that the total amount of evaporation and rainfall averaging over the whole surface of the earth is very nearly a constant quantity, and sun spots do not diminish solar radiation; and if they did, they would diminish the evaporation, and consequently the rainfall, instead of increasing it, because all the water that descends must have first ascended by solar heat, and what has been taken up will come down somewhere. If now, by a series of circumstances, some part of the earth's surface gets more than its usual share at the expense of another part, people commence at once to reason about astronomical causes, without first investigating whether the whole earth suffers in the same way. There is an important fact which proves that if much rain falls in one region it must be carried there from other regions where the weather is clear, and an amount of evaporation takes place adequate to supply that excessive rain; this fact is that if the total amount of watery vapor which the atmosphere can hold were to descend at once over the whole terrestrial surface, it would only amount to four inches, and raise the surface of the ocean as much, but as one-fourth is land, from which it would flow to the ocean, it would cause the ocean to raise its level about five inches.

## Uses of Euphorbia Gum.

The London Times says: Some few years since a survey was being carried out in Natal for the Colonial government, during which it was discovered by one of the officers engaged on the work, that when certain plants belonging to the natural order *Euphorbiaceae* were cut with the clearing knives, the gum which exuded from the plants adhered firmly to the blades, and was very difficult to remove. It was, moreover, found that the knives so coated did not rust, and this led to further experiments being made with the view of utilizing the gum as a preservative material. Iron plates were coated with the gum and subjected to immersion in the waters of South Africa, which are stated to be proverbial for their foulness and for the rapidity of the growth of vegetation. The euphorbia in Natal grows in close contiguity to the sea-shore, so that there was ample opportunity for securely testing its value as a protective covering for iron against corrosion and marine growth. The experiments proving perfectly successful, it was then sought to put the discovery into a practical form. To this end the gum was dissolved in a preparation of spirits, and this was found to be a ready means of applying it as a coating for ships' bottoms and for ironwork generally requiring such protection, the spirits evaporating and the gum being left on the surface of the metal. With this preparation experiments were made a few years since by Sir Andrew Clarke, C. B., who had a sheet of iron coated with it and placed in the waters in her Majesty's dockyard at Chatham, where anything immersed becomes rapidly fouled. At the end of two years the sheet of iron was taken out and was found to be quite clean, and free from fouling and corrosion. The composition has also been successfully tested in Africa against the ravages of the white ant. This success is attributed to the circumstance that the gum of the euphorbia, which forms the base of the fluid, is of such an

intensely bitter nature that it paralyzes the efforts of all insects to attach themselves to it, or to bore into any substance coated with it. These successes have led to its adoption in practice for the purposes above indicated, and it is now being introduced in England. We have examined several applications of this composition, which gives a glossy coating alike impervious to air or moisture, while, according to results, its own peculiar protective property remains unimpaired.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

PETER Saxe & Son, 520 Bush St., S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

## SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

## POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Doves, etc. Eggs for hatching. Send for price list.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Poland-China Swine and Black Cochon Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

## BEES.

JOS. C. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## PIANOS

## LARGEST MUSIC HOUSE

On the Pacific Coast.

WHOLESALE AND RETAIL.

Lowest Prices and Best Goods.

Write for Information concerning any Musical Instrument, and terms of sale. It will be given with pleasure.

ESTABLISHED IN 1850.

KOHLER & CHASE,

137 and 139 Post Street, San Francisco.

PACIFIC DEPARTMENT  
LONDON AND  
LANCASHIRE

Fire Insurance Company,  
OF LIVERPOOL.

CAPITAL.....\$7,500,000  
CASH ASSETS.....1,709,976  
U. S. BONDS, deposited in America 400,000

BALFOUR, GUTHRIE & CO.,

General Agents,  
316 California Street, - - - San Francisco

## RED CROSS OIL!

The Safest and Most Reliable Illuminating Oil. Water White and High Test. Brilliant, Pure and Economical.

C. T. RAYNOLDS & CO., Sole Agents, No 9 Front Street, San Francisco.

## Lands for Sale and to Let.

## TO LET.

THE CELEBRATED

## BARTON VINEYARD,

Situated at Old San Bernardino, in San Bernardino Co., Cal., consisting of eighty (80) acres of Mission Grapes, together with two (2) cellars, one brick and one adobe, a small lot of tubs, vats and pipes, distillery and brick dwellinghouse. Location good and crop sure. Would prefer to let for a number of years on easy terms. For particulars address H. M. BARTON, P. O. Box 88, San Bernardino, Cal.

## FARMING LAND

For Sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

## GRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000,

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$400,000.

## OFFICERS:

G. W. COLBY, President  
JOHN LEWELLING, Vice-President  
ALBERT MONTELLIER, Cashier and Manager  
FRANK McMULLEN, Secretary

## DIRECTORS

G. W. COLBY, President.....Butte Co  
JOHN LEWELLING, Vice-President.....Napa Co  
J. V. WEBSTER, .....Alameda Co  
URIAH WOOD, .....San Benito Co  
J. C. MERRYFIELD, .....Solano Co  
THOMAS MCCONNELL, .....Sacramento Co  
L. C. STERLE, .....San Mateo Co  
SOLOMON JEWETT, .....Kern Co  
C. J. CRESSEY, .....Stanislaus Co  
SENECA EWER, .....Napa Co  
A. D. LOGAN, .....Colusa Co

The Bank was opened on the first of August, 1874, for the transaction of general banking business. CURRENT ACCOUNTS are opened and conducted in the usual way.

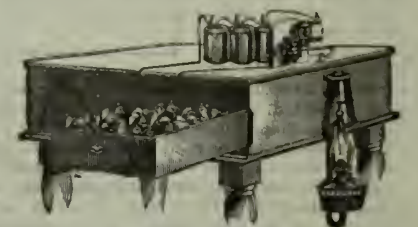
GOLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued for Gold and Silver. TERM DEPOSITS are received and interest allowed as follows: 6% per annum if left for 3 months; 7% per annum if left for 6 months; 8% per annum if left for 12 months. EXCHANGE on the Atlantic States bought and sold.

ALBERT MONTELLIER,

Cashier and Manager.

San Francisco, Oct. 15th, 1879.

## MONEY in CHICKENS



If You Want to Make Money

By raising any number of Chickens at any season of the year without setting hens, procure an

ECLIPSE INCUBATOR

(E. A. SAMUEL'S Patent).

In both public and private trials on this coast as elsewhere, the "ECLIPSE" has proved itself a perfect and successful Egg Hatcher. It may be examined and its merits proven to customers before they make purchases. Write for particulars and circulars to

G. G. WICKSON, 319 Market Street, S. F.  
Agent for the Pacific Coast.

## ROOMS TO RENT.

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

50 P. framed, gilt edge & chromo Cards, elegant case, name in gold. 10c. ATLANTIC CARD CO., E. Wallingford, Ct.



## Nurserymen.

## Berries and Small Fruits.

The most certain and best paying Market Berries and well tried sorts.

**Monarch of the West**  
STRAWBERRIES,

Most Productive, Largest Berries and Healthiest Grower.

**English Red Antwerp, Naomi & Hersteine**  
RASPBERRIES,

Best paying for market, and are perpetual bearers when irrigated.

**KITTATINNY BLACKBERRY,**

The most prolific, largest and most popular sort.

I offer also a large assortment of new and old varieties of

**STRAWBERRY, RASPBERRY,**

**Blackberry, Gooseberry and Currants.**

For full Price List send for a Catalogue.

To secure a crop of Berries the first season it is important to plant very early.

**JOHN ROCK,**

San Jose, Cal.

**THOS. MEHERIN,**

516 Battery St., San Francisco.

## Seeds, Trees and Plants.

We offer for sale the present season the largest and best collection of Fruit and Ornamental Trees ever offered on the Pacific Coast, at REDUCED PRICES. Also,

**Vegetable and Flower Seeds,**

KENTUCKY, AUSTRALIAN and ITALIAN RYE GRASS, RED and WHITE CLOVER, Etc.

Agent for the

**Nurseries of B. S. Fox.**

Send for Price List. 516 Battery Street, San Francisco

**1,000,000**

**Strawberry, Raspberry, Blackberry and Cranberry Plants.**

**STRAWBERRY PLANTS.**—The Essex Beauty, Crescent, Cinderella, Forest Rose, Glendale, Jucunda, Monarch of West, Langforth Prolific, Triomphe d' Gand, Wilson Albany.

**RASPBERRY PLANTS.**—Cutbush Early, Early Prolific, Reliance, Pride of the Hudson, Brandywine, Herstine, Philadelphia Red, Clark, Henrietta, Horuet, Belle de Fontenay, Delaware Bristol.

**BLACKBERRY PLANTS.**—Deering Seedling. Early and the most productive of all. I will give satisfactory proof that these Berries have realized \$750 per acre. It paid more than twice as much as the old varieties; also the Early Cluster, the Vina Seedling, Kittatiny, the Mammoth Cluster, Missouri Mammoth, Dorchester and Lawton.

**CRANBERRY PLANTS.**—The Cherry Cranberry Vines at \$10 per 1,000, by mail 64 cents more. I will sell to responsible parties on time, part cash, 10-acre field of Cranberry vines under cultivation. Can be seen at the place. Send for Catalogue.

H. NYLAND,  
Boulden Island, San Joaquin River.

**Los Angeles Nursery.**

The undersigned will furnish Fruit Trees of all kinds at low rates. We offer an unusually large stock of Apple, Peach and Apricot Trees; also Orange and other Fruit Trees. Our Trees are free from Disease or Blight of any kind.

We have WOOD'S EARLY APRICOT, that bears four weeks earlier than any known variety. We also have new Apples and Peaches of much promise.

Send for catalogue at once.

MILTON THOMAS,  
Los Angeles, Cal.

**HANNAY'S NURSERY.**

San Jose, Cal.

I offer for sale this season, a large and well assorted stock of

**Fruit, Shade and Ornamental Trees.**

My trees are WELL GROWN and HEALTHY, and of the

**Best Known Varieties.**

JOHN HANNAY,  
Successor to Hannay Bros.,  
San Jose, Cal.

**Phylloxera-Resisting Vines.**

Vineyard proprietors desiring to plant American Grape Vines, which resist the attacks of the Phylloxera, either as Grafting Stock, or for direct production, which proves to be the only salvation and means of reconstructing the destroyed Vineyards of France, will do well to address

BUSH & SON & MEISSNER,  
Bushberg, Jefferson Co., Mo.

**SECURE PATENTS**



Through Scientific Press Patent Agency.

**PEPPER'S NURSERIES.**

(Established 1858.)

For sale at reduced prices, a general assortment of Fruit Trees and Small Fruits; also choice Ornamental Shrubs, Roses, etc. A limited supply of Cook's Seedling Apple, one and two years old. Catalogue and list of prices furnished on application. Address

W. H. PEPPER,  
Petaluma, Sonoma Co., Cal.

**HEALD'S BUSINESS COLLEGE,**  
24 Post Street,  
Near Kearny,  
San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

**LADIES' DEPARTMENT.**—Ladies will be admitted for instruction in all the Departments of the College.

**TELEGRAPHIC DEPARTMENT.**—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

**Napa Valley Poultry Farm.**



Headquarters for all the leading varieties of

**PURE BRED POULTRY.**

**WHITE and BROWN**

**LEGHORNs,**

**PLYMOUTH**

**ROCKs,**

**AYLESBURY**

**DUCKs, BRONZE**

**TURKEYs, TOULOUSE**

**GEESE, ETC., ETC., ETC.**

Price of Fowls and Eggs as low as the high standing of

the owner will permit. Send stamp for Illustrated Catalogue and Price List.

R. G. HEAD,

Napa, Cal.

**CARD.**

The undersigned having purchased the business of the Marin and Sonoma County Land Office, and recognizing the necessity for a radical change in the matter of conducting it, have made arrangements to carry it on upon a basis and principles such as must insure satisfaction to our patrons. No shading descriptions permitted; all guaranteed. LINGLEY & BEATTY, 702 Market Street.

Refer to Hon. C. Palmer, Hon. C. Clayton, R. McElroy, Esq., L. Shore, Esq.

N. B.—All descriptions of farms and city and Oakland property for sale and exchange. L. & B.

**ASSESSMENT NOTICE.**

**The California Fruit Growing Association.**

Location of principal place of business, San Francisco. Location of works, El Dorado county, California.

Notice is hereby given, that at a meeting of the Directors, held on the 24th day of November, 1879, an assessment (No. 10), of \$4.00 per share was levied upon the capital stock of the Corporation, payable immediately in United States gold coin, to the Secretary, at the office of the Company, 641 Sacramento Street, San Francisco.

Any stock upon which this assessment shall remain unpaid on the 8th day of January, 1880, will be delinquent, and advertised for sale at public auction; and unless payment is made before, will be sold on Monday, the 2d day of February, 1880, to pay the delinquent assessment, together with costs of advertising and expenses of sale.

D. A. BROWN, Secretary.

Office—641 Sacramento Street.

**THE DEAF HEAR**

THROUGH THE TEETH!

PERFECTLY all Ordinary Conversation, Lectures, Concerts, etc., by NEW Channels, to the Nerves of Hearing, by a wonderful New Scientific Invention, THE DENTAPHONE.

For remarkable public tests on the Deaf—also on the Deaf and Dumb—See New York Herald, Sept. 28, Christian Standard, Sept. 27, etc. It displaces all Ear-trumpets. Size of an ordinary Watch. Send for our FREE pamphlet. Address

AMERICAN DENTAPHONE CO., 251 Vine St., Cincinnati, Ohio

THE EXETER \$3 Printing Press

Prints cards labels &c. (Self-Inker \$5) 18 larger sizes

For business or pleasure, young or old. Do your own advertising and printing. Catalogue of press, type, cards, &c., for 2 stamps. Kelley & Co. Meriden, Conn

60 Chromo, perforated, Snowflake & Lace cards, name on all

10c. Game Authors, 15c. Lyman & Co., Cliftonville, Ct

OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library containing official American and foreign reports, files of scientific and mechanical publications, etc. All worthy inventions patented through our Agency will have the benefit of an illustration or a description in the MINING AND SCIENTIFIC PRESS. We transact every branch of Patent business, and obtain Patents in all countries which grant protection to inventors. The large majority of U. S. and Foreign Patents issued to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most reliable advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free. DEWEY & CO., PATENT AGENTS.

A. T. DEWEY. W. B. EWER. GEO. H. STRONG.

A California Book for Horticulturists, Gardeners, Farmers and Ruralists generally.

**PACIFIC RURAL HANDBOOK.**

Containing a series of brief and Practical Essays and Notes on the Culture of Trees, Shrubs, Vegetables and Flowers, adapted to the Pacific Coast. Also, Hints on Farm and Household Economy. Prepared especially for the publishers of the PACIFIC RURAL PRESS. CHAS. H. SHINN, author. Purely a California book, fresh and interesting to rural readers at home and abroad.

CONTENTS OF THIRTEEN OUT OF FIFTEEN CHAPTERS:

Chapter I.—LAYING OUT THE GROUNDS.—Inmate Love of Rural Life.—The Pleasantry of Founding a Home.—We can Read Men's Characters in their Homes.—Value of Originality.—Importance of a well Considered Plan.—Hints on General Effects and Results.

Chapter II.—IMPROVING THE SOIL.—Whatever is taken from the Soil must be Restored.—We may even increase the Fertility of Soil.—Otherwise Farming would be a Sad Affair.—Thorough Cultivation.—Rotation of Crops.—Wasteful Methods of many California Farmers.—Commercial Manures.—Barnyard Manures.—Composting.—Alkali Soils.—Adobe Soils.—Sandy Soils.

Chapter III.—IRRIGATION.—The Object one of Great Importance.—Need of Better Legislation.—Water, the Property of the People.—Examples of Successful Irrigation.—Value of our Mining Experience.—Sources from which Water is Obtained.—Methods of Lifting Water.—Artesian Wells.—How to Use Water, when Obtained.—Winter Irrigation.—Examples of its Use.—Irrigation in Lombardy, and elsewhere.—A Governmental System Needed Here Also.

Chapter IV.—WIND-BREAKS AND HEDGES.—Benefits to be Derived from a Use of Wind-breaks.—Kinds most Popular.—Other Valuable Varieties.—The Best Way to Procure Trees in Large Quantities.—Hedge Plants for Fences.—The Plants Adapted to our Climate.—The Value of Low Boundaries for Ornamental Purposes.—Shrubs which may be Used.

Chapter V.—FRUIT TREES AND SMALL FRUITS.—California's Leading Industry.—Orchards: Where to Plant Them.—Treatment, Pruning, etc.—A List of Fifty Trees, for a Family Orchard.—Leading Market, Drying and Canning Varieties.—Their Culture, and Best Kinds Known.

Chapter VI.—SHADE TREES.—Universal Love of Shade Trees.—Their Measureless Beauty.—My Friend who uses too many Evergreens.—The Proper uses of Conifers, and the most Desirable Kinds.—How to Transplant Evergreens.—Deciduous Trees.—Their Great Variety, and Place in Landscape Gardening.—Leading Varieties.—Nut-bearing Shade Trees.—Trees with Tropical Foliage.—The Weeping Trees.—Ancestral Oaks.

Chapter VII.—SHRUBS.—The Value of Shrubs.—Their Easy Culture, and Clustered Memories.—Shrubs for Each Season.—Deciduous and Broad-leaved Shrubs.—Diseases, Treatment and Method of Training.

Chapter VIII.—THE VEGETABLE GARDEN.—Farmers ought to Raise More Vegetables.—Different Ways of Laying out a Garden.—The Combination System.—General Culture and Treatment.—The Tools Needed.—Notes on the Best Vegetables.—Birds in the Garden.

Chapter IX.—FLOWER GARDEN AND LAWN.—Lord Bacon's Remark.—The Universality of Gardens.—Their Infinite Variety.—The Time when our Gardening Calendar properly Begins.—Autumn Work.—Our Californian Winter, and the Happy Awakening of the Flowers.—Gardens must be Permanent, kept Clean, and full of Fragrance and Gifts.—How to Lay out a Garden.—Plans, Walks, advisable Flowers and Edgings.—Roses.—Garden Statuary.—Concerning Rock-work.—Aquatic Gardens.—Lawns.—Beds cut in the Lawn.—The Enemies of the Garden and Lawn.

Chapter X.—SEEDS, AND SEED PLANTING.—The Way Plants Grow.—Some of the Curious Things about Seeds.—Sowing of Flower Seeds.—Preparation of Soil.—Planting and Covering.—Tree and Shrub Seeds.—The Critical Periods.—Subsequent Treatment.—The Three Enemies.—The Delight of Success.

Chapter XI.—CUTTINGS.—Nature Provides for many Ways of Increase.—Plants may be grown from Cuttings, Slips or Pippings.—Nurseryman, Florist, and Gardener, Depend on this System.—The Ease with which Some People Start Cuttings.—The Difficulties of Others.—The Practical Divisions of Soft-wood, Hard-wood, Leaf and Root Cuttings.—Each one, Considered Separately.—Choosing Hints.—Layers, and the Probable First Suggestions of Layering.

Chapter XII.—WINDOW PLANTS, HANGING BASKETS AND FERNERIES.—Conservatory Gardens: The Highest Type.—A Love of Flowers in the Homes of the Poor.—How to Make Window-boxes.—What Plants to Use, and How to Take Care of Them.—House Plants, for Winter and Summer.—Hanging Baskets, how to Make, and how to Keep in Order.—The Best Plants for Baskets.—Ferneries and Jardinieres: Treatment, and Suitable Plants.

Chapter XIII.—A SMALL GREENHOUSE.—The Comfort of Having a Little Greenhouse.—Early Enthusiasm.—Changeableness of many Greenhouse Owners.—Their Frequent Failures.—The Mournful Tale of Friend.—The First Rule is not to Grow too many Kinds.—The Second Rule is to Give Constant Attention.—Liquid Manure.—Potting Plants.—Watering.—Hanging Baskets.—Autumn Work.—A Digression Concerning Mangoes.—Begonias.—Other Greenhouse Plants.

Sold in substantial cloth binding (postpaid) for \$1. DEWEY & CO., Publishers, PACIFIC RURAL PRESS office, No. 202 Sansome Street, San Francisco.

**Seedsman.**

**SEEDS!**

**Thomas A. Cox & Co.,**

Importers and Dealers in

**Vegetable, Flower, Field, Grass and Tree Seeds.**

We wish to announce to country merchants and the trade generally that we are ready to supply all descriptions of Seeds of the New Crop of 1879.

Special prices on application. Vegetable and Flower Seeds put up in small packets for the retail trade.

**FRESH AND TRUE TO NAME.**

We will send the following Seeds, postpaid, on receipt of price. Remit by P. O. Order or postage stamps:

Beets, per oz.	10c	Parsnips, per oz.	10c
Carrots, per oz.	10c	Radish, per oz.	10c
Cabbage, per oz.	25c	Spinach, per oz.	10c
Lettuce, per oz.	15c	Turnip, per oz.	10c
Onion, per oz.	15c	Tomato, per oz.	25c

We will mail to any address a collection of 20 packets of choice Flower or Garden Seeds for \$1.

Fruit and Ornamental Trees at Nursery Prices.

**THOMAS A. COX & CO.,**

409 Sansome Street, San Francisco.

**J. P. SWEENEY & CO.'S**

**SEED WAREHOUSE,**

409 & 411 Davis St., San Francisco.

ESTABLISHED IN 1853.

Keep constantly on hand the largest stock of FIELD, ARDEN, CONIFER, or

**CALIFORNIA TREE SEEDS,**

On the Pacific Coast. Seeds all FRESH and GENUINE. Our Stock is large, especially of the following varieties:

**ALFALFA, BLUE GRASS,**

Red and White Clover, Red Top, Timothy, Australian Rye Grass, Mesquit Grass, Lawn Grass and Millet Seeds

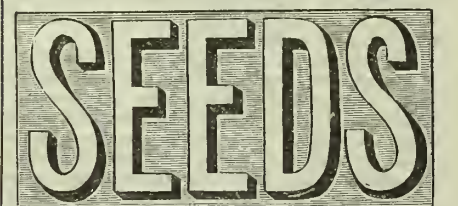
Or different varieties. Field Seeds, Mangel Wurzel and Sugar Beets, Rutabagas, Carrot Seeds of all varieties, Peas, Beans, etc. Our assortment of GARDEN and FLOWER SEEDS are full and complete. Also, FRUIT and ORNAMENTAL TREES at Nursery Prices.

**Trees For Sale at Lowest Market Rates.**

For Catalogue, Price Lists, etc., apply as above.

**SEVIN VINCENT & CO.,**

Importers, growers of, wholesale and retail dealers in



**Field, Grass, Flower and Tree Seeds.**

**CLOVER, ALFALFA,**

BULBS, FRUIT, ORNAMENTAL TREES, ETC.

We call the attention of farmers and country merchants to our unusually low prices. Trade price list on application.

We issue the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is handsomely illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

**SEVIN VINCENT & CO.,**

607 Sansome Street, S. F.

**SEEDS. TREES. SEEDS.**

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEEDS; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

**B. F. WELLINGTON,**

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.

**EXOTIC GARDENS.**

F. A. MILLER & CO., Mission St., opposite Woodward's Gardens. Send for Catalogue and Price List.

**KEATING'S COUGH LOZENGES!**

The Great British Remedy. There is unquestionably no other remedy so certain in its effects. ASTHMA, WINTER COUGH, BRONCHITIS and DISORDERS of the THROAT alike yield to its influence. The highest medical testimony states no better cure for these complaints exist (now proved by over a half a century's experience.) They contain no opium, morphia, or any violent drug. KEATING'S COUGH LOZENGES prepared by THOMAS KEATING, London, Britain, are sold by all Druggists.

**The New Beekeepers' Text Book.**

By N. H. and H. A. KING. The latest work on the Apian, embodying accounts of all the newest methods and appliances. Fully illustrated. Sent by mail, postpaid, for \$1. DEWEY & CO., 202 Sansome Street, S. F.



## Detestible Frauds.

[By H. No. 1.]

Verily there is no end to the frauds which are continually being perpetrated upon the unsuspecting public. They constantly loom up and present themselves in as varied disguises as are ever seen at masquerade balls, and are equally varied in character.

The class which we now have to deal with, is the advertising class, who use the newspapers to obtain money by promises of returning from 10 to 50 times the amount sent, in articles of various kinds. We have before us as we write, several samples of these advertisements which have been sent us for insertion in our papers, and to receive in payment for such insertion, in one case a Bible, and in another a revolver. We are not in want of either Bibles or revolvers, and as we know the whole thing to be a fraud we decline to insert the advertisement, preferring to use our columns only for legitimate purposes.

The Bible man in his advertisement describes a "Royal quarto Bible," containing:

The Old and New Testaments, Apocrypha, Concordance and Psalms, nearly 2,000 illustrations, 36 full-page engravings; and 115 additional features, the most important of which are a Bible dictionary, history of the books of the Bible, history of religious denominations, history of the nations, cities, rivers, lakes, birds, beasts, reptiles, insects, trees, fruits and flowers of the Bible, 100,000 marginal references, marriage certificate, family record and a photograph album. Printed with clear, large type, on paper of first-class quality. The work is superbly bound in morocco, massive raised panel, gilt edge and back, and was sold two years ago at \$15 per copy.

And he further says that for \$1 he will send, postage paid, a copy of the Holy Bible, but he does not say that he will send a copy of the above described \$15 Bible, not he. He may possibly send a Bible, but it will probably be such a one as can be bought at any bookstore for about 75 cents or \$1. It is extremely doubtful, however, if the sender ever hears from his dollar again.

The revolver man, who by the way is evidently the same person though a different name is given, offers a six-shot revolver free to any one who will send 75 cents for a six months' subscription to an unknown paper. He says:

The famous American Model, six-shot bulldozer revolver is made of select metal and neatly finished. The cylinder revolves when the hammer is raised. Can be loaded in an instant. Just the thing for tramps and burglars.

We do not exactly understand this. Is it possible that he is desirous of obtaining the patronage of tramps and burglars? I would seem so from his advertisement.

It may be that knowing that his revolvers are worthless, he thinks that he will be conferring a favor on the public by supplying tramps and burglars with them.

Several months since a friend of ours received a printed postal card from the East, offering to send a genuine Swiss magnetic time-keeper, warranted to keep perfect time, for the small sum of 60 cents. This was his chance to get a watch he said, and he forwarded the amount to the sender of the card. For about three weeks visions of fine time-keepers haunted his waking and sleeping hours. They haunt him no more. He never more heard of his 60 cents or the watch he was to get.

Another style of advertisement we have received reads that "\$10 to \$500 invested in Wall street stock makes fortunes every month." "Two unerring rules for success sent free." Address, Bimpton & Co., Bankers and Brokers, New York.

This is evidently another of the so-called bucket-shop swindles, which were at one time so numerous in this city. No bankers or brokers of any pretense to respectability would so far debase themselves as to lend their names to any such nefarious transactions. The chances are that Bimpton & Co., are myths after the style of the late firm of Martiu Taylor & Co. of this city, who it will be remembered suddenly disappeared, when it was discovered that the firm name was an assumed one, used to give an air of respectability to the swindle. They also made a medium of many a newspaper (not including ours) to perpetrate their frauds.

**S. C. HORTICULTURAL SOCIETY.**—Since the late fair several changes have occurred in the affairs of this prosperous organization. The publication of the *Southern California Horticulturist*, has been discontinued and in its place will appear next January, the first issue of *Semi-Tropical California*, edited by Messrs. Carter & Rice, which will be both the organ of the society and an advocate of southern California as a field for new-comers. Mr. N. C. Carter is well known to our readers; Mr. George Rice the other member of the firm, was lately immigration agent at Kansas, and doubtless has experience which may be valuable to the new enterprise. Since the above was determined upon, we learn from the Los Angeles papers, that L. M. Holt, late Secretary of the society, has resigned, and the Secretaryship has been given to Mr. Carter.

**CITRUS CULTURE.**—Mr. L. M. Holt of Los Angeles, announces that he expects to publish a book on citrus culture of about 150 pages. The publication of the work will depend upon whether sufficient subscribers' names are received to justify the undertaking.

## Wheat Prices in Liverpool and Ocean Freight Rates from San Francisco, from 1867 to 1879.

[Compiled by A. MONTPELLIER, Cashier and Manager Grangers' Bank of California.]

MONTHS.	1867	1868	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879
	£ s d	£ s d	£ s d	£ s d	£ s d	£ s d	£ s d	£ s d	£ s d	£ s d	£ s d	£ s d	£ s d
JANUARY.....	Highest 11 2 Lowest 10 6 Average 10 10 Freight 3 7 6	16 0 15 10 15 11 2 10 0	12 0 11 6 11 9 2 12 6	9 9 9 1 9 5 2 8 6	12 2 11 7 11 10 2 0 0	13 0 12 4 12 8 2 14 6	12 10 12 5 12 7 4 0 0	14 0 13 7 13 9 4 0 0	10 0 9 5 9 8 2 17 6	10 7 10 2 10 4 2 5 0	11 8 10 7 11 1 2 11 7	13 3 12 6 12 10 2 3 0	9 8 8 10 9 3 1 13 9
FEBRUARY.....	Highest 10 6 Lowest 10 4 Average 10 6 Freight 3 12 6	16 2 15 6 15 10 2 7 6	11 6 10 9 11 9 2 12 6	9 2 8 10 9 0 2 5 0	12 2 11 8 11 11 2 0 0	12 6 12 4 12 5 2 10 0	12 4 11 9 12 0 4 2 6	13 6 12 7 13 0 4 1 0	9 5 9 0 9 2 2 7 6	10 4 10 1 10 2 2 2 6	11 4 10 5 10 10 2 4 6	13 11 10 12 5 2 9 6	9 8 8 11 9 3 1 17 6
MARCH.....	Highest 11 5 Lowest 10 7 Average 11 0 Freight 3 5 0	16 0 15 10 15 11 2 7 6	11 0 10 9 10 5 2 5 0	9 6 9 1 9 3 2 2 6	12 0 11 10 11 11 2 2 6	12 3 11 6 11 10 2 12 6	12 0 11 7 11 9 4 0 0	12 7 12 0 12 3 3 15 0	9 5 9 1 9 3 2 2 6	10 10 9 10 10 4 2 5 0	11 3 10 3 10 9 2 1 3	12 3 11 1 11 8 2 5 0	9 9 8 9 9 3 2 6 3
APRIL.....	Highest 12 2 Lowest 11 8 Average 11 11 Freight 2 12 6	16 2 15 10 16 0 2 10 0	9 4 9 1 9 2 2 5 0	9 4 9 0 9 2 2 2 6	12 6 12 0 12 3 2 2 6	12 4 11 8 12 0 2 13 6	11 11 11 7 11 9 3 17 6	12 11 12 4 12 7 3 13 6	9 5 9 0 9 2 2 0 0	10 8 9 6 10 1 2 10 0	10 8 10 9 11 10 2 2 6	12 6 11 11 9 2 10 0	9 8 8 10 9 3 2 4 3
MAY.....	Highest 11 10 Lowest 10 2 Average 11 0 Freight 2 10 0	16 2 14 3 15 2 2 17 6	9 7 9 3 9 5 2 7 6	9 11 9 5 9 8 2 5 0	12 6 12 0 12 3 Onr's Act	13 0 12 8 12 10 3 5 0	12 4 11 10 12 1 3 13 6	12 10 12 6 12 8 3 15 0	9 1 9 0 9 0 2 2 6	9 9 9 6 9 7 2 15 6	14 11 2 12 7 2 4 0	12 4 10 8 11 6 2 7 6	9 5 8 6 8 11 2 5 9
JUNE.....	Highest 11 4 Lowest 10 3 Average 10 9 Freight 2 10 0	14 3 13 6 13 10 Onr's Act	10 3 9 6 9 10 2 10 0	10 11 9 11 10 5 2 17 6	12 3 11 8 11 11 Onr's Act	13 0 12 8 12 10 3 16 0	12 4 11 11 12 1 4 10 0	12 10 12 5 12 7 3 13 0	9 2 8 9 8 11 2 7 6	10 9 9 8 10 2 3 6 0	13 2 12 4 12 9 2 9 9	11 3 10 4 10 9 2 8 9	9 5 8 4 8 10 2 5 0
JULY.....	Highest 10 8 Lowest 10 2 Average 10 5 Freight 2 17 6	13 3 12 0 12 10 3 5 0	10 8 9 7 10 1 2 12 6	12 3 10 3 11 3 3 2 6	11 9 11 4 11 0 2 7 6	12 6 11 10 12 2 4 1 6	12 0 11 9 11 10 4 15 6	12 4 11 2 11 9 3 18 0	11 0 9 7 10 3 2 4 6	10 5 9 1 9 9 3 4 4	13 6 11 10 12 8 2 3 9	10 8 9 11 10 3 2 11 3	9 10 8 6 9 2 2 6 3
AUGUST.....	Highest 11 1 Lowest 10 8 Average 10 10 Freight 3 7 6	12 10 12 0 12 5 3 6 6	11 4 10 8 11 0 3 2 6	11 6 10 6 11 0 2 17 6	12 0 11 7 11 9 2 1 6	12 5 12 8 12 0 3 12 6	12 8 11 9 12 2 3 17 6	11 4 10 1 10 8 3 12 6	11 11 9 3 10 0 2 5 6	10 9 9 3 10 0 2 17 6	13 2 12 7 12 7 3 6 3	10 9 10 4 10 4 2 11 12	9 10 8 6 9 2 2 9 3
SEPTEMBER.....	Highest 14 1 Lowest 13 2 Average 13 7 Freight 3 2 6	13 0 12 10 12 11 3 4 0	11 4 10 8 11 0 3 11 6	10 6 9 9 10 1 2 10 0	12 11 11 11 12 5 2 0 0	13 6 12 8 13 1 3 18 6	13 0 12 7 12 10 3 5 6	10 6 10 0 10 3 3 5 6	11 4 10 9 11 0 2 10 0	10 1 9 4 9 8 3 6 0	13 3 12 6 12 10 2 0 6	10 8 9 9 10 2 2 3 6	10 6 8 6 9 6 2 7 6
OCTOBER.....	Highest 17 0 Lowest 14 6 Average 15 9 Freight 3 0 0	12 7 12 7 12 7 3 0 0	10 8 10 4 10 6 3 4 6	11 2 9 11 10 6 2 7 6	13 2 13 0 13 1 2 0 0	13 4 12 8 13 0 4 6 6	12 10 12 5 12 7 3 6 6	10 2 9 9 9 11 2 15 6	11 3 11 2 11 2 2 11 6	11 9 9 10 4 3 0 0	13 6 12 4 12 11 1 13 9	10 4 9 7 9 11 2 3 9	12 6 9 10 11 2 3 5 10
NOVEMBER.....	Highest 17 0 Lowest 15 6 Average 16 3 Freight 3 6 0	12 7 12 1 12 4 2 17 6	10 6 9 5 9 11 3 2 6	11 7 10 10 11 2 2 5 0	13 0 12 10 12 11 2 0 0	12 9 12 6 12 7 4 5 0	13 5 12 10 13 1 3 2 6	9 9 9 9 9 9 2 15 0	11 0 10 11 10 11 2 13 6	11 11 9 6 10 8 2 17 6	13 4 12 7 12 11 2 1 0	10 2 9 6 9 6 2 5 7	12 10 8 11 4 3 5 0
DECEMBER.....	Highest 15 6 Lowest 15 2 Average 15 4 Freight 2 7 6	12 4 12 0 12 2 2 12 6	9 11 9 6 9 8 2 10 0	11 7 11 4 11 5 2 5 0	12 9 12 0 12 7 2 5 6	12 8 12 4 12 6 4 2 6	13 9 13 4 13 6 3 7 6	10 2 10 1 10 1 3 0 0	12 0 10 8 11 4 2 11 6	11 8 10 9 11 2 2 16 3	13 3 12 7 12 11 2 1 3	10 2 9 1 9 7 1 15 0	9 6 8 6 9 7 2 3 6
Wheat.	Average per year in Sterling do do in Dollars and Cents	12 4 \$3 42	13 9 \$3 36	10 4 \$2 53	10 2 \$2 43	12 2 \$2 97	12 4 \$3 02	12 11 \$3 16	11 7 \$2 84	10 14 \$2 63	10 3 \$2 53	12 2 \$3 06	10 11 \$2 70
Freight	Average per year in Sterling do do in Dollars and Cents	2 19 10 \$14 66	2 16 0 \$13 71	2 14 5 \$13 33	2 0 8 \$9 75	2 1 6 \$10 06	3 9 6 \$17 10	3 16 8 \$18 04	3 10 8 \$17 30	2 7 0 \$11 30	2 8 2 \$12 05	2 3 9 \$10 90	2 7 0 \$11 72

**THE BUNACH BUSINESS.**—Some time since we announced that Mr. Milco had made arrangements to move his business to Los Angeles county. It seems the plans have been changed and this move will not be made. According to the *Stockton Independent*, the business will be developed with Stockton capital. Messrs. J. D. Peters, A. C. Paulsell and G. N. Milco, who are now associated in the enterprise, have purchased 770 acres of land in Merced county for the cultivation of the plant from which the insect-destroying powder is made. The land is a light sandy loam, and is situated near Atwater station, on the line of the Southern Pacific railroad. The Merced canal runs through it, so that the plants may be irrigated if necessary. It is the intention of the gentlemen interested to commence planting 200 acres as early as practicable.

**CALIFORNIA SHEEP FOR COLORADO.**—It seems that California has done much to people the great center of the country with sheep this year. Aside from the drives to Wyoming and Montana, to which we have formerly alluded, there have been, according to the *Colorado Farmer*, about 40,000 California sheep taken into that State this year. The *Farmer* says: "They are a vast improvement upon the Mexican sheep we have been buying for the past seven years, and the quality of wool from these sheep will soon put Colorado wool on a par with California and Oregon as to quality." We notice also that thoroughbred Merino rams are coming into Colorado from the East. They too should be sought in this State, as our breeders are bringing out young rams that cannot be beaten elsewhere.

**CALIFORNIA TOBACCO.**—A sample of California tobacco grown by J. C. Davis, of Los Angeles, has been analyzed by the Department of Agriculture and found to contain 4.04% of nicotine, an amount about midway between the weak tobaccos of Havana and the stronger ones of Virginia and Kentucky. The specimen analyzed possessed good color and good smoking qualities, and was apparently a superior tobacco in all respects.

THERE are now 25 soldiers and 25 Apache scouts at Fort Cummings, New Mexico. The road to the Mimbres is being constantly patrolled, and no party of hostiles could pass up from the south without being discovered.

## PATENTS AND INVENTIONS.

## List of U. S. Patents Issued to Pacific Coast Inventors.

[From Official Reports for the "Mining and Scientific Press," Dewey &amp; Co., Publishers and U. S. and Foreign Patent Agents.]

FOR THE WEEK ENDING NOVEMBER 25TH, 1879.

- 211,952.—INVALID BED—J. H. Archer, S. F.  
 221,903.—ATMOSPHERIC PUMPING SYSTEM—W. P. Barclay, S. F.  
 222,004.—MANUFACTURE OF CEMENT—C. Brown, Mare Island, Cal.  
 222,013.—DISCHARGING AMALGAMATING PANS—E. Coleman, S. F.  
 222,019.—AMALGAMATING PAN—E. Coleman, S. F.  
 222,027.—HYDRO-CARBON PRESSURE GENERATOR—H. H. Eames, S. F.  
 221,960.—TRUSS—G. Gleim, Yreka, Cal.  
 222,033.—BOOK—E. S. Glover, Portland, Ogn.  
 221,961.—VACUUM ENGINE—B. Goldmann, S. F.  
 221,920.—SAFETY POCKET—L. Jakubowski, S. F.  
 221,928.—OIL CUPS—J. G. McBride, (2), Sacramento, Cal.  
 221,970.—AIR-COMPRESSING FANS—M. B. Miller, S. F.  
 222,074.—STRAK PACKING—G. C. Phillips, Silver City, Nevada.  
 221,989.—RATCHET WRENCH—J. Woolford, Plymouth, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

## Rock's Nurseries, San Jose.

EDITORS PRESS:—I had the pleasure last week of a visit to Mr. John Rock's new nurseries, some two or three miles north of San Jose. For several years Mr. Rock has successfully carried forward his business, growing his trees and plants on leased land in this neighborhood; but now he has established himself on a tract of 70 acres of splendid land of his own, located on the east bank of the Coyote river, near the Milpitas road. Perhaps no better tract of land for the purpose designed could be found in the whole valley. The soil is of a deep rich sandy loam, and has been at much expense perfectly graded for convenient irrigation. Located conveniently, near to his house and other buildings connected with the business, and on the highest point of land on the whole tract, is his deep, strong-flowing well, which sends constant and abundant streams of clear, pure water through a systematic network of flumes, pipes and ditches, to every part of the large plantation.

Notwithstanding all the improvements made here are of comparatively recent date, yet a vast amount of work has been done, the whole tract being beautifully laid out and conveniently arranged for business; and a drive

over the grounds could hardly fail to impress even the most casual observer that the whole enterprise was in the hands of one who thoroughly understands his business. The long straight rows of thrifty trees and plants in the well arranged plots bear good evidence of order, neatness and thrift on every hand. The plots of ground near the house are, of course, devoted mostly to ornamental productions. Here Mr. Rock has just completed three large and expensive glass-covered plant houses, with all the most approved arrangements for the culture of tropical trees and plants. These are already filled with beautiful specimens from many foreign lands, all looking bright and fresh as if in their native groves.

In addition to this home place Mr. Rock still retains the use of several tracts of land sufficiently near to him on which he grows large stocks of trees. He is paying particular attention to the best approved varieties of small fruits and berries. Of these I noticed particularly the fine appearance of his "Monarch of the West," that has produced the most wonderful results in the way of early and heavy fruiting in this neighborhood for the last two years, that have ever come under my notice. His advertisement of small fruits may be seen in this paper. A general advertisement for the trade season may soon be expected.

Santa Clara, Cal., Dec. 5th, 1879.

We have read the "Handbook" with much pleasure and can cheerfully recommend it to all who wish to adorn, beautify and make their homes attractive. — *Salinas Index*.

The "PACIFIC RURAL HANDBOOK," written by Chas. H. Shinn for the publishers of the PACIFIC RURAL PRESS, will be sent, post-paid, in substantial cloth binding for \$1; in full leather, \$1.50; in cloth, interleaved with fine ruled paper for memoranda, \$1.50. Address

DEWEY & CO., PUBLISHERS,  
No. 202 Sansome Street, San Francisco.

THE RIVERSIDE HOUSE is pleasantly located in the center of the town in Riverside Colony, San Bernardino Co. It is a new two-story brick building, containing some 40 rooms. Health-seekers and other visitors to this most favored climate will find good boarding accommodation at favorable rates. For further information address the proprietors, CUNNINGHAM & MOODY, Riverside, San Bernardino Co., Cal.

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate the copy sent.

EXTRA COPIES can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.



## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

## Weekly Market Review.

## DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, December 10th, 1879.

The Wheat market has picked up a little since our last report, and rates which prevailed two weeks ago are now restored. A fair amount of business is being done, and the market has a firm tone. Foreign prices do not change materially, a gain of 1d being the full fluctuation for a week.

## Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday....	10s	7d@11s	6d	11s	6d@11s	10d		
Friday.....	10s	7d@11s	6d	11s	6d@11s	10d		
Saturday.....	10s	7d@11s	6d	11s	6d@11s	10d		
Monday.....	10s	7d@11s	6d	11s	6d@11s	10d		
Tuesday.....	10s	7d@11s	7d	11s	7d@11s	10d		
Wednesday....	10s	6d@11s	7d	11s	7d@11s	10d		

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1877.....	12s	7d@11s	11d	12s	9d@11s	3d		
1878.....	9s	7d@9s	9d	9s	9d@10s	2d		
1879.....	10s	7d@11s	7d	11s	7d@11s	10d		

## The Foreign Review.

LONDON, December 9.—The *Mark Lane Express* says: As a rule, farmers' interests in England have not suffered by the delay in their operations caused by frost, but in Scotland plowing is much in arrears. The deliveries of home-grown Wheat were slightly less than the previous week; but, in consequence of there being no material improvement in quality, business was very slow, both in London and at the country markets, with little or no change in prices. Imports of foreign Wheat have again been large, amounting to 83,524 quarters received at London during the past fortnight. These supplies, though doubtless in excess of present requirements, have exercised very little depressing effect on trade, which possesses many qualities of inherent strength, the principal of which are a rise in the American markets and an anticipated decrease in the American supply. It appears likely that there will be increased activity, and, perhaps, excitement before the close of the year, as further St. Petersburg shipments are impossible, and Southern Russian ports will also soon be closed. Although trade is healthy, it is for the moment lethargic. As America still holds the key of the position, the first impulse toward renewed activity must come from her. Maize advanced 6d per quarter, in consequence of scarcity. Owing to excessive arrivals, sales of Oats were difficult even at a reduction of 4s 3d to 4s 6d per quarter. The sales of English Wheat last week amounted to 33,428 quarters, at 46s 7d per quarter, against 37,856 quarters, at 40s 11d per quarter, during the corresponding week last year. Imports into the United Kingdom, for the week ending November 29th, were 1,610,425 cwt of Wheat, and 260,129 cwt of Flour.

## Freights and Charters.

The latest reported charter is the bark *Fresno*, 1,245 tons, for Wheat to Liverpool, Havre or Bordeaux, at £3 7s 6d.

## Eastern Grain and Provision Markets.

NEW YORK, December 6.—The General Merchandise markets begin to show less animation and activity in most departments, as usual at the approach of the end of the year; still, the volume of trade is larger than usual at this late period. Breadstuffs are quiet and about steady, the export demand being limited. Pork and Lard are moderately active.

CHICAGO, December 6.—The Grain and Provision markets have been exciting, unsettled, and daily higher until to-day, when they were steadier, and Provisions were lower. Grains have maintained their strength, and the shorts have been pushed hard by the persistent bulls of Wall street, whose manipulations and money have received hearty encouragement from the continued demand in Europe, and the stiffening prices in all directions. The comparatively small influx of Grain is also an argument used with considerable effect by holders and purchasers. The total receipts of Grain for the week have been considerably ahead of those for the same week in 1878, although prices are much higher now than then. In the Provision market surprises have been numerous, and the results disastrous to the short interest. The men who were bears on Lard at \$5.50, and on Pork at \$7.50, are now bulls with Lard at \$8, and Pork at \$14. Wall street here is the guiding star, also, and a keen lookout is kept by all traders toward advices from the East. The prices of Provisions have been higher than since the summer of 1877, although the receipts of Hogs have been very large, considering the soft weather, unfavorable to packing operations. It would not be difficult to foresee a decided break under these conditions, and some operators predict a tremendous crash. The sales have been prodigious, as indicated by the clearings, which for the week were 44,000,000, the largest in the history of the city. Sales of January option were: Wheat, \$1.23 1/2 @ 1.27 1/2; Corn, 33 1/2 @ 42; Oats, 33 1/2 @ 35 1/2; Pork, \$12.45 @ 14.40; Lard, \$7.37 @ 8.10. Sales of cash were: Rye, 73 1/2 @ 77; Barley, 85 @ 91; Whisky, \$10 @ 11. The closing cash prices were: Wheat, \$1.25 1/2 @ 1.25 3/4; Corn, 40 1/2 @ 41; Oats, 34 1/2 @ 35; Rye, 77; Barley, 90 @ 91; Pork, \$13.50; Lard, \$7.70.

## Eastern Wool Markets.

NEW YORK, December 6.—Wool is in good demand, although scarcely so active as a few weeks since. Values, however, are firmly maintained, and holders evince no signs of weakness. Considerable business was done in California Wools, sales amounting to 250 bales and 165,000 lbs fall, at 23 @ 35; 150 bales Spring, at 33; 20,000 lbs Spring, private. Some Australian has been sold to arrive, and others are offered. Advices from abroad report a fractional reaction on some of the fine Wools, but a generally strong market.

BOSTON, December 6.—The Wool trade was comparatively quiet during the past week, with a falling off in the demand, but the tone of the market was quite firm, and for medium fleeces, Combing selections and pulled Wools very extra prices were obtained. Holders are very confident, and indifferent about selling. Sales include Ohio and Pennsylvania X, XX and No. 1, at 43 @ 55; Michigan and No. 1, 47 @ 55; Wisconsin and New Hampshire fleeces, 44 @ 50; Combing and Delaine, 49 @ 55; unwashed and unmerchantable, 30 @ 40; Texas, 30 @ 33; Eastern and Valley Oregon, 31 @ 42; Missouri, 27 @ 34; tub washed, 50; scoured, 45 @ 55; Super and X pulled, 40 @ 60. California Wool is in good demand, sales for the week comprising 617 and 300 bales of Fall and Spring, at 21 @ 23 for the former, and 20 @ 37 for the latter. The total sales of the week were 1,618,400 lbs of domestic and 510,000 lbs of foreign.

PHILADELPHIA, December 9.—Wool is steady, firm, supply light. Oregon fine, 30 @ 40; medium, 30 @ 42; coarse, 30 @ 35; California fine, 35 @ 40; medium, 35 @ 40; coarse, 30 @ 35; New Mexico and Colorado fine, 35 @ 40; medium, 35 @ 40; coarse Carpet Wool, 23 @ 30; pulled extra Merino, 45 @ 50; Super, 50 @ 55; Lambs' Super, 50 @ 55.

## New York Dried Fruit Markets.

NEW YORK, December 9.—Trade in foreign Fruits of all

kinds continue slow. Prices are irregular and weak, though there are no decided changes. Domestic dried continue in demand, which, for Apples, exceeds the supply. Prices are very firm.

## Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLE.	WEEK. Nov. 10.	WEEK. Nov. 25.	WEEK. Dec. 3.	WEEK. Dec. 10.
Flour, quarter sacks....	46,355	32,000	99,904	56,274
Wheat, centals.....	239,670	212,344	115,490	321,900
Barley, centals.....	21,407	17,742	18,628	14,530
Beans, sacks.....	18,379	12,977	21,290	9,901
Corn, centals.....	5,616	1,896	7,151	6,376
Oats, centals.....	1,963	27,136	3,801	28,399
Potatoes, sacks.....	19,517	27,346	20,895	19,490
Onions, sacks.....	2,062	1,972	1,274	1,570
Wool, bales.....	2,117	1,120	274	376
Hops, bales.....	233	179	128	160
Hay, bales.....	923	1,271	932	1,328

BAGS—There is no change in prices not in the trade generally. There is no demand for present uses.

BARLEY—Barley is unchanged from rates formerly quoted. We note sales of 100 tons ordinary Chevalier at \$1.30; 1,140 sacks good Brewing, 92c; and 400 do poor Bay Brewing, 77c.

BEANS—The decline is quite severe in Bayos, Reds, Pea and Small White Beans. Our list gives the ruling rates for all kinds.

CORN—There is a slackening of demand and a sharp drop of about 10c per cwt on all sorts. We note sales of 200 sacks Large and Small Yellow at 95c; and 300 sacks do at 92c per cwt.

DAIRY PRODUCE—The increasing amount of fresh Butter gives the fresh roll trade a weaker feeling, and the price has shaded off about 1c per lb. Butter-making from the new grass is now in progress in the upper coast districts. Cheese is unchanged.

EGGS—Eggs are abundant and hold the present rates with some difficulty. Dealers report the trade rather weak.

FEED—There is no change in Hay or Ground Feeds. Straw sells a little better for clean, bright lots.

FRUIT—Strawberries and Raspberries have reappeared. Oranges are now chiefly from Loreto and Cape St. Lucas, and rule from \$2 to \$30 per M. California Limes have dropped to \$1 @ 1.50 per box. The Mexican Limes being selected with care sell much higher.

FRESH MEAT—Our list shows a general advance on Beef of all descriptions; also on Lamb and Veal. The trade seems to be brightening up a little. Sixteen dressed Cattle came in from Oregon and sold at 3 1/2c per lb. They were not very good, as the price shows.

HOPS—There is no change in this market. Some holders of good Hops are offering them at 35 @ 37c, but transactions are few at present. Emmet Wells reports the New York market, for the week ending November 28th, as follows:

The receipts and exports continue on the decrease, and the market has been extremely dull throughout the week. There has been a difference between buyers and sellers of about 5c per lb on new Hops; but, wishing to let the thing down "easy," we reduce quotations only 2c. Not over 200 bales of German Hops have arrived here, and these are being taken in a small way by brewers at a considerably higher price than is asked for best American. The indications now are that we shall have a dull market until after the holidays; then, if prices are reasonable, orders will again come in from England.

LIVE STOCK—We note the following sales: 35 Ewes, Wethers and Lambs, sheared, \$1.25; 400 do do, \$1.25; 2,300 Wethers, \$2; 3,500 do, \$2.50; 1,700 do, \$2.75; 1,012 Lambs, \$1.75; 600 Ewes, \$1.80; 2,100 Steers, good, \$3 each; 507 Cows, \$23.50 each; 462 Hogs, 3 1/2c per lb; 700 do, 3 1/2c; 564 do, 3 1/2c; 275 Calves, large and fat, \$12 per head; 220 small Milk Calves, \$2.50.

OATS—The range is unchanged. We note sales of 250 sacks common Feed at \$1.20; and 700 do fair Humboldt do, \$1.15.

ONIONS—The choicest Union City bring \$1 per cwt; other shipments range from 40c to 75c per cwt.

POTATOES—Petaluma, Tomatoes and Alvarado, the best lots of each, have sold a little better than last week. Sweet Potatoes are again in the depths, selling at 50c per cwt.

PROVISIONS—The Provision trade is quiet, except

Eastern Hams, which are very firm, owing to the excitement and advance at Eastern packing points.

POULTRY AND GAME—Turkeys have recovered and advanced to 20 @ 22c for the best alive and dressed. Hens, too, are a shade better. Teal are now selling at \$1 @ 1.25 per doz.

VEGETABLES—Beets, Cabbage, Garlic and Horseradish have all improved a little during the rains. Marrowfat Squash is \$2.50 @ 25 per ton lower than last week.

WHEAT—The market is firm and transactions in fair amount as noted above. We cite sales: 100 tons Gilt-Edged Shipping at \$2.10; 500 do good Shipping, and 794 sacks good White Milling, \$2.05; 150 and 100 tons good Shipping, \$2.01; 50 do, No. 2, \$2; 5,000 sacks No. 2, and 300 do off Milling, \$1.97; and 150 do off grade, \$1.85 per cwt.

WOOL—Unchanged.

## BAGS AND BAGGING.

## JOBBER PRICES.]

WEDNESDAY M., December 10, 1879.

Eng Standard Wheat, 11 @ 12	Eighths.....	3 1/2 @ 4
California Manufacture.	Hessian, 60 inch.....	@ 14
Hand Sewed, 22x36, 11 @ 12	45 inch.....	@ 10
24x36.....	40 inch.....	@ 9
22x40.....	11 1/2 @ 12	
24x40.....	12 @ 12	
24x40.....	13 @ 12	
Machine Sewed, 22x36, 11 @ 12	4 lb do.....	@ 47
24x36.....	4 lb do.....	@ 45
Flour Sacks, bales.....	8 @ 10	
Quarters.....	5 @ 6	
	Bean Bags.....	@ 6 1/2

## Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO &amp; Co.]

SAN FRANCISCO, December 10, 3 P. M.

SILVER, 1 par.  
GOLD BARS, \$90 @ 910. SILVER BARS, 10 @ 18 1/2 cent discount.

EXCHANGE on New York, 20, on London bankers, 49 1/2 @ 49 1/2; Commercial, 50; Paris, five francs @ dollar; Mexican dollars, 33 @ 35.

LONDON Consols, 97 1/2 @ 98; Bonds (4 1/2), 106 1/2. QUICKSILVER in S. F., by the flask, @ 1b, 39 @ 40.

## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., December 10, 1879.

BEANS & PEAS.		ONIONS.	
Bayo, cts.....	10 @ 25	Alviso.....	@ 100
Butter.....	1 40 @ 50	Union City, cts.....	@ 60
Castor.....	3 00 @ 30	Stockton.....	@ 60
Pea.....	1 37 1/2 @ 50	Sacramento River.....	@ 60
Red.....	1 00 @ 05	Salt Lake.....	@ 60
Pink.....	95 @ 05	Oregon.....	@ 60
Sm'l White.....	1 37 1/2 @ 50	Red.....	@ 60
Lima.....	6 00 @ 60	New Onions.....	@ 60
Field Peas, yellow.....	37 1/2 @ 50	Red, cts.....	@ 40
do, green.....	35 @ 00	White.....	@ 40

BROOM CORN.		POTATOES.	
Southern.....	1 1/2 @ 2	Petaluma, cts.....	@ 80
Northern.....	2 1/2 @ 3	Tomatoes.....	@ 80

CHICORY.		HUMBERT.	
California.....	4 @ 4	Humboldt.....	@ 90
German.....	8 @ 7	Cutter Cove.....	@ 90

DAIRY PRODUCE, ETC.		POULTRY & GAME.	
Cal. Fresh Roll, lb.....	25 @ 29	Early Rose, sk.....	@ 25
Fancy Brands.....	@ 30	Self-Min Bay, new.....	@ 35
Pickle Roll.....	22 1/2 @ 24	Alvarado, red.....	@ 60
Firkin.....	18 @ 22 1/2	Sweet.....	@ 50
Western.....	12 1/2 @ 15	Hens, doz.....	@ 50
New York.....	@ 15	Roosters.....	@ 50

EGGS.		DUCKS, TAME, DOZ.	
Cheese, Cal, lb.....	14 @ 17	Broilers.....	@ 40
N. Y. State.....	@ 17	Ducks, tame, doz.....	@ 40

EGGS.		WIDGON.	
Cal. fresh, doz.....	35 @ 37 1/2	Teal.....	@ 100
Ducks.....	@ 30	Wildgeon.....	@ 100
Oregon.....	@ 30	Geese, pair.....	@ 25
Eastern, by expts.....	27 1/2 @ 30	Wild Gray, doz.....	@ 25
Picked here.....	30 @ 32 1/2	White do.....	@ 25
Utah.....	30 @ 32 1/2	Snipe, Eng.....	@ 15

FEED.		PROVISIONS.	
Bran, ton.....	15 @ 17 00	Cal. Bacon, Hvy, lb.....	@ 9
Corn Meal.....	22 50 @ 23 50	Medium.....	@ 9
Hay.....	8 @ 13 00	Light.....	@ 10
Middlings.....	@ 22 00	Lard.....	@ 10
Oil Cake Meal.....	34 00 @ 35 00	Cal. Smoked.....	@ 8 1/2
Straw, bale.....	40 @ 50	Shoulders, Cover'd.....	@ 7

FLOUR.		SEEDS.	
Extra, City Mills.....	6 1/2 @ 6 3/4	Alfalfa.....	@ 8
do, Contry Mills.....	5 7/8 @ 6 00	do, Chile.....	@ 7
do, Oregon.....	5 25 @ 5 50	Clover.....	@ 5
do, Walla Walla.....	5 7/8 @ 6 1/2	Clary, Red.....	@ 16
Superfine.....	4 00 @ 4 50	White.....	@ 55

FRESH MEAT.		FLAXED.	
Beef, 1st quality, lb.....	4 1/2 @ 5	Onion.....	@ 10
Second.....	4 @ 4 1/2	Flaxseed.....	@ 2 1/2
Third.....	3 1/2 @ 4	Hemp.....	@ 8
Mutton.....	4 @ 4 1/2	Italian Rye Grass.....	@ 10
Spring Lamb.....	6 @ 6 1/2	Perennial.....	@ 10
Pork, undressed.....	34 @ 35	Millet, German.....	@ 12
Dressed.....	54 @ 55	do, Common.....	@ 7
Veal.....	6 @ 6 1/2	Mustard, White.....	@ 3 1/2
Milk Calves.....	6 @ 6 1/2	do, Brown.....	@ 3
do choice.....	6 1/2 @ 7 1/2	Rape.....	@ 3

GRAIN, ETC.		SWEEP.	
Barley, feed, cts.....	70 @ 85	Alfalfa.....	@ 8
do, Brewing.....	85 @ 100	do, Chile.....	@ 7
Chevalier.....	50 @ 75	Clover.....	@ 5
do, Coast.....	60 @ 70	Clary, Red.....	@ 16
Burbs.....	20 @ 20	White.....	@ 55
Corn, White.....	90 @ 92 1/2	Onion.....	@ 10
Yellow.....	90 @ 92 1/2	Flaxseed.....	@ 2 1/2
Small Round.....	92 1/2 @ 95	Hemp.....	@ 8
Oats.....	10 @ 35	Italian Rye Grass.....	@ 10
Milling.....	@ 61 50	Perennial.....	@ 10
Rye.....	10 @ 25	Millet, German.....	@ 12
Wheat, No. 1.....	95 @ 100	do, Common.....	@ 7
do, No. 2.....	92 @ 95	Mustard, White.....	@ 3 1/2
do, No. 3.....	70 @ 75	do, Brown.....	@ 3
Choice Milling.....	@ 92 10	Rape.....	@ 3

HIDES.		SWEET V. GRASS.	
Hides, dry.....	20 @ 20 1/2	Red Top.....	@ 18
Wet salted.....	9 @ 10	Hungarian.....	@ 10

HONEY, ETC.		LAWN.	
Bee wax, lb.....	22 1/2 @ 25 1/2	Mesquit.....	@ 20
Honey in comb.....	12 1/2 @ 13 1/2	Timothy.....	@ 7
do, No 2.....	12 1/2 @ 13 1/2		
Dark.....	10 @ 15		
Extracted.....	10 @ 12 1/2		

HOPS.		TALLOW.	
Oregon.....	26 @ 31	Crude, lb.....	@ 6
California, new.....	32 @ 37 1/2	Refined.....	@ 7 1/2
Wash Ter.....	32 @ 35		
Old Hops.....	32 @ 35		

NITS Jobbing.		WOOL, ETC.	
Walnuts, Cal.....	10 @ 11	San Joaquin & S. Coast.....	@ 13
do Chile.....	8 @ 9	Burry.....	@ 15



## Agricultural Articles.

## The Famous "Enterprise."

PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.



These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babbitted boxes. Positively self regulating, with no coiled springs or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

**HORTON & KENNEDY,**

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

**MATTESON & WILLIAMSON,**  
STOCKTON, CAL.

## The Boss Pruner.

Patented Jan. 8, 1873.

## ENTIRELY NEW!

Works on a cog principle. Smallest size cuts one inch, and largest size two inches in diameter. Has been thoroughly tested, and given perfect satisfaction. Sold by

**GEORGE LARKIN,**  
Newcastle, Placer County, Cal.

# ARITHMETIC MADE EASY BY ROPP'S EASY CALCULATOR.

This valuable work is used by thousands of farmers, mechanics and business men, and is highly recommended for its practical utility and convenience.

It embodies an entirely new system of calculation, by which a vast amount of figures and mental labor—required by the ordinary methods—and fractions with their complexities, are absolutely avoided.

It is so simple and easily comprehended that even the most illiterate is enabled, in a few minutes, to reckon with absolute accuracy and speed; while its original and rapid methods, benefit and delight the most scholarly.

It shows at a glance the accurate value of wheat, corn, rye, oats, barley, cattle, hogs, hay, coal, lumber and merchandise, from one pound to a car load, and for any price the market is likely to reach.

It gives the interest, simple and compound, on any sum, or any time, at six, seven, eight, and ten per cent.; the exact measurement of boards, scantlings, timbers, saw logs, cisterns, tanks, wells, granaries, bins, wagon beds, corn cribs, etc. the wages at various rates, for hours, days, weeks and months; besides numerous other important methods, rules and tables.

It is printed on fine tinted paper, is well and elegantly bound in pocket-book shape, and accompanied by a silicate slate, pocket for papers, and memorandum, which can be replenished in the two latter styles.

It answers the purpose of a pocket book and diary, and costs no more, although it was gotten up at great expense and labor, and is unquestionably one of the most useful publications ever issued from the press.

Price, bound in Fine English Cloth, \$1.00.

Sent direct from the Eastern publisher, postpaid, on receipt of price, by P. O. order, registered letter or receipted by express. Address

**DEWEY & CO., San Francisco.**

**DO**

NOT FAIL to send for our NEW PRICE LIST. More complete than ever. Contains descriptions of every thing required for personal or family use, with over 1000 illustrations. Send nine cents for it. (Stamps will do.) We sell all goods at wholesale prices in quantities to suit the purchaser. The only institution in America who make this their special business. Address,

**MONTGOMERY WARD & CO.,**  
227 & 229 Wabash Ave., Chicago, Ills.

**JOHN ROGERS & SONS,**  
GENERAL STOCK AND SALE YARD,  
Corner Market and 9th Sts., San Francisco.

HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN. Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

## READING RANCH,

Shasta Co., Cal.

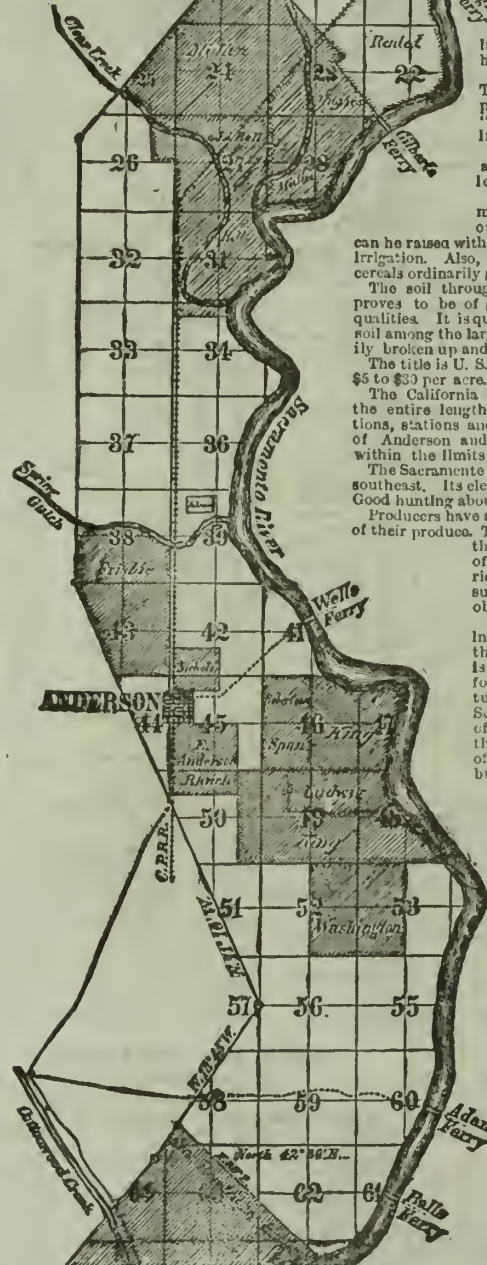
Good Land!

Sure Crops!

HEALTHY CLIMATE!

Prices Low. Terms Easy.

TITLE PERFECT.



The Reading Ranch, in the Upper Sacramento valley, originally embracing over 23,000 acres of choice grain, orchard and pasture land, is now offered for sale at low prices and on favorable terms of payment, in subdivisions to suit purchasers.

The ranch was selected at an early day by Major P. B. Reading, one of the largest pioneer land owners in California. It is situated on the west side of the Sacramento River and extends over 20 miles along its bank.

The average rainfall is about 30 inches per annum, and crops have never been known to fail from drought.

The climate is healthy and desirable. The near proximity of high mountain peaks give cool nights during the "heated term" which occurs in our California summers.

Pasture, wood and good water are abundant. The tillage land is mostly level, with complete drainage.

Figs, Grapes, Peaches, Prunes, Almonds, English Walnuts, Oranges and other temperate and semi-tropical fruits can be raised with success on most of the tract without irrigation. Also, Alfalfa, Vegetables, Corn and all other cereals ordinarily grown in the State.

The soil throughout the tilled portions of the ranch proves to be of great depth and enduring in its good qualities. It is quite free from foul growths. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

The title is U. S. patent. Prices range principally from \$5 to \$33 per acre.

The California and Oregon railroad traverses nearly the entire length of the tract. There are several sections, stations and switches, besides depots at the towns of Anderson and Reading, all of which are located within the limits of the ranch.

The Sacramento River borders the whole tract on the southeast. Its clear waters are well stocked with fish. Good hunting abounds in the surrounding country.

Producers have a local market, which enhances the value of their produce. The railroad transportation route is level throughout to San Francisco. A portion of the land is auriferous and located near rich mines now being worked. Land suitable for settlers in colonies can be obtained on good terms.

Town lots are offered for sale in Reading, situated on the Sacramento river, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

Purchasers are invited to come and see the lands before buying here or elsewhere. Apply on the ranch, to the proprietor.

**EDWARD FRISBIE,**

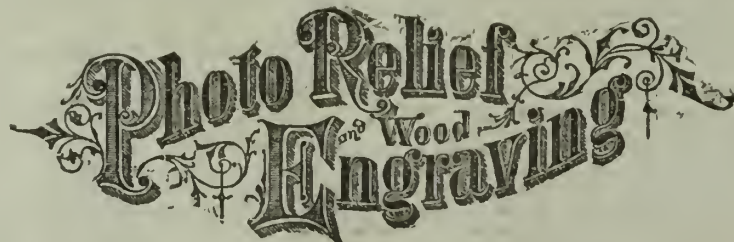
Anderson, Shasta Co., Cal.

P. S.—Send postage stamp for illustrated paper containing information about Shasta county and these lands, and say advertised in this paper.

## Location of Shasta County.

Shasta County lies not far from midway between the two most important ports on the Pacific shore, i. e., San Francisco and Portland, Oregon, and directly on the overland route, which in the future will become the grand thoroughfare from Mexico to British Columbia. The town of Reading, at present, and probably for years to come, the head of railroad transportation on the California side of the mountains intervening below Oregon, is distant from San Francisco by railroad (via Vallejo) 255 miles; from Sacramento City, 169 miles; from Marysville, 117 miles.

LAND FOR SALE OR RENT IN SUB-DIVISIONS.



The use of Photography in producing stereotype and electrotype plates for artistic and common printing, forms, comparatively, a new method, in which we are making continual improvements and executing different kinds of work, superior to any before issued. It also enables us to produce certain kinds of work at greatly reduced prices.

Designing and Wood Engraving of every variety in the best style of the art, continued as usual. All orders executed promptly and on the most reasonable terms. We guarantee satisfaction. For the credit of our own journals, our customers can rely upon first-class work of the styles desired.

**SCIENTIFIC PRESS ENGRAVING CO.,**

No. 202 Sansome St., S. F.

## SITUATION WANTED.

A Mechanic, 41 years of age, desires a situation on a Farm. Wages not so much of an object, for the first six months, as a wish to remove from the city for the winter, and to gain some general information of farm work, before going into the farming business for himself. Address,

**J. SHOERS,**  
No. 639 Mission St., S. F.

## F. A. ROBBINS.

MANUFACTURER OF

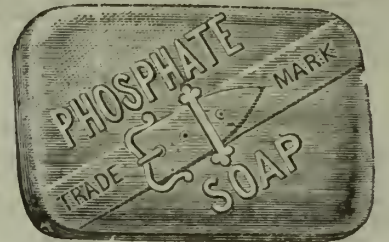
Canners and Soap Makers' Presses and Dies

**JEWELERS' TOOLS.**

**ELECTRICAL and MODEL MACHINERY.**

No. 7 First St., San Francisco.

## PHOSPHATE SOAP



THE BEST soap for toilet use ever manufactured. BEST because it contains all the excellencies of the most expensive foreign or American soaps without their defects. BEST because it combines strength with delicacy in such a way that its strong detergent qualities do not injure the skin. BEST because it is the result of years of study and experiment in the soap manufacturing business, assisted by modern chemical discoveries. BEST because it contains ingredients beneficial to the skin, which unite chemically with the soap in such a manner as to increase its saponaceous qualities. Every chemist familiar with soap manufacture knows that some ingredients which are in themselves beneficial to the skin cannot be saponified; some are partially neutralized, while others injure the quality of the soap. There are soaps in the market which are to some extent beneficial to the skin, but they are inferior articles for toilet use. PHOSPHATE SOAP is the ONLY article offered to the public which combines all the best elements of toilet soap with medical ingredients beneficial to the skin.

If you wish to make your hands soft buy a cake of PHOSPHATE SOAP, and when that is gone you will buy a dozen and recommend your friends to do the same.

Ladies who wish to make the skin look beautiful and natural should use PHOSPHATE SOAP.

For chapped hands the constant use of PHOSPHATE SOAP will be recommended by all who give it one fair trial.

## TESTIMONIALS.

SAN JOSE, September 21, 1879.

To the Standard Soap Co.—Gentlemen:

It affords me pleasure to say to the public that I have used and prescribed your PHOSPHATE SOAP as a remedy in various forms of cutaneous diseases with the happiest results. I am of the opinion that it is the mildest and most perfect detergent that can be used, either for cleansing the skin and leaving it soft and healthy, or for removing the fetor and corroding influences of sores and ulcerations. I should be sorry to be without it in shaving my face or making my toilet, to say nothing of my good opinion of its remedial qualities.

**A. J. SPENCER, M. D.**

SAN FRANCISCO, Aug. 27, 1879.

Gentlemen:

I received a package of your soap (Phosphate Soap) and it gives me great pleasure to testify as to its superior excellence. As a toilet soap I have never seen anything to surpass it. It also possesses superior remedial qualities. I have used it in two cases of obstinate skin disease, one of intolerable itching, Pruritus, the other an Eczema. In both great relief was obtained. Its emollient properties are remarkable. Respectfully,

**W. A. DOUGLASS, M. D.,**

126 O'Farrell St.

To the Standard Soap Company.

SAN FRANCISCO, July 19, 1879.

Standard Soap Co.—Gents:

I have tried your PHOSPHATE SOAP, and have no hesitation in saying that it is the best toilet soap I ever used. My wife has used it and is of the same opinion. I have paid as high as fifty cents per cake for an article in every respect inferior to what you sell for twenty-five cents. **HENRY H. LYNCH,**  
515 Haight street.

The genuine merits of PHOSPHATE SOAP and persistent advertising will force every druggist, groceryman and general dealer to order it by the gross sooner or later. Ask for it in every store. The retail price is 25 cents per cake. We wish to sell it only at wholesale, but in case you cannot find it we will send a nice box of three cakes by mail, postage paid, on receipt of 85 cents in stamps.

Address **STANDARD SOAP CO.,**

204 Sacramento St., San Francisco



**Popular Music Books.**

**Temperance Jewels.** New Temperance quality. 30 cts. (Nearly ready.)

**White Robes.** The Sweetest Sabbath School Song Book ever made. 30 cts.

**Gem Gleaner.** Superior collection of Anthems for Church Service. \$1.00.

**Prodigal Son.** A grand Cantata. By SULLIVAN. Commended to Musical Societies. 75 cts.

**American Glee Book.** Mixed Voices. One of the very best Glee and Chorus Books. \$1.50.

**Emerson's Vocal Method.** For Voice Training. One of the very best. \$1.50.

**Dr. of Alcantara.** Fine Opera. Good Music and easy to give. \$1.50.

Specimens of these or any other books, or any piece of Sheet Music mailed anywhere, post free, for the retail prices.

**OLIVER DITSON & CO., BOSTON.**

C. H. Ditson & Co., 843 Broadway, N. Y.

P. JONES.

J. THOMPSON.

**JONES & THOMPSON,**

Wholesale and Retail Dealers in

**Hay, Grain and Feed.**

Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,

1535 Mission St., San Francisco.

M. COOKE.

R. J. COOKE

**PIONEER BOX FACTORY,**

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

**Fruit and Packing Boxes Made to Order, AND IN SHOOKS.**

Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREGORY.

**PLEASANT SUMMER READING.**

**THE NEW PENELOPE**

— AND —

**Stories of California Life.**

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. Agents wanted for this popular work. Easy sales and large commissions. Address

MRS. F. F. VICTOR,

721 Market St., S. F., Bancroft's Building, top floor.

PRICE, \$2 00.

**MONEY TO LOAN**

AT LOWEST RATES

**On Country Real Estate and Grain in Warehouse.**

McAFEE BROTHERS.

202 Sansome Street, San Francisco.

**A Card to Grangers and Farmers.**

HAY, GRAIN, HORSES and CATTLE.

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nos. 11 and 13 Bluxome St., San Francisco.

TRADE



MARK.

**LITTLE'S CHEMICAL FLUID.**

The New Non-Poisonous Sheep Dip and Disinfectant. Price reduced to \$1.00 per gallon. For directions and testimonials apply to FALKNER, BELL & CO., Sole Agents, 430 California Street, S. F.

**SEND FOR THE**

**\$1.50**

**Homœopathic Medicine Case.**

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address BOERICKE & TAFEL,

Homœopathic Pharmacy, San Francisco.

**Agricultural Books.**

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.

**Nathaniel Curry & Bro.,**

113 Sansome Street, San Francisco,



Sole Agents for the

**Sharps Rifle Co., of Bridgeport, Conn.**

FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO.

Also Agents for W. W. GREENER'S Celebrated Wedgefast, Chokebore, Breech-loading DOUBLE GUNS; and all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America. AMMUNITION of all kinds in quantities to suit.

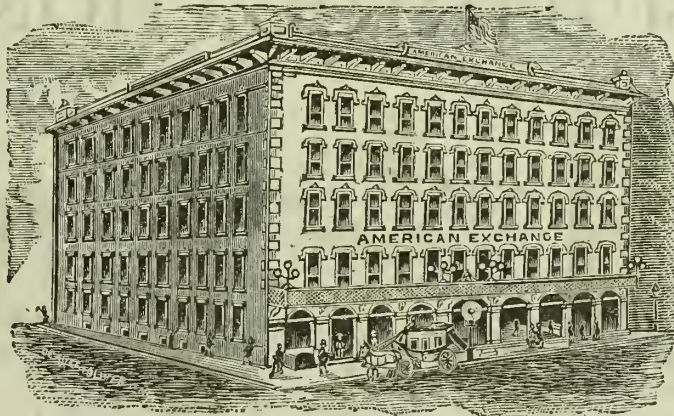
**The American Exchange Hotel,**

SAN FRANCISCO, CAL.

Is situated on Sansome street, next adjoining Bank of California, and is in the very center of the great city.

Sansome Street is one of the finest and principal business streets in S. F.

The Hotel is situated within two blocks of the U. Land Office and U. S. Surveyor General's Office; also within



two blocks of the City Hall, Supreme Court and all the District Courts; within two blocks of the Postoffice and Custom House. All places of amusement are convenient to the Hotel. Street cars for all parts of the city pass the Hotel every minute.

**THE AMERICAN EXCHANGE HOTEL**

Having been recently renovated and refurnished throughout in every respect the BEST FAMILY HOTEL. San Francisco. It has Two Hundred Rooms, well ventilated and neatly furnished, and being easy of access, fire-proof and sunny is decidedly the Hotel for comfort and convenience for the traveling public.

— OFFICE OF THE —

**BLACK POINT PACKING AND SLAUGHTER HOUSE.**

MERRY, FAULL & CO., Proprietors.

**TO OWNERS OF LIVE STOCK!**

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

**SQUARE DEAL and FULL MARKET PRICES**

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices. Please address our

Principal Office, No. 125 & 127 California Street, San Francisco.

In consequence of spurious imitations of

**LEA AND PERRINS' SAUCE,**

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature thus,

*Lea & Perrins*

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

WELLS, RICHARDSON & CO'S

**PERFECTED****BUTTER COLOR**

Gives Butter the gilt-edge color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.

60 Elegant Perfumed Cards, Chrono, Motto, Lily, Etc., 15c. Gift with each pack. H. M. SMITH, Clintonville, Ct. YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

**MONEY | FOOD**

For Farmers. For Hogs.

**CHEAP PORK.****The Brazilian Artichoke,**

Is the cheapest and best food for Hogs, being ahead of anything in existence for that purpose. 600 to 1,000 bushels to the acre. Little trouble. No harvesting. No feeding. The Hogs will help themselves if allowed to do so.

I have eight acres of Artichokes this year, and will furnish seed for half the price of last year, when my seed cost me 25 cents a pound.

PRICE—I will send by Express or common freight, 50 to 300 lbs. at 3 cents a pound. Over 300 lbs. 3 cts.; 1,000 lbs. and over, 2 1/2 cts.; 3 lbs. by mail for \$1. I will send a circular with each package giving all information. Send all money in draft on San Francisco or P. O. Order on Hollister Post-office.

Winter is the best time to ship Artichokes. Frost does not hurt them.

150 lbs. plants an acre.

For further information send for circular. Address

J. H. F. GOFF,

San Felipe, Santa Clara County, Cal.

**THE WILSON ADJUSTABLE CHAIR,**

With 30 Changes of Position.

Patented in the United States and Foreign Countries. BEST CHAIR IN THE WORLD.

Parlor,	Combining
LIBRARY,	Beauty,
Invalid Chair	Lightness,
Rocking,	Strength,
BED or	Simlicity
LOUNGE.	and
	Comfort.

READING POSITION.

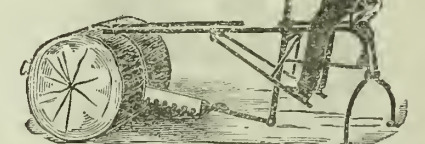
Same Chair in Cane Seating, very desirable for summer. Manufactured of the best of wrought iron and rivets. Castors made purposely for the Chair. Everything to an exact science. **IT WILL LAST A LIFETIME.**

Has been awarded Medals, Prizes and Diplomas for its superiority and merit wherever it has been exhibited.

Orders by mail promptly attended to. Goods shipped to any address. C. O. D. Send for Illustrated Circular.

Address the WILSON ADJUSTABLE CHAIR MFG CO., 535 Washington St., Boston

Sawing off a Log,  
Easy and Fast.



Our latest improved sawing machine cuts off a 2-foot log in 2 minutes. A **\$100 PRESENT** will be given to two men who can saw as much in the old way, as one man can with this machine. Circulars sent free. W. GILES, 741 W. Lake St., Chicago, Ill.

**ST. DAVID'S.**

A FIRST-CLASS LODGING HOUSE. CONTAINS 113 ROOMS.

715 Howard St., near Third, San Francisco.

This House is especially designed as a comfortable home for gentlemen and ladies visiting the city from the interior. No dark rooms. Gas and running water in each room. The floors are covered with body Brussels carpet, and all of the furniture is made of solid black walnut. Each bed has a spring mattress, with an additional hair top mattress, making them the most luxurious and healthy beds in the world. Ladies wishing to cook for themselves or families, are allowed the free use of a large public kitchen and dining room, with dishes. Servants wash the dishes and keep up a constant fire from 6 A. M. to 7 P. M. Hot and cold baths, a large parlour and reading room, containing a Grand Piano—all free to guests. Price single rooms per night, 50 cts.; per week, from \$2.50 upwards.

R. HUGHES, Proprietor.

At Market Street Ferry, take Omnibus line of street cars to corner Third and Howard.

**Mission Rock Dock and Grain Warehouse.**

San Francisco, Cal.

40,000 tons capacity. Storage at lowest rates.

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. - - Proprietors.

Office—318 California Street, Room 3.

**CARP FISH FOR SALE**

— BY —

LEVI DAVIS,

At Forestville, Sonoma County, California, IN LOTS TO SUIT.

GILES H. GRAY.

JAMES M. HAVEN.

**GRAY & HAVEN,**

Attorneys and Counsellors-at-Law,

In building of Pacific Insurance Co.,

Corner California and Leidesdorff streets, San Francisco.

**WELL AUGER.**

Ours is guaranteed to be the cheapest and best in the world. Also nothing can beat our SAWING MACHINE. It saws off a 2-foot log in 2 minutes. Pictorial books free. W. GILES, Chicago, Ill.

62 Gold, Crystal, Lace, Perfumed & Chrono Cards, nam in gold and jet, 10c. Clinton Bros., Clintonville, Ct.



# LATEST WINCHESTER REPEATER.

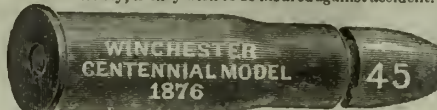
MODEL 1879—TARGET RIFLE—45 CALIBRE, 60 GRAINS POWDER.



With Pistol Grip, Vernier and Wind Gauge Sights.

Uses Central Fire Cartridges (straight shell) 45 calibre, 60 grains Powder, 300 grains lead. This splendid Gun is perfection as a Sporting Rifle, for defense or as a target Rifle.

**CAUTION!** The W. R. Arms Co. manufacture Cartridges for their own arms, and persons are hereby cautioned against using those made by any other Cartridge Companies who have no interest in such arms or their efficiency, if they wish to be insured against accident.



The SAN FRANCISCO AGENCY is now fully supplied with this splendid Arm—Standard blued or extra finish—set or plain Trigger. Also with the

## New Winchester Express Rifle,

50 Calibre, straight Cartridge, 95 grs. powder, 330 grs. lead. Also the

## NEW HOTCHKISS REPEATER,

Just out, using the U. S. Government Cartridge, 45 calibre, 70 grains powder. Both Sporting and Military styles of this fine Arm are ready for delivery to the trade. Also a large and complete stock constantly on hand of Models, 1866, 1873 and 1876, as well as all other kinds of goods manufactured by the Winchester Repeating Arms Co., viz:

## CARTRIDGES,

Both RIM and CENTRAL FIRE, by the million, for all kinds of Rifles and Pistols.

Brass and Paper Shot Gun Shells, Primed Cartridge Shells, Reloading Tools, Primers, Percussion Caps and Gun Wads.

**JOHN SKINKER, 115 Pine St., S. F.,**

Sole Agent for the Pacific Coast.

M. W. DUNHAM

Just Imported 36 Head

FOR HIS OAKLAWN STUD OF

**Percheron-Norman  
HORSES.**



Largest and Most Complete Establishment of the Kind in the World.

More than 200 Stallions and Mares

Imported from Best Stud Stables of France.

Winners of First Prizes in Europe and America, awarded First Prizes and Gold Medals at the Universal Exposition at Paris, 1878, over all. First Prizes and Grand Medals at Centennial Exhibition, 1876.

The public appreciation of its merits is indicated by the great demand for stock from every part of the country. During the past twelve months, the provinces of New Brunswick, Canada, and the States of New York, Pennsylvania, Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Nebraska, Kansas, Texas, Louisiana, Colorado, Nevada, California and Oregon, and Utah, Washington and Idaho Territories have drawn supplies from its Stables.

100-page Catalogue—finest thing of the kind ever issued; 25 pictures of Stallions and Mares, sent free on application.

M. W. DUNHAM,

Wayne, DuPage County, Illinois.

**W. R. B.—All Imported and Pure Native Bred Animals Recorded in Percheron-Norman Stud Book.**

1879-80.

**W. R. STRONG & CO.,**

Field, Garden, Lawn and Tree  
**SEEDS.**

Our stock is FULL, FRESH and RELIABLE. In these essential particulars we claim to be unsurpassed. We have largely increased our list of varieties by importations from the best growers in the East and Europe. We make specialties of

**ALFALFA, RED CLOVER,**  
Timothy, Red Top, Kentucky Blue Grass,  
HUNGARIAN GRASS, MILLET,  
Mesquit Grass, Lawn Grasses, Etc.

Also, DUTCH FLOWERING BULBS of every description. Catalogue mailed free on application. We also do a

**Wholesale Commission Business,**

Handling all kinds of California and Tropical, Green and Dried Fruits, Nuts, Honey and General Merchandise.

All orders promptly attended to. Address

W. R. STRONG & CO.,

6, 8 and 10 J Street, Sacramento, Cal.

**Patents**  
OBTAINED IN U. S. AND FOREIGN COUNTRIES: copyrights registered through DEWEY & CO.'S MINING AND SCIENTIFIC PATENT AGENCY, San Francisco. Send for free circular.

# SUB-IRRIGATION.

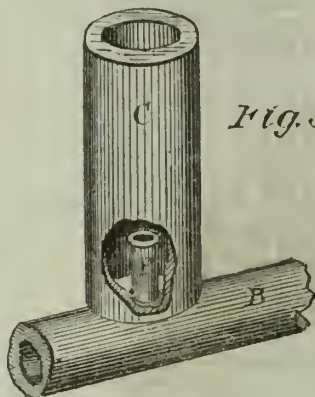


Fig. 3.

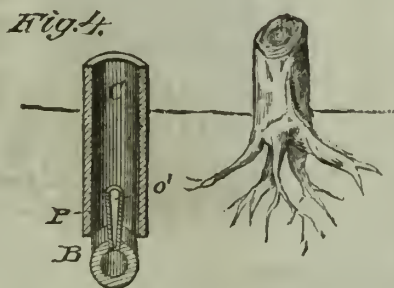


Fig. 4.

—FOR—

**Orchards, Vineyards, Small Fruits, Alfalfa,  
Lawns, Vegetables, Etc.**

The Asbestine System consists in conducting the water in concrete pipes laid below reach of the plow.

It saves from three-fourths to nine-tenths the water used in surface irrigation.

It is under perfect control, and can be applied wherever irrigation is needed.

The surface remaining dry there is no need of Summer Cultivation, either before or after irrigating.

The soil is never excessively wet and cannot bake, but remains moist, loose and at a nearly uniform temperature, promoting a long-continued Summer's growth.

Anything which the soil lacks as plant food (manure, lime, etc.,) can be easily, directly and economically applied in liquid form; the pest of the vineyard—phylloxera—can thus be easily reached.

No grading is necessary, as the system works perfectly on hillsides and undulating land.

Roots cannot get into the pipe, neither can it suck mud—difficulties never overcome by any other system of sub-irrigation.

The pipe is made continuously with a recently patented machine which makes and lays it in the trench, following all the undulations and curves.

Water is not kept in the pipes; but is applied about twice a month.

Three men will easily lay 1,200 feet of two-inch pipe in 10 hours.

This system and machines used are fully protected by U. S. Patents.

Our pipe machine makes the cheapest and best tile drain known. Nothing can compare with it in cheapness and durability.

For further information, circulars, etc., address

**Asbestine Sub-Irrigation Co.,**

Los Angeles, Cal.

**Geo. F. Silvester,**

IMPORTER, WHOLESALE AND RETAIL DEALER IN

**SEEDS,**

**Fruit and Evergreen Trees, Plants, Etc.**

**ALFALFA, GRASS AND CLOVER SEEDS**

In large Quantities and offered in Lots to suit Purchasers.

GREAT REDUCTION IN PRICES.

Seed Warehouse, 317 Washington Street, San Francisco.

**Baling  
Fencing  
Telegraph  
Telephone  
Galvanized**

**WIRE**

**Barbed Fence Wire.**

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the  
Trademark.



**A. S. HALLIDIE**

Wire Mills.

Office, No. 6 California St.

SAN FRANCISCO.

**WIRE ROPE and CORDAGE**

Of every kind on hand or Made to Order.

**R. J. TRUMBULL & CO.,**

SUCCESSORS TO

**R. J. TRUMBULL,**

Growers, Importers, Wholesale and Retail  
Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

"Guide to the Vegetable and Flower Garden" will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

**R. J. TRUMBULL & CO.,**  
419 and 421 Sansome Street, S. F.

**LOS ANGELES NURSERY.**

The undersigned will furnish Fruit Trees of all kinds at low rates. We offer an unusually large stock of

Apple, Peach and Apricot Trees,

— ALSO —

Orange and Other Fruit Trees.

Our Trees are free from Disease or Blight of any kind. We have

**WOOD'S EARLY APRICOT.**

That bears four weeks earlier than any known variety.

We also have new Apples and Peaches of much promise.

Send for catalogue at once.

**MILTON THOMAS,**

Los Angeles, Cal.

**JAMES HANNAY'S NURSERY,**

SAN JOSE, CAL.

I offer for sale at low prices a well assorted stock of one-year-old

Apple, Pear and Cherry Trees.

Also, a large stock of Apricot, Peach, Pear, Cherry and Plum, in the dormant bud, for \$60 per 1,000. Address

**JAMES HANNAY, San Jose, Cal.**

**GOOD CROPS EVERY SEASON.**

Productive farms for sale on easy terms in Santa Cruz and adjoining counties. State requirements and obtain suitable particulars from the Real Estate

**EXCHANGE & MART,**

Santa Cruz, Cal.

METTRICK & Co., Insurance and Money Brokers and Agents

**TAKE NOTICE!**

To those contemplating planting ORANGE and LEMON Trees, I would recommend only the Best Varieties of

**THORNLESS TREES.**

Catalogue containing full particulars furnished free on application. Address

**THOS. A. GAREY,**

P. O. Box 188, Los Angeles, Cal.

This paper is printed with ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 120 Sutter St., S. F.





Volume XVIII.]

SAN FRANCISCO, SATURDAY, DECEMBER 20, 1879.

Number 25.

### Cotton Culture in California.

The Superintendent of the Tenth census of the United States, which will be prepared during the coming year, has decided to make a special examination of the cotton-growing industry, and to embody the results obtained thereby in a separate volume. The direction of this work has been entrusted to Prof. Hilgard, of the California State University, and under his guidance the facts will be collected by agents, and by means of communications from local growers of cotton everywhere. Prof. Hilgard has sent us a copy of the schedule of questions, which will be sent to cotton growers for answer in their reports, and he desires us to state that he would be pleased to receive facts relating to cotton growing on this coast from anyone who is willing to communicate them. We trust that all who have had experience in cotton growing here or who may now be engaged therein, will address Prof. Hilgard and give him the facts they possess, in order that the history of cotton growing on this coast may be fully written.

The chief points to be established concerning the cotton crop of the country are the comparative results upon different soils, different modes of culture, different conditions of climate, with and without fertilizers, etc. Also facts are asked concerning harvesting, ginning, baling and shipping, and the diseases or insect depredations to which the plant is subject. Under each of these and other leading headings there are many questions asked, and the result will be a most complete monograph on the production of cotton in the United States, and one which will be of value the world over.

The chief importance of this movement to us will lie in stimulating the inquiry into the possibility of profitable cotton growing upon favoring locations in this State. Some little has been done already but nothing of general character. A reporter of the *Call* has been collecting facts from city authorities, and from his presentation of the subject we take the following: "The present season 130 bales have been received here, and the production for the year will probably reach 500 bales. Each bale contains 550 lbs., being considerably heavier than those packed in Louisiana and other Southern States. In 1870, the first year that any cotton was grown in the State, 34 bales were produced. Since then the production has been irregular—one season it reached nearly 300,000 lbs. while last year it was but 163,000 lbs. Most of the cotton received here is grown on the banks of the Merced, near Hopeton, although it has been raised successfully on the King's river and other points in the San Joaquin valley, as well as in Los Angeles county. There is a large area of land in the southern section of the State especially suited for the cultivation of cotton, and whenever the time arrives that proper inducements are offered in the way of manufacturing advantages and the cultivation shall be carried on understandingly, California may reckon cotton as one of her staple productions. Heretofore there has been little encouragement held out to those desiring to engage in its cultivation—the demand has been irregular and the want of care in preparing the land and caring for the plant as well as picking and placing it in the market has not had the effect of improving the standard quality of the production. California cotton ranks with New Orleans middlings in the market; the staple is rather short, but the color is superior and if the same care was taken in the choice of seed and selection of land as is given to the cultivation of fruits and cereals, there is little doubt that it would take a high place in the estimation of manufacturers."

We understand that most of the cotton now produced in this State is used in our woolen mills for improving "all wool" goods. The production, if extended, would of course soon outgrow this demand, and "cotton mills" would be a necessity. A friend of ours at the East, who is in the cotton manufacturing business, assured us some time ago that there would be no lack of capital to invest in a cotton mill on this coast as soon as the production of the staple was certain. The inquiry as to our adaptations for growing is consequently of the highest importance, and we trust success may be foreshadowed by it.

### A Christmas Symphony.

I.  
Oh, Christmas stars! Your pregnant silentness  
Mute syllabled in rhythmic light,  
Leads on to-night,  
And beckons, as, three thousand years ago,  
It beckoning led. We, simple shepherds, know  
Little we can confess,  
Beyond that we are poor, and creep  
And wander with our sheep,  
Who love and follow us. We hear,  
If we attend, a singing in the sky,  
But feel no fear,  
Knowing that God is always nigh,  
And none pass by  
Except His Sons, who cannot bring  
Tidings of evil, since they sing.

II.  
Oh, not alone because His name is Christ,  
Oh, not alone because Judea waits  
This man-child for her King, the Star stands still  
Its glory reinstates,

And wisdom shall come seeking it, with gift,  
And worship it, with myrrh and frankincense;  
And angels shall tremble if it lift  
Its hand against a throne.  
But mighty in its own  
Great feebleness, and safe in God's defense,  
No harm can touch it, and no death can kill,  
Without its Father's will!

IV.  
Oh, not alone because His name is Christ,  
Oh, not alone because Judea waits  
This man-child for her King, the Star stands still.  
The universe must utter, and fulfill  
The mighty voice which states—  
The mighty destiny which holds,  
Its key-note and its ultimate design.  
Waste places and the deserts must perceive  
That they are priced,  
No less than gardens in the Heart Divine.  
Sorrow her sorrowing must leave,  
And learn one sign  
With joy. And Loss and Gain  
Must be no more.  
And all things which have gone before,



MADONNA DELLA SEDIA—Raffaello.

Beyond humiliation's utmost ill,  
On peerless throne, which she alone can fill,  
Each earthly woman. Motherhood is priced  
Of God, at price no man may dare  
To lessen, or misunderstand.  
The motherhood which came  
To virgin, sets in vestal flame,  
Fed by each new-born infant's hand,  
With Heaven's air,  
With Heaven's food,  
The crown of purest purity revealed,  
Virginity eternal signed and sealed  
Upon all motherhood!

III.  
Oh, not alone because His name is Christ,  
Oh, not alone because Judea waits  
This man-child for her King, the Star stands still.  
The Babe has mates.  
Childhood shall be forever on the earth;  
And no man who was hurt or lightly priced  
So much as one sweet hair.  
On one sweet infant's head,  
But shall be cursed! Henceforth all things fulfill  
Protection to each sacred birth.  
No spot shall dare  
Refuse a shelter. Beasts shall tread  
More lightly; and distress,  
And poverty, and loneliness,  
Yea, and all darkness shall devise  
To shield each place wherein an infant lies,

And all things which remain,  
And all of Life, and all of Death be slain  
In mighty birth, whose name  
Is called Redemption! Praise!  
Praise to God! The same  
To-day and yesterday, and in all days  
Forever! Praise!

V.  
Oh, Christmas stars! Your pregnant silentness,  
Mute syllabled in rhythmic light,  
Fills all the night.  
No doubt, on all your golden shores,  
Full music rings  
Of happiness  
As sweet as ours.  
Midway in that great tideless stream which pours,  
And builds its shining road through trackless  
space,  
From you to us, and us to you, must be  
Some mystic place,  
Where all our voices meet, and melt  
Into this solemn silence which is felt,  
And sense of sound mysterious brings  
Where sound is not. This is God's secret. He  
Sits centered in his myriads of skies  
Where seas of sound and seas of silence rise,  
And break together in one note and key,  
Divinely limitless in harmony!

—H. H.

### Irrigation Errors in India.

Students of irrigation in this State have naturally turned to the immense projects prosecuted by government money in India, and studied them to gain light for the solution of our own problems. It is well to note that recent experience is proving that the most magnificent governmental enterprises alone will not succeed in winning benefits unless the water is used wisely. This reflection is of course a trite one, but it seems it has been overlooked by those who have hailed irrigation as the one agency to make India prosperous. It seems that the ryots or native cultivators absolutely know nothing of the manner of using water for the greatest advantage. His only idea is to drench his land until it becomes a swamp, and, though in many cases he is protected from the natural results of his ill-advised practices, he only escapes them by the natural advantages he so often falls in with in river deltas, etc., where irrigation is most widely extended, and where often admirable subsoil drainage is naturally provided. One natural result of the ryot never looking to the drainage of his land is the formation of alkali spots, as has been the case in Upper India, and as is the case on the black clay soil, where the Madras Irrigation Co. is endeavoring to extend the use of water among the natives. These results might, one would think, have been foreseen, for drainage either natural or artificial must be an attendant of copious irrigations.

The account which we have read of the practical working of irrigation in India, gives an instance of the failure of a large scheme for the cause named. It is stated that the Madras Irrigation Co. was formed to carry out a scheme of Sir A. Cotton's, it has sunk all its capital, and is largely in debt to the Indian government for sums which have been advanced on the security of the works. With the engineering part of the works or its cost, the writer is not concerned; but regarding the design, no one, who knows anything of the physical properties of soils can doubt but that failure was courted from the first in this case. A stiff, heavy clay soil, covering widespread plains with little surface fall, undrained, naturally or artificially, uncommonly retentive of water, as has been proved by the experience of many dry seasons, and by experiments in the laboratory, is not, as can be easily understood, fit for irrigation, unless under the most skillful management. The ryot, if he is skillful in any of his processes of husbandry, is totally destitute of any skill in the management of irrigation water. Can it then be surprising that on such lands irrigation is not remunerative? This Indian experience it would be well to bear in mind whenever irrigation under similar natural conditions is attempted elsewhere.

HORTICULTURAL SOCIETY MEETING. — The next meeting of the State Horticultural Society will be held at Y. M. C. A. Hall, 232 Sutter street, S. F., on Friday, Dec. 26th, at 1 P. M. The Society will try another hall in the same building, this time to determine whether its acoustics are better adapted to its use. There is no set subject for discussion, but it is expected that each member will come prepared to say something concerning the horticultural lessons learned during the year 1879. It is probable that papers on interesting subjects will also be read. An entertaining feature of the last meeting was the exhibit of fruit. This may be much extended at the next meeting and all who have something fine in late fruits would do well to bring samples with them. It will also be timely to make a comparative exhibit of Japanese persimmons by all who have them ripening. The early birds of the orange crop will also be welcomed. Anything which the grower who cannot be present, may desire to exhibit may be sent in care of the secretary, Mr. Wickson at 414 Clay street. Let there be a full attendance and an interesting discussion of experiences.

THE *Contra Costa Gazette* reports that S. B. Martin has sold his Santa Rita Rancho property in the Amador valley, comprising some 16,000 or 18,000 acres, at the rate of \$90 an acre.





## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

## The Good Offices of a Botanic Garden.

EDITORS PRESS:—No enterprise is perhaps of more general benefit, while at the same time its importance is less appreciated and understood than that of a botanic garden. Many persons imagine that it is some kind of a garden where all sorts of strange plants are cultivated merely for the benefit of a handful of botanists, gardeners and a few other silly persons; only a place for curiosities where a few hours once in a while may be spent to see these oddities. The majority of people have no comprehension of the vast benefits, financial as well as moral and scientific, that might be derived from a place of this kind if well conducted and well located.

The feverish excitement in the race for riches, young and old too often find themselves in, and its fatal results seen almost every day, are things every thoughtful person deploras, and anything which would counteract this tendency, by strengthening man's moral character, ought to be welcomed. I believe that few things have in this respect such good results as the study of nature, the calm contemplation of the silent life around us. The business man tired of financial speculation seeks the country to find rest among the dumb creations. He finds recreation in the change; he admires the beautiful form of the flowers, their colors and odors, but only for a moment. The impression passes away, and he does not understand why the longing he often felt when surrounded by the gray walls of the city has been but so imperfectly satisfied. But is not the reason this, that nature's book showing all these pretty pictures has a text written underneath with letters unfamiliar to him? Let him learn the alphabet, and objects so humble as never before attracted his attention will now be admired more than formerly the most gorgeous flower.

Now one of the objects of the botanical garden is to awaken an interest in the vegetable kingdom by presenting to the eye all the complex and wonderful structures it contains, that some of them may impress themselves on the spectator, arouse his admiration and stimulate his curiosity to learn and understand something of what he sees. It ought, furthermore, to be the aim of the botanic garden not alone to create this curiosity for botany, but to facilitate its study by having the collections arranged in as natural a manner as possible. The arrangement should have usefulness in view without disregard of taste, it should, as much as possible, represent the plant in its natural state of development with the least possible amount of artificial training; in short, as near the image of wild nature as practicable.

The promotion of botany and horticulture in general is, in older countries, almost the sole aim of the botanic garden—the plants, valuable for general culture, being so well known that new introductions are but seldom added to the list of important plants. Not so with California—a State but thirty years old in American civilization—with climatic and commercial facilities almost unparalleled. Every year private enterprise adds to the long list of plants which already have been found useful for some portion of this State. But if private enterprise is successful, should we not suppose that a general, well-organized plan of this kind would accomplish much greater results? We can here readily gather the productions of the northern and southern temperate zone, and many plants from sub-tropical countries have proved hardy here. Plants from high elevations in the tropics, heretofore considered useless for other localities but those similarly located, as the Cinchona or Peruvian bark tree, have in Australian low-lands proved hardy, and since many plants, indigenous to that country almost, seem to have found a home here, there is no reason why we should not have corresponding success in other respects.

Cultivation renders plants cosmopolitan, as the same race of civilized people find homes in the most diverse climates. Our long cultivated cereals, such as wheat and barley, have an immense range and diversity, some varieties requiring almost twice as long for their development as others. Although among trees and shrubs there are fewer examples of the adaptability and pliancy of their varieties, there are instances enough to prompt experiment in this line. Plants raised in the central botanical garden should from there be distributed to the various gardens of economic plants to be established in connection therewith. The good that might be accomplished in this manner seems to me to be sufficient to give a garden of this kind the support of all practical and thinking men.

But it must be remembered that a botanical garden could not be established with equal success in any part of the State. It should be within easy reach of communication from all directions, and the coast, with its most uniform climate, offers the best condition for the largest variety of forms. Its place should be there, and as near the commercial and populous center as possible, yet without being loaded down with its incumbrances and burdens. It should not be a part of a pleasure resort, but a garden founded for its own sake, where its aims should not be overlooked for the sake of show or pecuniary speculations. As a matter of course as many species of plants as possible should be

grown outdoors that their true character might be seen, and a naturally sheltered location ought always to be preferred to one artificially protected. It becomes the State at large to support an enterprise of this kind, and as an educational element, it ought to be connected with the highest institution of learning, for here it should naturally be supposed to exert its best influence, and the supervision and guidance it would need would likewise readily be found here.

W. G. KLEE.

Berkeley, Cal.

## Marin County.

EDITORS PRESS:—Marin is a small county compared with most of the counties of the State. The north and northeasterly boundary is Sonoma county, the east is Bay of San Pablo and San Francisco bay, and south and west the ocean. Having so large a proportion of waterfront, its boundary lines are very irregular, by reason of bays and inlets which serve as valuable thoroughfares for transportation. The abundance of moisture from the daily fogs, floated inland from the ocean, ensures coolness in the climate and luxuriant growth of vegetation. Stock men early discovered its value, especially for dairy purposes, and soon demonstrated the fact that a good butter could be made in California, and slowly and gradually the Eastern importations were superseded by Marin county butter; that now challenges even the far-famed Orange county butter to compete with it as to quality, and in quantity they far excel the palmist days of that famed butter county. Marin scarcely plows at all, and Orange county always plowed and carried on general farming with the dairying.

## New Switzerland.

Perhaps no single county in the United States ever contained as many milk cows as this little "New Switzerland," as it is sometimes denominated, owing to the large number of Swiss now owning or renting ranches here. They seem to have great faith, if not sufficient to remove mountains, ample to use them from base to summit, and compel them to yield golden butter for the maintenance of their families. They are not agitators, nor do they propose to remodel our Government before they are naturalized citizens. They are industrious, peaceable and intelligent citizens, learning to speak and read our language, and sending their children to the public schools, not as grumblers, but as supporters. In some neighborhoods, after finishing their task of milking, the adults attend an evening school to get the rudiments of a practical English or rather American education. I called at the ranch of a Swiss renter near Olema and found them engaged in milking their 140-cow dairy. The proprietor (an old subscriber to the *RURAL*) could speak and read a little American, but his helpers could scarcely speak any. That evening they were all at night school, taught by a qualified teacher of the district school, with the full blackboard drill. This little accidental discovery of how some of the dairy boys spend the winter evenings is mentioned as worthy of imitation by others.

I have not the data of exact figures as to the number of cows in the county; but in the immediate vicinity of Novato they estimate fully 2,000 dairy cows. There is some talk of organizing a company for sending milk to the city, as the San Rafael and Petaluma railroad passes right through this valley, and will afford speedy conveyance.

One of the elements of discouragement to the enterprise is the doubt expressed whether pure rich milk would be appreciated or even tolerated by those unaccustomed to its use. The low prices of butter and the high rents paid for cows and pastures dispose the dairymen to experiment for some new channel of trade. The present milk supply in the city seems to be ample, and their headquarters, on Eddy street, has often a surplus beyond any present demand, which makes the prospect for new enterprises in milk-dairying not very promising.

## Novato

Lies on San Pablo bay, and comprises many excellent hill, valley and some marsh farms. A navigable slough gives them cheap freighting to the city. The village is small and not well compacted. I doubt if entitled to the name of village, as their mail matter must be addressed "Black Point" to reach Novato.

Much improvement has been made in this part of the county since my former visit, and several residences built.

The noted ranch of Sweetzer & DeLong (13,000 acres) is divided into eight 100-cow dairies, with choice stock and good outfittings. The home mansion is retained by Mr. F. DeLong as a fruit ranch; his old partner, Mr. J. Sweetzer, taking about 1,000 acres near Novato, is elegantly improving it as a home. Mr. Losee, his brother-in-law, who will have charge of the dairy, is also very comfortably located in entirely new buildings on the same tract.

## Fruit, Cider and Vinegar.

The Sweetzer & DeLong fruit, sweet cider and pure cider vinegar have made an enviable reputation on this coast. The day I was there he filled an order for 100 barrels of vinegar; sold to a San Francisco dealer. The vinegar depot was being filled up with cider; a tier of over 500 barrels ranked along the entire length filled either with cider or vinegar. In front of them were 22 tanks, each 90 barrels capacity, and a

few other tanks of much larger capacity were all either filled or to be filled before the steampower crusher and presser would cease its labors. The sweet cider is made from sound, perfect fruit, and filtered through a white-sand filter, and when brought to its highest purity is kept in barrels or bottles free from the action of the atmosphere and light. To those desiring the pure article, this seems to be far ahead of anything that would be ordinarily made as pure cider. I tasted some that had been bottled five years, as sweet cider. It was almost syrup for richness, and though old was not rough, hard cider. The visit would be incomplete unless you passed through the great

## Fruit Store-House.

Where the choice winter apples are stored in boxes, and as you pass along they will say we have so many thousands of this, and here are so many thousands of boxes of another kind—all selected and choice for marketing in winter and late spring. From this basement story you go into the main building above, which also has a driveway through it, and is burdened with hoxed fruit that would be marketed first. Here several white men and one Celestial were assorting over and reboxing for the market.

A 200-acre orchard adjoins this store-house. The orchard contains 30,000 apple trees, pears 3,000, apricots 3,000, peach 1,000, and 8,000 to 9,000 grapevines. The grapes were sold by the ton in San Francisco, for wine making, at good prices—\$25 or more per ton. Mr. DeLong has employed 30 men in the orchard for the last three months, and an average of 20 men for the year; and only two Celestials, though they excel in fruit handling. This condensed schedule does not do justice to the ranch, nor to the cordial welcome of his foreman and bookkeeper, who took pains to show me much more than I have noticed. I fully intended to repeat my visit, and note more items of interest.

Mr. DeLong's experiments on fruits seem to be entirely of a practical nature—nothing done for show or brag, all utility and economy; and while others are denouncing all kinds of fruit and vine business as overdone, he will go on preparing to utilize every product of tree and vine. Sonoma county has many successful fruit growers, but Marin county almost entirely neglects fruit culture.

## Other Establishments.

J. B. Redmond's fine stock and dairy ranch, lying about three miles west of Novato, has been doing much in breeding improved stock, and generally carries off a portion of the prizes at the Petaluma fairs.

Dr. Galen Burdell holds a large tract of grant land. Has most of it rented out in convenient sized dairy farms, some of which are neatly fitted up. The Doctor's own residence is homely (in its true sense), grounds highly decorated with rare plants and flowers, and his park the home of many tree-squirrels and birds. His lands extend up to the Sonoma county line, and include some of the choicest tracts of the county.

Spanish grants that covered much of the best lands of the county are now divided into convenient sizes to have all utilized. The Throckmorton grant of 16,500 acres, extending from Sancelito to Bolinas bay, takes in a large extent of coast hills, apparently less valuable than those interior. About three miles out of Sancelito you drive through a self-opening iron gate, which closes after you. Now you are in a well-fenced field. By an excellent road through this tract you can travel about 12 miles, passing over high hills on a splendid graded road, giving a fine view of the ocean above the Golden Gate, and only seeing one or two ranch houses till another iron gate opens by the touch of your wheel and lets you out on the shore of Bolinas bay. This vast field is pastured by various parties, at so much per head. It would not be worth fencing in small tracts. Marin county has many attractions for the hunter, fisher and tourist, and some for the wearied. All who visit it will carry away cherished recollections.

Dec. 1st, 1879.

B. W. C.

## Dr. Simms' Farewell to His Critics.

EDITORS PRESS:—When I wrote my first article I expected it would be attacked by just such a class of critics. I spoke of the old foggy way of going to mill. It is so with all innovations upon long established customs, let them be false or true. I did not say "sunshine" would accomplish everything. I said nature fertilized by adding new material to the top, then fertilized with sunshine and rain. Why have those who have commented on my article left out rain and played on sunshine. They have not explained why the fallow has produced the full crop without any fertilizers; neither have they explained why it fell back the next crop to its worn-out yield. Mr. Berwick seems to have had a full flow of words, without a single idea that would benefit those who live to-day and those who come after us. We have nothing to do with tumble-bugs, horned toads, worms, badgers, etc. We are after facts of the day, and will leave our ideas to the intelligence of your many readers. I have not forced myself on your readers merely to see my name in print. It is said that he who causes an additional blade of grass to grow is a benefactor. If I have said anything that may cause an increased yield of wheat on our fields I am satisfied. I am willing to wait and let facts prove themselves.

J. R. SIMMS.

Near Santa Rosa, Cal.

## Salt Marsh Reclamation.

EDITORS PRESS:—Having been invited to visit the reclamation works of the Novato salt marshes, comprising nearly 5,000 acres, we went thither and spent two days investigating the whole area, with its systems of levees, flood-gates, ditches, irrigating canals, etc., and think the whole scheme of sufficient interest to be made the subject of a communication to your valuable paper.

The Novato meadows, as they are called to-day, lie about 11 miles north of San Rafael, in Marin county. The owner of these meadows is John W. Ferris, Esq., a civil engineer but recently from England, but who has already earned a well-deserved reputation for skill, through the successful reclamation of Roberts island, near Stockton. This island has an area of 60,000 acres, and is to-day entirely under cultivation.

The reclamation works of the Novato meadows have been very intelligently planned by Mr. Ferris, and carried out with skill and economy by Mr. J. B. Christensen, assistant engineer, to whom the whole work has been entrusted.

The levees are 23 feet wide at base, 9 feet at top and 5 feet high. They are built with the compact salt-marsh soil, which renders them liable to ugly cracks in the dry summer months; but Mr. Christensen has had the happy idea to harrow them over several times, until the soil was thoroughly pulverized, and to-day not a single crack has manifested itself. This is a real improvement in levee building.

Twelve hundred acres have been plowed and immediately rented to eager tenants. The first crops on properly reclaimed salt-marsh land are very heavy and of excellent quality. Ladd's Sonoma meadows produced barley, bringing 10% more at the breweries than the good common brewers' market barley.

We really wish that our California capitalists would invest some money in the development of the real resources of California, instead of following so closely the narrow arts of the money lender.

A. V. D. N.  
San Francisco.

## Conjectures of the Weather.

EDITORS PRESS:—This is a favorite amusement of Californians. Simply as a pastime it is well enough perhaps, especially when the predictions are all rosy and farmers are not thereby induced to burn up their straw before sufficient rains insure abundance of feed. But these predictions sometimes result in positive harm, besides being a sad dissipation of thought that might be employed to better purpose. Let us examine this subject in the light of reason. What reason have we for saying that next month or next winter will be either wet or dry? Last month or last winter had such and such weather, but that is no criterion for next month or next winter. The combination of forces that produced the weather of last winter has long since dissolved into thin air, and can have no power whatever upon the weather of this winter. Nor is there any known law by which the weather can be predicted for more than a few hours, or at most, a few days in advance. Anything further than this is ignorance, or superstition, or humbug. That the influence of the moon has any perceptible effect upon the weather, has long since been disproved by careful and extensive observations.

A weather prophet will say "last winter was dry, we may, therefore, safely predict that this winter will be wet, as two dry winters do not succeed each other." His prediction will probably prove correct, but his reasoning is false. A dry winter is remarkable. It occurs once in five years, perhaps. May I therefore say it is five times remarkable. Two dry winters in succession would be five times as remarkable, or 25 times remarkable; an occurrence that might not happen in a hundred years. We may, therefore, safely say that two dry winters do not occur in succession, and the prophet should receive no honor upon the fulfillment of his prediction. Their predictions often come true, and indeed it would be remarkable if it were not so, but what prophet, or what system of rules have we upon which we can place reliance? There are none; our knowledge is not yet sufficiently advanced. We have only the light of experience to guide our footsteps. We can look back upon the past, and guess what the future will bring forth. We can take the average rainfall for the past 10 or 20 years and reasonably guess that the present winter will bring the same; it may be more, it may be less, no one can tell. Nay, we can do a little more than this. We can take the average of each month for the past twenty years, and guess at each month of the present winter. Usually it rains in January; we may safely guess that it will rain this coming January. If it is very dry up to the 1st of January we need not prophesy a very dry winter, or, even up to the 1st of February, we need not quite despair, for our average rainfall after that date is sufficient to raise small crops.

Nature's laws are unswerving, unchangeable—what has been, will be. If the cultivation of the ground, the destruction or increase of forest and fruit trees produce a gradual change of seasons, it is so exceedingly gradual as to be almost,



and I think quite imperceptible. When we know a great deal more about the laws of electricity, magnetism and perhaps several other at present unknown forces, we may be able to predict the weather several weeks or months in advance, but with our present knowledge it is utterly impossible, and whoever pretends otherwise, is not wise.

We have had a fair amount of rain up to the present time; let us be thankful, and hope for more. In seasons of prosperity let us prepare for adversity, and if the adversity does not come, so much the better. Let us always be prepared for a dry year, for we do not know when it may come, whether in one, two, ten or twenty years. It costs but a small effort to be always ready; it is a fearful calamity to have a dry year roll its train of suffering upon us unprepared.

S. P. SNOW.  
Santa Barbara, Cal., Dec. 10th, 1879.

### The Salinas Valley.

EDITORS PRESS:—The Salinas river is the third in length in the State of California, flowing into the Pacific ocean. It comes down from the southeast, nearly straight in its general course 160 miles, with a bend higher up to the northeast round again to the southeast, adding another 50 miles or more to its length. Its level, rich valley, between mountain ranges on each side, gradually widens toward the ocean until it is some 12 miles across. The soil is a dark sandy loam, almost quicksand in character, and hence easy to cultivate in seasons of rain best according with its nature. Land, usually called adobe, is scarcely known in the whole region. The great difficulty is the want of sufficient rainfall to meet the necessities of the growing crops. This is not so much felt in the lower part for 15 or 18 miles, as it is further up the valley.

This lower portion is naturally as fine a section for farming as we know in the State. But its great disadvantage is that vastly the greater portion is cultivated by renters on short leases, generally a year, the longest being five years. The result is that the country residences are few and far between, mostly small, one story, roughly put up, and perhaps whitewashed; having either a rude, front-protecting fence, or none at all; without a garden, or with a very poor one, destitute often of a flower-bed, rosebush or shade tree; with a well around which perhaps freely gather heus, ducks, geese and pigs for water. A rough barn may be nearly in a corresponding condition of litter. Such a condition is almost inevitable where leases are for a short term of years; for there is little inclination and less stimulus to improvement, where the laborer knows he is to lose nearly all the benefit of his efforts, while possibly the very act of improving his place may cause an increase of rent the next year, or bring in a competitor for the farm. Besides this, the common rent in this fine region is \$7 per acre a year, cash rent, often in advance, for the open land alone or possibly enclosed in one vast tract. This keeps the laborer very busy to meet the demands of the land-owner and make a bare living for himself and family.

Of course, this presents about the poorest aspect of the case, for there are some exceptions, fine farms and admirable residences, characterized by beauty and luxury without and within. But these, without exception, are where the lands were either owned, or believed about to be owned when the mortgage should be paid by the resident laborer. How often has this last proved a delusive hope in California, and the mortgage has taken all, while the improvements occasioned just so much higher rent to the next occupant. We could recount many such cases, and sad ones too, along on the coast.

The towns, or central places of business for this large, finest portion of the valley, are Castroville, 2½ miles from the ocean; Salinas, 10 miles; and Chualar, 20 miles inland. The first depends entirely for its support upon the surrounding farming population. Its own population may be 600, with one good flouring mill, seven stores, three or four blacksmith and wagon shops, shoemakers', harness-makers' and tinners' shops, druggist, jewelers, etc., with three or four hotels, of which we very much liked "The American," owned by Mr. F. M. Smith. Mr. J. B. Castro was the original owner of the town site, who did wisely in selling to actual settlers. Hence a pleasant village has here grown up, evidently to go on improving for generations.

Salinas is the county seat, more central as a place of business for the whole valley, directly on the great southern railroad, and a much larger town than Castroville, containing a population of over 2,000. Its main street is admirably macadamized, built up on both sides in fine city fashion, while the whole town is supplied with gas and water. It has all those facilities for the arts, sciences, conveniences and benefits expected in connection with such a place. Its county buildings, churches, schools, hotels, stores, shops and residences cause it to rank among the first of its size in the State. Among its hotels, for quiet, convenience and a gentlemanly landlord, we like "The Diamond," at the very head of Main street, where this street branches in three directions, yet the "Abbott House" aims at the greatest pretensions.

From Salinas an immense amount of grain,

mostly wheat, is shipped to San Francisco, the figures for an approximate amount we cannot now give. Mr. Raymond appears the principal agent as purchaser, a most reliable and experienced dealer whom we have known for years. The white Australian variety is raised almost exclusively through this whole region. The town is becoming embowered in trees and adorned with pleasant gardens and lovely flowers. The aspect of the whole is that of a true, enterprising, progressive, permanent American city. Good Templars, A. O. U. W., Odd Fellows, Masons and other fair organizations are flourishing, while seven churches exist with good buildings and regular worshipping congregations.

Chualar, 11 miles farther to the southeast, is much the smallest place of the three, in a region bordering on the dry portion of the great valley; yet it bids fair to become a place of business in time. The lands surrounding it do look admirable, only they need more rain than usually had. Yet on the eastern side of the valley where the storms are apt to bank up somewhat against the high mountains, nearly enough water falls to insure excellent crops. Such is the case on the large farms of Messrs. Iverson, Linn, Kellogg and Carr. Their locations are just in the foothills, and are fine specimens of enterprising good farming. We hope for this whole region just a sufficiency of rain this year; and if this comes, the cultivators of the soil will be abundantly rewarded for their toil the next season, and then we should be glad again to visit them with the worthy organ of agriculture on the coast: THE PACIFIC RURAL PRESS.

S. V. B.

## THE FIELD.

### The Question of Sugar Supply in the United States.

EDITORS PRESS:—With the exception of a few sugar refiners, the opinion seems to be a unanimous one through the length and breadth of our country, that it would be very desirable if we could manufacture the \$100,000,000 worth of sugar we consume annually at home, and thus retain this enormous amount of coin amongst us, to help develop our resources and enrich the people instead of shipping it out of the country.

The kind of material our sugar supply is to be derived from is a matter of absolute indifference; sugar manufacturers may disagree and lean towards the one or other, and so may farmers, both being led by personal experience, by habit, likes and dislikes, but the man who buys sugar cares little for its origin, as long as it is what he supposes he buys.

Sugar, from every source which contains it, was collected and put on exhibition in the first world's fair in Paris. It has surprised many visitors to learn that so many of our trees, plants and vegetables contain the identical article known as cane sugar, and from which it can be extracted. But no tree, plant or vegetable is known which contains sugar alone, or from which it can be extracted without extracting more or less other matter which is more or less objectionable—which, in fact, gives the raw sugar its peculiar character. Even the same plant, grown in different countries, will differ as to the foreign matter which is extracted in extracting its sugar. Maple and palm sugar are the purest, and contain extractive matter which is more pleasant than otherwise, while beet sugar is the impurest, containing the most foreign matter, which gives it a strong objectionable odor; the Louisiana sugar cane imparts to the sugar and molasses it yields a very strong, peculiar flavor, which is liked by many and greatly disliked by others, but which, after all, is paid for by those who like the peculiarity. But cane sugar, when in its pure state, when properly refined, is identical, and no man, however expert, can tell the source from which it is derived by its taste, appearance or crystallization.

The value of a cane-sugar containing plant is judged first by the quantity of sugar it contains; second, by the nature and quantity of the foreign substances which are extracted with the sugar; third, by the facility or difficulty of separating the sugar from these substances; and fourth, by the facility and cheapness with which it can be produced, and the length of time during which it can be kept in a fit state for manufacturing sugar therefrom.

Leaving the sugar cane, maple and palm out of this discussion, also the plants from which sugar has been extracted as a mere curiosity, we are brought face to face with but very few plants which can be produced in the United States, none of which are unobjectionable, though these objectionable qualities differ widely in their character and are more or less difficult to overcome. It certainly has not facilitated the introduction of the sugar industry in the United States, in general, that the advocates and patrons of one of the sugar-yielding plants have attacked the advocates of the others. Instead of pointing out the difficulties and objectionable part of the others, it might

have been well to find means to neutralize and overcome their own. The cane-sugar containing plants which are on trial at present, each with its own friends, are: The cornstalk, the various varieties of sorghum and the sugar beet. The cornstalk is comparatively a new competitor for the favors as a sugar-producing plant; its juice is purer than that of the sorghum, but the great uncertainty of the exact time which is most favorable to its extraction and the extreme shortness of this time appear to make the manufacture of sugar therefrom, on anything like a large scale, very uncertain and precarious. The cultivation of the corn is so well understood in every State of the Union, and profitable in many, that it is not asserting too much by stating there is not one farmer in a thousand who does not understand the cultivation of corn well.

The sorghum and sugar beet have, during the last 20 years, claimed the attention of farming communities more or less. They appeared both at the same time, and though the steps taken to introduce them had to be widely different from their very nature, neither has so far gained a sound, sure and permanent footing. During our civil war, thousands of farmers raised sorghum and manufactured syrup or molasses therefrom on a small scale. The only party known who tried it on a large scale was the late William H. Belcher, of Chicago, a man of great enterprise, whom many farmers and manufacturers of sorghum syrup will remember for the ever-ready help he extended to every one who applied to him.

The cultivation of the Chinese sugar cane, which includes the sorghum, imphee, amber, in fact, every variety of sugar cane which is raised directly from the seed and not from slips, so closely resembles the cultivation of corn that our farmers had nothing to learn in that respect and were ready to give it a trial. The cane sugar which the different varieties contain differs greatly in quantity, but all is to a great extent mixed with grape sugar and gum, both of which prevent the liberal use of caustic lime in the working of the juice. The lime will caramelize the grape sugar and gum, will turn it dark in color and bitter in taste; while the grape sugar and gum will prevent the cane sugar (by incasing it) from quick and ready crystallization. The agricultural part is on drawback on the manufacture of sorghum sugar, because every farmer who understands the cultivation of that great American staple, Indian corn, understands the cultivation of sorghum.

The production of sugar from beets meets with difficulties of a different nature from either the corn or sorghum sugar. The beet juice is the most impure of all the sugar-producing plants, and these impurities are of a nature which require a rather complicated process to separate them from the sugar; hence more costly machinery is required and the process has to be carried on on a larger scale and by regularly trained sugar men, than the others. Yet in the many trials which have been made to establish the manufacture of sugar from beets in the United States, no difficulty was encountered in extracting the sugar from the beets; the great obstacle generally, though not only, has been in raising the beets by our farmers, in order to supply the sugar works to work for a sufficient length of time to make it profitable. Root crops are no part of American farming generally, which is the reason that the cultivation of beets is but little understood and meets with difficulties. California is an exception to this rule and the beet-sugar works in this State have made more progress than in all the rest of the United States together.

In summing up the result of 1879, it stands about thus: Under the special care of Gen. Le Duc, Commissioner of the Agricultural Department, it is stated that 40,000 pounds of sorghum sugar (amber cane) has been produced in some Western State, and that several companies will take the matter in hand another year.

In Soquel, Cal., the oldest beet-sugar factory in the United States, from 45 to 55 barrels of white granulated sugar are turned out daily with as much regularity as a haker turns out his rolls. In Alvarado, Cal., from 30 to 35 barrels of white sugar are made daily, and beet-sugar prices are regularly quoted in the San Francisco market. The main beet-sugar company in Portland turns out daily from 30,000 to 35,000 pounds of concrete or melado, and has sold the whole season's product in advance at a very good price to a Boston sugar refinery. The beet-sugar factory at Isleton, Cal., though complete, stands idle; but there is little doubt that it will work next year to its full capacity. A new sugar factory will be built in Los Angeles county and begin work by next July; the beets for the same will be mostly planted before the expiration of the present year.

Although this will give the beet a little start over the cornstalk and sorghum, there is no cause for jealousy, because there is room for all. It will take some time before home-production from all three prevents the importation of \$100,000,000 worth of sugar, and whichever proves most advantageous of the three, corn, beet or sorghum, will supersede the others.

If sugar from cornstalks can be produced profitably, it will prove a Godsend to the Southern planter, whose costly machinery stands idle so many months in the year. If the Commissioner of Agriculture has found out anything worth knowing, let him give correct figures; that is what the Department was created and is supported for, but it is figures and facts the farmer wants—he cares little for opinions, because he has one of his own. ERNEST TH. GENNET.

Los Angeles, Cal., Dec. 7th, 1879.

### Machine for Harvesting Cane.

EDITORS PRESS:—There have been several pieces in the papers lately in regard to raising sugar cane; but it can never be very profitable in this State until some means other than by hand are devised to do the harvesting. To attain that end I propose to make an assignment (for nothing, to any one who will complete it) of all my right to a contrivance that will serve that purpose, which I have not the money or time to perfect. A model of this invention may be seen in your Patent Agency Office, and some of your readers may remember seeing a notice of it a little over a year ago.

JOHN HOWELL.

Anderson, Shasta Co., Cal.

## THE PUBLIC LANDS

### Shasta County Government Land.

EDITORS PRESS:—I have lately returned from a trip up the State as far as Fall River City and vicinity, and think that a few items from my observations of this country might be of interest to your readers.

Fall River City is a fine growing town of about one hundred inhabitants. It has a fine water-power, upon which are situated flour, saw and planing mills. There are in the town two hotels, four stores, one drug store, one shoemaker and harness shop, two blacksmiths, one paint and one meat shop. There is also being built a well-proportioned two-story school house. A doctor has settled in the place; but from what I heard and experienced of the healthfulness of the climate, I judge his practice will be small.

Fall River City is situated in one of the finest valleys that can be found in the mountains. Many good pieces of land have already been taken up as homestead or pre-emption claims, and there is much more government land which will in time be occupied. In fact, all through the mountains there are many desirable locations, good land, springs and timber, with school houses close by. If one can depend on these observations, there are as many schools in the mountains as in the valleys of this State, as there are not so many large tracts of land owned here by single individuals. Fall river itself is one of nature's wonders. It comes booming up out of the ground a wide, deep, rapid stream, only about eight miles from where it leaps down about a hundred feet into Pitt river. It is supposed to be merely a continuation of Lost river, which sinks into the mountains some ninety miles away.

Judge Bell, our ex-Land Office Registrar, has said that there is vacant land enough in this county to support 30,000 additional inhabitants; and I judge his estimate is about right, for the county is as large as some of our Eastern States. Much of the land is still to be surveyed. Goose valley has been surveyed lately, thus making room for fifty more homes.

The mining interests are rather looming up in these parts. Several new Chinese companies or partnerships have been formed to work new ground, and one partnership of white men are preparing to sluice over ground from which, nearly twenty years ago, nuggets of gold valued as high as \$60 were washed out with the long-tom. The ditch companies, who own nearly all the available water in this region, are using 2,500 inches of water day and night; tearing down whole mountains as it were at one sweep of the water from their enormous hydraulic pipes; making great chasms and gulches that look as though Mother Earth had taken upon herself the fulfillment of the prophecy that "Mountains shall be brought down, and valleys shall be filled"—but the fulfillment of the rest—"and a highway shall be made for human prosperity to pass over," seems to be almost out of the question, for go which way you will (in some of these mining localities) you find the way so obstructed by debris and cut by gulches that you must turn back and out go miles around to reach your destination. What a pity it is to deface a country possessing such a fine climate, just to dig out a few paltry handfuls of gold; to make so much land untillable for future generations, to gratify the present in their passion for aggrandizement.

Now, a question if you please. Can you tell us how it is that our Land Office Receiver can give us a receipt for only \$22, and charges us \$30 for filing? When the homestead bill passed, it only allowed \$10 to be charged when filing, and \$7 in proving up.

JOHN HOWELL.

Anderson, Shasta Co., Cal.

[Perhaps the Receiver at the Shasta land office will answer the point raised about fees. We invite him to do so.—EDS. PRESS.]

TIGHTENING OLD WINDOWS.—Old windows that do not close tightly may be remedied by smearing the edge on which they close with putty, and that of the sash with chalk, and then closing them as firmly as possible. The putty will fill up the crevices, and the excess pressed out at the sides may be removed with a knife, whilst the chalk prevents adhesion to the sash.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eps.

### The Good Offices of a Botanic Garden.

**EDITORS PRESS:**—No enterprise is perhaps of more general benefit, while at the same time its importance is less appreciated and understood than that of a botanic garden. Many persons imagine that it is some kind of a garden where all sorts of strange plants are cultivated merely for the benefit of a handful of botanists, gardeners and a few other silly persons; only a place for curiosities where a few hours once in a while may be spent to see these oddities. The majority of people have no comprehension of the vast benefits, financial as well as moral and scientific, that might be derived from a place of this kind if well conducted and well located.

The feverish excitement in the race for riches, young and old too often find themselves in, and its fatal results seen almost every day, are things every thoughtful person deploras, and anything which would counteract this tendency, by strengthening man's moral character, ought to be welcomed. I believe that few things have in this respect such good results as the study of nature, the calm contemplation of the silent life around us. The business man tired of financial speculation seeks the country to find rest among the dumb creations. He finds recreation in the change; he admires the beautiful form of the flowers, their colors and odors, but only for a moment. The impression passes away, and he does not understand why the longing he often felt when surrounded by the gray walls of the city has been but so imperfectly satisfied. But is not the reason this, that nature's book showing all these pretty pictures has a text written underneath with letters unfamiliar to him? Let him learn the alphabet, and objects so humble as never before attracted his attention will now be admired more than formerly the most gorgeous flower.

Now one of the objects of the botanical garden is to awaken an interest in the vegetable kingdom by presenting to the eye all the complex and wonderful structures it contains, that some of them may impress themselves on the spectator, arouse his admiration and stimulate his curiosity to learn and understand something of what he sees. It ought, furthermore, to be the aim of the botanic garden not alone to create this curiosity for botany, but to facilitate its study by having the collections arranged in as natural a manner as possible. The arrangement should have usefulness in view without disregard of taste, it should, as much as possible, represent the plant in its natural state of development with the least possible amount of artificial training; in short, as near the image of wild nature as practicable.

The promotion of botany and horticulture in general is, in older countries, almost the sole aim of the botanic garden—the plants, valuable for general culture, being so well known that new introductions are but seldom added to the list of important plants. Not so with California—a State but thirty years old in American civilization—with climatic and commercial facilities almost unparalleled. Every year private enterprise adds to the long list of plants which already have been found useful for some portion of this State. But if private enterprise is successful, should we not suppose that a general, well-organized plan of this kind would accomplish much greater results? We can here readily gather the productions of the northern and southern temperate zone, and many plants from sub-tropical countries have proved hardy here. Plants from high elevations in the tropics, heretofore considered useless for other localities but those similarly located, as the Cinchona or Peruvian bark tree, have in Australian low-lands proved hardy, and since many plants, indigenous to that country almost, seem to have found a home here, there is no reason why we should not have corresponding success in other respects.

Cultivation renders plants cosmopolitan, as the same race of civilized people find homes in the most diverse climates. Our long cultivated cereals, such as wheat and barley, have an immense range and diversity, some varieties requiring almost twice as long for their development as others. Although among trees and shrubs there are fewer examples of the adaptability and pliancy of their varieties, there are instances enough to prompt experiment in this line. Plants raised in the central botanical garden should from there be distributed to the various gardens of economic plants to be established in connection therewith. The good that might be accomplished in this manner seems to me to be sufficient to give a garden of this kind the support of all practical and thinking men.

But it must be remembered that a botanical garden could not be established with equal success in any part of the State. It should be within easy reach of communication from all directions, and the coast, with its most uniform climate, offers the best condition for the largest variety of forms. Its place should be there, and as near the commercial and populous center as possible, yet without being loaded down with its incumbrances and burdens. It should not be a part of a pleasure resort, but a garden founded for its own sake, where its aims should not be overlooked for the sake of show or pecuniary speculations. As a matter of course as many species of plants as possible should be

grown outdoors that their true character might be seen, and a naturally sheltered location ought always to be preferred to one artificially protected. It becomes the State at large to support an enterprise of this kind, and as an educational element, it ought to be connected with the highest institution of learning, for here it should naturally be supposed to exert its best influence, and the supervision and guidance it would need would likewise readily be found here.

W. G. KLEE.

Berkeley, Cal.

### Marin County.

**EDITORS PRESS:**—Marin is a small county compared with most of the counties of the State. The north and northeasterly boundary is Sonoma county, the east is Bay of San Pablo and San Francisco bay, and south and west the ocean. Having so large a proportion of waterfront, its boundary lines are very irregular, by reason of bays and inlets which serve as valuable thoroughfares for transportation. The abundance of moisture from the daily fogs, floated inland from the ocean, ensures coolness in the climate and luxuriant growth of vegetation. Stock men early discovered its value, especially for dairy purposes, and soon demonstrated the fact that a good butter could be made in California, and slowly and gradually the Eastern importations were superseded by Marin county butter; that now challenges even the far-famed Orange county butter to compete with it as to quality, and in quantity they far excel the palmist days of that famed butter county. Marin scarcely plows at all, and Orange county always plowed and carried on general farming with the dairying.

#### New Switzerland.

Perhaps no single county in the United States ever contained as many milch cows as this little "New Switzerland," as it is sometimes denominated, owing to the large number of Swiss now owning or renting ranches here. They seem to have great faith, if not sufficient to remove mountains, ample to use them from base to summit, and compel them to yield golden butter for the maintenance of their families. They are not agitators, nor do they propose to remodel our Government before they are naturalized citizens. They are industrious, peaceable and intelligent citizens, learning to speak and read our language, and sending their children to the public schools, not as grumblers, but as supporters. In some neighborhoods, after finishing their task of milking, the adults attend an evening school to get the rudiments of a practical English or rather American education. I called at the ranch of a Swiss renter near Olema and found them engaged in milking their 140-cow dairy. The proprietor (an old subscriber to the RURAL) could speak and read a little American, but his helpers could scarcely speak any. That evening they were all at night school, taught by a qualified teacher of the district school, with the full blackboard drill. This little accidental discovery of how some of the dairy boys spend the winter evenings is mentioned as worthy of imitation by others.

I have not the data of exact figures as to the number of cows in the county; but in the immediate vicinity of Novato they estimate fully 2,000 dairy cows. There is some talk of organizing a company for sending milk to the city, as the San Rafael and Petaluma railroad passes right through this valley, and will afford speedy conveyance.

One of the elements of discouragement to the enterprise is the doubt expressed whether pure rich milk would be appreciated or even tolerated by those unaccustomed to its use. The low prices of butter and the high rents paid for cows and pastures dispose the dairymen to experiment for some new channel of trade. The present milk supply in the city seems to be ample, and their headquarters, on Eddy street, has often a surplus beyond any present demand, which makes the prospect for new enterprises in milk-dairying not very promising.

#### Novato

Lies on San Pablo bay, and comprises many excellent hill, valley and some marsh farms. A navigable slough gives them cheap freighting to the city. The village is small and not well compacted. I doubt if entitled to the name of village, as their mail matter must be addressed "Black Point" to reach Novato.

Much improvement has been made in this part of the county since my former visit, and several residences built.

The noted ranch of Sweetzer & DeLong (13,000 acres) is divided into eight 100-cow dairies, with choice stock and good outfittings. The home mansion is retained by Mr. F. DeLong as a fruit ranch; his old partner, Mr. J. Sweetzer, taking about 1,000 acres near Novato, is elegantly improving it as a home. Mr. Losee, his brother-in-law, who will have charge of the dairy, is also very comfortably located in entirely new buildings on the same tract.

#### Fruit, Cider and Vinegar.

The Sweetzer & DeLong fruit, sweet cider and pure cider vinegar have made an enviable reputation on this coast. The day I was there he filled an order for 100 barrels of vinegar; sold to a San Francisco dealer. The vinegar depot was being filled up with cider; a tier of over 500 barrels ranked along the entire length filled either with cider or vinegar. In front of them were 22 tanks, each 90 barrels capacity, and a

few other tanks of much larger capacity were all either filled or to be filled before the steam-power crusher and presser would cease its labors. The sweet cider is made from sound, perfect fruit, and filtered through a white-sand filter, and when brought to its highest purity is kept in barrels or bottles free from the action of the atmosphere and light. To those desiring the pure article, this seems to be far ahead of anything that would be ordinarily made as pure cider. I tasted some that had been bottled five years, as sweet cider. It was almost syrup for richness, and though old was not rough, hard cider. The visit would be incomplete unless you passed through the great

#### Fruit Store-House.

Where the choice winter apples are stored in boxes, and as you pass along they will say we have so many thousands of this, and here are so many thousands of boxes of another kind—all selected and choice for marketing in winter and late spring. From this basement story you go into the main building above, which also has a driveway through it, and is hurdled with boxed fruit that would be marketed first. Here several white men and one Celestial were assorting over and reboxing for the market.

A 200-acre orchard adjoins this store-house. The orchard contains 30,000 apple trees, pears 3,000, apricots 3,000, peach 1,000, and 8,000 to 9,000 grapevines. The grapes were sold by the ton in San Francisco, for wine making, at good prices—\$25 or more per ton. Mr. DeLong has employed 30 men in the orchard for the last three months, and an average of 20 men for the year; and only two Celestials, though they excel in fruit handling. This condensed schedule does not do justice to the ranch, nor to the cordial welcome of his foreman and book-keeper, who took pains to show me much more than I have noticed. I fully intended to repeat my visit, and note more items of interest.

Mr. DeLong's experiments on fruits seem to be entirely of a practical nature—nothing done for show or brag, all utility and economy; and while others are denouncing all kinds of fruit and vine business as overdone, he will go on preparing to utilize every product of tree and vine. Sonoma county has many successful fruit growers, but Marin county almost entirely neglects fruit culture.

#### Other Establishments.

J. B. Redmond's fine stock and dairy ranch, lying about three miles west of Novato, has been doing much in breeding improved stock, and generally carries off a portion of the prizes at the Petaluma fairs.

Dr. Galen Burdell holds a large tract of grant land. Has most of it rented out in convenient sized dairy farms, some of which are neatly fitted up. The Doctor's own residence is homely (in its true sense), grounds highly decorated with rare plants and flowers, and his park the home of many tree-squirrels and birds. His lands extend up to the Sonoma county line, and include some of the choicest tracts of the county.

Spanish grants that covered much of the best lands of the county are now divided into convenient sizes to have all utilized. The Throckmorton grant of 16,500 acres, extending from Sausalito to Bolinas bay, takes in a large extent of coast hills, apparently less valuable than those interior. About three miles out of Sausalito you drive through a self-opening iron gate, which closes after you. Now you are in a well-fenced field. By an excellent road through this tract you can travel about 12 miles, passing over high hills on a splendid graded road, giving a fine view of the ocean above the Golden Gate, and only seeing one or two ranch houses till another iron gate opens by the touch of your wheel and lets you out on the shore of Bolinas bay. This vast field is pastured by various parties, at so much per head. It would not be worth fencing in small tracts. Marin county has many attractions for the hunter, fisher and tourist, and some for the wearied. All who visit it will carry away cherished recollections.

Dec. 1st, 1879.

B. W. C.

### Dr. Simms' Farewell to His Critics.

**EDITORS PRESS:**—When I wrote my first article I expected it would be attacked by just such a class of critics. I spoke of the old foggy way of going to mill. It is so with all innovations upon long established customs, let them be false or true. I did not say "sunshine" would accomplish everything. I said nature fertilized by adding new material to the top, then fertilized with sunshine and rain. Why have those who have commented on my article left out rain and played on sunshine. They have not explained why the fallow has produced the full crop without any fertilizers; neither have they explained why it fell back the next crop to its worn-out yield. Mr. Berwick seems to have had a full flow of words, without a single idea that would benefit those who live to-day and those who come after us. We have nothing to do with tumble-bugs, horned toads, worms, badgers, etc. We are after facts of the day, and will leave our ideas to the intelligence of your many readers. I have not forced myself on your readers merely to see my name in print. It is said that he who causes an additional blade of grass to grow is a benefactor. If I have said anything that may cause an increased yield of wheat on our fields I am satisfied. I am willing to wait and let facts prove themselves.

J. H. SIMMS.

Near Santa Rosa, Cal.

### Salt Marsh Reclamation.

**EDITORS PRESS:**—Having been invited to visit the reclamation works of the Novato salt marshes, comprising nearly 5,000 acres, we went thither and spent two days investigating the whole area, with its systems of levees, flood-gates, ditches, irrigating canals, etc., and think the whole scheme of sufficient interest to be made the subject of a communication to your valuable paper.

The Novato meadows, as they are called to-day, lie about 11 miles north of San Rafael, in Marin county. The owner of these meadows is J. W. Ferris, Esq., a civil engineer but recently from England, but who has already earned a well-deserved reputation for skill, through the successful reclamation of Roberts island near Stockton. This island has an area of 6,000 acres, and is to-day entirely under cultivation.

The reclamation works of the Novato meadows have been very intelligently planned by Mr. Ferris and carried out with skill and economy by J. B. Christensen, assistant engineer, to whom the whole work has been entrusted.

The levees are 23 feet wide at base, 9 feet at top and 5 feet high. They are built with the compact salt-marsh soil, which renders them liable to ugly cracks in the dry summer months; but Mr. Christensen has had the happy idea to harrow them over several times, until the soil was thoroughly pulverized, and to-day not a single crack has manifested itself. This is a real improvement in levee building.

Five hundred acres have been plowed and immediately rented to eager tenants. The first crop on properly reclaimed salt-marsh land is very heavy and of excellent quality. Ladd's Sonoma meadows produced barley, bringing 10% more at the breweries than the good common brewers' market barley.

I really wish that our California capitalists would invest some money in the development of the salt resources of California, instead of following so closely the narrow arts of the money lender.

S. Francisco.

A. V. D. N.

### Conjectures of the Weather.

**EDITORS PRESS:**—This is a favorite amusement of Californians. Simply as a pastime it is well enough perhaps, especially when the predictions are all rosy and farmers are not thereby induced to burn up their straw before sufficient rain insure abundance of feed. But these predictions sometimes result in positive harm, being a sad dissipation of thought that might be employed to better purpose. Let us examine this subject in the light of reason. What reason have we for saying that next month or next winter will be either wet or dry? Lately his place month or last winter had such and such weather, but that is no criterion for next month or next winter. The combination of forces that produced the weather of last winter has long since dissipated into thin air, and can have no power whatever upon the weather of this winter. Now very busy to make a prediction for more than a few hours, but at last, a few days in advance. Anything further than this is ignorance, or superstitious credulity, or umbig. That the influence of the moon and admirably has any perceptible effect upon the weather and luxuriance of vegetation has since been disproved by careful and tenacious observations.

Weather prophet will say "last winter was dry, we may, therefore, safely predict that this winter will be wet, as two dry winters do not succeed each other." His prediction will probably prove correct, but his reasoning is as fallacious as a fortune teller's. A dry winter is remarkable. It occurs once in five years, perhaps. May I therefore say that the next five years will be remarkable. Two dry winters in succession would be five times as remarkable. 25 years remarkable; an occurrence that never happens in a hundred years. We may, therefore, safely say that two dry winters will occur in succession, and the prophet shall receive no honor upon the fulfillment of his prediction. Their predictions often come true, indeed it would be remarkable if it did not, but what prophet, or what system, have we upon which we can place reliance? There are none; our knowledge is not yet sufficiently advanced. We have only the limited experience to guide our footsteps. We cannot know the past, and guess what the future will bring forth. We can take the average of the past 10 or 20 years and reason that the present winter will be like it; it may be more, it may be less, but we can do a little better. We can take the average of each of the past twenty years, and guess what the present winter. Usually it is January; we may safely guess that it will be the coming January. If it is very dry the first of January we need not prophesy a dry winter, or even up to the 1st of February, we need not quite despair, for our average after that date is sufficient to raise crops.

Nature's laws are unswerving, unchangeable, and will be. If the cultivated ground, the destruction or increase of fruit trees produce a gradual change, it is so exceedingly gradual







## PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

### The National Grange.

#### Officers' Reports.

After the address of the Worthy Master, of which we gave an outline last week, the reports of the Treasurer and Secretary were read. The *Grange Bulletin* correspondent says of the former:

"Bro. F. M. McDowell then presented the Treasurer's report—as usual, a complete, concise, and business-like statement of the finances, that will be printed in the proceedings and sent to each subordinate Grange. The showing was good, while some States are still undergoing the weeding-out process and report less numbers, others show a solid and fixed condition."

The report of Bro. W. M. Ireland, Secretary, was a long document giving in detail the work of his office during the year.

Bro. Aiken, Chairman of the Executive Committee, then presented the report of that committee, with a number of recommendations, which report was referred to the appropriate committee.

Bro. Lang, of Texas, introduced the following:

*Resolved*, That a special committee of five be raised who shall take into consideration the state and condition of American agriculture, and to report such measures and policies as in their judgment will tend to afford relief from the weighty hindrances and difficulties that may beset it; and to suggest such methods as will restore to American farmers greater prosperity and promote their political and material welfare.

#### Adopted.

Bro. Ellis moved that a committee of five be appointed to draft suitable resolutions of respect for the memory of those members of the National Grange who had died since the last session. Adopted.

Bro. Whitehead then presented the

#### Lecturer's Report.

It was a long document and is published in full in the Cincinnati *Grange Bulletin* of Nov. 27th. We make the following extracts:

I have met our loved Order under all circumstances and conditions, enjoying the sunshine of prosperity, reflecting its beams of hope and happiness to its members and the entire community; or under the clouds of adversity, struggling against local hindrances, and prejudices within and without the gates. I have found members and Granges that have grown weary in well-doing, or becoming faint-hearted in the battle have fallen by the wayside. Others I have seen as individuals once more encouraged by the lessons of perseverance, renewing their exertions, more determined than ever to fight the good fight. Without doubt the past year has seen more subordinate Granges revived that are now in an active working condition than any one year of our previous history. I feel that I can report progress and truthfully say that a better and healthier feeling and spirit animates the membership we now have than at any time before. The mistakes and hindrances of the past have been corrected or removed, uncongenial material has found its proper place without the gates; the real objects and purposes of our Order were never better understood. In true co-operation, in all the higher aims and purposes of the Grange; in its work within the gates, and in all its varied avenues and opportunities to help its members as farmers, as business men, as citizens, as men and as women, never did it have so many and so careful students; never was it better understood, more highly respected, more sincerely loved. The genuine revival of interest that I have so generally found during the past year is not confined to special States or localities, but seems to be widespread and real, founded on the growing conviction that the Grange is a necessity and must be sustained.

#### Young People as Members.

Another proof positive of the stability of our Order and its real progress that I have noticed, is that more young people are applying for admission than at any former time. This should be generally encouraged, by making the Grange and its work attractive, pains being taken to develop all the social, intellectual and elevating advantages that its varied field presents.

And right here I would offer a suggestion for consideration at this session; offered not on the spur of the moment or without reflection, but only after having its importance forced upon me very many times by facts, actual needs and observation, and after presenting the subject to numerous Granges and talking it over with many of the most earnest Patrons it has been my good fortune to meet. It is, that our laws be so amended, as to permit the admission of young people at 14 years of age, whose parents are members in good standing. Much can be said in favor of taking this really forward step. I have never heard the slightest objection offered from any Patron to whom I have stated the case, but it always has received a most hearty approval, with the hope that I would properly bring it before the National Grange.

To receive the beautiful and instructive lessons of our Order, intended to "develop a higher and better manhood and womanhood" two years

earlier in life, and those two years, perhaps, the most important of all in their influence upon after life, will meet with the best wishes of our members and please thousands of young folks now looking forward to membership, thereby strengthening and advancing our work in many ways.

#### The New Ritual.

It is known to many of our best members that a revised Manual was adopted at the Charleston session of the National Grange nearly five years ago, and that it has never yet been printed and sent out; I have heard many inquiries as to when it might be expected, and a desire for its early issue. I am fully convinced that if it should be printed and made known to the Order that it could be had, enough could soon be sold to cover the expense. Many Granges are still using the old fourth edition of the Manual, these, with others who have the improved fifth edition are nearly worn out, and would be replaced with the revised edition. Besides, a desire to see the work in its perfected form, and the growing interest and effort in all degree work manifested by many of the best Granges, could only result in good in its influence upon our Order. I would suggest, however, if it should be thought best to soon issue the revised Manual, that after five years more of actual experience other needed changes or improvements may have been developed, and that a competent committee again look it over before printing.

#### Memorial Trees.

Another want that the National Grange is expected to supply, and that has several times been sent to this body for their action, but has so far been overlooked, is a form of service for planting memorial trees. Our funeral ceremony has always had connected with it the suggestion that—"Each Grange may set apart a day at the proper season of the year for the purpose of planting a memorial tree at the grave, or elsewhere, in memory of any brother or sister who may have died."

In several States I have found that the planting of memorial trees has become quite common, and it only needs the formal ceremony to make it still more impressive, and add one more link to the many that so closely bind us in fraternal bonds. Seeing as I have the need of this, and acting on the impulses and impressions thus derived, I have ventured with what few opportunities my scant work would permit, to prepare a form of ceremony and present it at this session with the hope that my feeble efforts may at least assist in supplying what many of our membership are asking for and expecting.

#### Extending a Helping Hand.

It is a fact known to all that in some portions of our country our Order has languished, and unless the fraternal hand is extended in time it will almost cease to exist in those sections. From various causes, the result of business ventures and other experiments, some States are having a struggle to maintain their existence as a Grange organization. Something should be done to encourage them; offer them such help as will prove our interest in them as Patrons; deeds that many

"A forlorn and shipwrecked brother  
Seeing shall take heart again."

Subordinate Granges have realized the necessity of thus looking after their lake-warm members by visiting committees. Pomona Granges actuated by the importance of sustaining the full number of subordinate Granges in their jurisdictions are looking after those that are not fully active, are holding special meetings with them for encouragement and help, and much good has been done.

I have been much impressed during the past year with the necessity and importance of similar action on the part of the National Grange. It has ever been one of our proudest boasts, that our Order knows no State or sectional lines. Let us, if possible, try to cheer those that are drooping; we cannot afford to lose a single State from our great brotherhood. When one shows signs of faltering or weakness, let the causes be investigated, ways and means adopted to bring them once more within the fold.

Let us ever cultivate and cherish the true Grange sentiment that should run through all our organizations—National, State, County and Subordinate. "Each for all, and all for each."

#### The Work of the National Grange.

It is with great pleasure that I can say that the National Grange, its work accomplished and the importance of that yet to be done, never was better understood or appreciated by the mass of our membership than at present. The National Grange plans for co-operation are being carefully studied and applied, new converts to the doctrine as the only practical and true plan never were so numerous as of late.

The action of the National Grange at its last session in regard to the tobacco tax, and railroad questions, met with a hearty approval, and has, with the good results thereby accomplished done much to prove the value and necessity of our National body when applied to these practical questions. The reduction of the tobacco tax has benefited this year, the farmers of the State of Kentucky alone, to the amount of over \$3,000,000.

#### Railroads.

Thousands of members are now looking hopefully and anxiously for the National Grange to devise the plans and lead the way in protecting the industries of our country from the increasing encroachments of great corporations.

We all take pride in the fact that it was our Order that first called—halt, and said, sustained by the Supreme Court of the United States, to those who use chartered rights to oppose the

people, "Thus far shalt thou go and no farther." This year our favored land has produced the most bounteous crops in its history, which with an unusually good market abroad, furnishing the demand that ever causes a rise in prices, has cheered and rewarded the toil of the farmer and started the busy wheels of commerce and manufacture. With more business than the great capacity of the roads could accommodate, pre-empting on business principles, that the larger the amount of freight carried, the cheaper pro rata it could be carried for would reduce freights, but instead of reduced rates, the railroad lines using the power the people have conferred upon and confided to them, have four separate times advanced their rates, deliberately taking from our farmers millions of money that belongs to "wife and home, of what their harvests yield." I find that some who do not think far enough, say that advancing freights on Western products increases the price that farmers in the Eastern and Middle States will receive for theirs. Such is not the case. Western grain will as surely come East for market and shipment abroad, as will water flow down hill. The advance in freight only means that in its passage the Western farmer shall pay that much more toll by taking just the amount less for his grain that the freight has been advanced. Millions thus taken from the majority of our husbandmen reduces their consuming power just that much, and Eastern manufacturers, merchants, mechanics and others all over the land suffer just that much in proportion.

Never have farmers realized or understood these questions so well as now. Unjust discriminations in freights are paralyzing the entire industries of some sections. Let our Order push on the work so well begun, and never pause until railroads and all other would-be monopolies that oppress our people shall be taught the lesson that "The creature is subject to the Creator."

### Our National Birthday.

[Written for the RURAL PRESS by Mrs. M. B. LANDER.]

Birthdays are generally pleasing though forcible reminders of passing years, and as each one sets its seal of another checkered 365 days, reflection, an offspring of time and hallowing thought upon the quick and hasty impulses of youth, must assert her power, throwing characteristic shades of maturing judgment upon each separate life-course, such as well done, indifferently performed, or total failure; these three life phases give responsive solutions of those causes and effects so distinctly bearing upon each other as to produce upon the plastic mind of the mass, sensations from the highest, most exalted mount of feeling to that of its dark opposite, the lowest point in the valley of humiliation.

At such random did my thoughts range, as busy bands and plodding feet made ready for the festal scene of the twelfth birthday of our National Grange. December fourth, little more than a decade of years since, did the expounders of those new methods of agricultural warfare, such as "live and let live," declare themselves worthy a name and place among the organized bodies of society; and was I a blind enthusiast if I measured the life-throbblings of this Brotherhood at large, by this one tiny heart-beat of Alhambra Grange, that this slight pulsation toward a fixed, an eternal principle, had numberless like reciprocal minor veins, all of which would eventually define and place themselves into one of those avenues leading at once to truth and progression, and be inevitably swallowed by those arterial tubes upon whose ebbings and flowings depends the life of our organization.

This natal morn, spite of the fickle prophecies of the preeding week, was greeted with a cloudless sky; but ere many hours had told their short life, there passed over her bright, sunny face tiny cloud-hecked veils, as if to remind that the brightest sunshine is a sure forerunner of dripping clouds and falling showers. Between such weather sittings of lights and shadows, wagon after wagon unloaded their living freight of hardy, genial brothers, good, trusty sisters and happy blooming little Grangers, with faces all aglow, hearts alive and burning with zeal born of that consciousness assuring them, that in this hall they too had found a recognized place and planted seed from which there was not only a possibility, but a sure probability of reaping a harvest that would redound an hundred fold to their credit when the great master of sheaves, after the fall of this ripened earth-life shall garner the fruits of labor, and beneficently smile upon that humility which says in acceptance of their offering of child-work:

"Not what I did, but what I strove to do,  
And though the full ripe ears be sadly few,  
Thou wilt accept my sheaves."

With happy, hearty, off-hand greetings the morning hours passed quickly away, though the frothy tide of pleasure was ever and anon darkened by sorrowful waves of memory sweeping o'er us as loving sisters reverently trimmed anew with funeral crape, budding flower and garlands of living green, our vacant chair and sacred altar in semblance of everlasting remembrance; this chain of memory though woven with strands of joy intermingled with few sorrowful threads, is hushed with budding hopes and anticipations of again meeting that sister

and those brothers who have only gone before to form links in that fraternal circle above, welded by a higher love than earth can give. Even the children hushed for a moment their joyous, ringing laughter, and over their sunny faces came a cloud whose passing mistiness left a tear-drop to reflect the next smile with a softened radiance because of its nearness to a tear.

Let us mount the wings of fancy and fly to those cold northern Grange hearth-stones lighted and warmed by old-fashioned, crackling wood-fires; the cooler blood of these strong, yeoman hearts is quickened by the genial warmth, and flashing crystals of wit and humor fly good-humoredly about, perhaps with as great zest and much better mark than the flying golden sparks who snap hither and thither in their seemingly aimless and unconscious flight. Now to the "sunny south" whose warm skies and mild air almost, if not quite, preclude the necessity of warming fires, and whose home-temple were rudely blasted by the scathing hand of war, though now are slowly rising from their ashen bed and being made to smile again socially, morally and financially, in proportion only as tillers of the soil write their names in prosperity and growth; then hie we back to the great growing, thriving west, whose young, active days of experience are but the upheaval of that knowledge gained in as many years of the past, but whose great, quickly-palpitating heart is in keeping with her wondrous valleys, picturesque glades, towering mountains, and grand, flowing, ravenous rivers; only to find this Grange-heart, whether its pulsations be told by the cool, calculating throbbings of the north and east, the quick, impulsive throes of the south or the more evenly-balanced life-drops of the west, still lighted like fires in this national circling brotherhood, and to-day in sisterly and brotherly conclave their councils will be so modified in tone, as to crown their deliberations with such zeal as "worketh the greatest good to the greatest number," and in their choice of color-bearers for the coming year will display such wisdom and forethought as will redound ever to the weal of this comparatively new and petted life of the "Patrons of Husbandry."

Our little Grange-hearts beat in unison with birthday festivities, and with song, recitation, reading and dialogue, came they in a manly and womanly way to their post of duty; if promptness and readiness is an omen of the fullness of their sheaves, then will they have gained the well-done of the harvest gatherer. These young minds in tendencies true to real life, ranged from plaintive, simple melodies, through deeper and more stirring thoughts down to fun and lighter frothings of wit and humor, as was given to a most delectable dish of social improvement and advancement, a pleasing flavor savoring of that "variety which is the spice of life."

From this exalted intellectual sphere we trod the steps of a real, practical stairway down to another altar, namely, the centerpiece of a dining-room, and which our organism has dedicated to a social creed whose purity it is our highest duty to foster; here sight, taste and smell was rampant, and coffee, tea, pigs, chickens, turkeys, pies, cakes and other sweets only known to Prof. Blot's vocabulary were placed upon this groaning altar to mollify these triple senses. Powers of elective forces now called the fast-dying officerhood to duty, and with that good feeling and harmony usually crowning our councils, a new staff of leaders was told by ballot-strength; though most of the old board was again assigned, with one or two changes of trust, to olden office labors and responsibilities; not we believe that they have done so well in the past, but that they may have the golden opportunity of doing better in the future.

As this birthday fast recedes into the shades of the past, taking with it the closing days of the year 1879, not far off are the propitious gleamings of the new-coming 1880.

Our last official act was to do an added honor and reverence to our dead. This beautiful edict empowered two sisters to obtain pictures of those who have drifted to the other shore, also of others who in the to-come may be called to break that awful brooding silence of death, to grace the walls of our Grange room, that thus their silent semblances might ever emulate us to their virtues and soften that judgment which is not always an outgrowth of that "Charity which covereth a multitude of sins." May the years left us to labor be as was this day's work, hallowed by records of words and thoughts which should consecrate this act a loving memory to all those of our mystic circle whom death weds with a frozen kiss.

Martinez, Dec. 8th, 1879.

### Eden Grange.

EDITORS PRESS:—Eden Grange, No. 106, Haywards, met in goodly numbers at their new hall in Luce's block, last Saturday, the 14th inst., and after conferring the fourth degree upon a class of three, the Grange retired to one of the commodious anterooms, where they found a table groaning under a load of splendid selections of good things from their several farm homes, such as would surprise anyone but a Granger; and after an hour and a half of a feast of good things said as well as eaten, the Grange was again called from refreshments to labor, and in the due order of business proceeded to the election of its officers for the ensuing year, the result of which I send you. [See "Election of Officers."—EDS. PRESS.]

The regular meetings of the Grange take



place on the second and fourth Saturdays of each month, at one o'clock P. M., when a hearty welcome will be extended to all Grangers.

W. M.

Haywards, Cal., Dec. 15th.

### Election of Officers.\*

EDEN GRANGE, No. 106, HAYWARDS, CAL.—Geo. Barter, M.; L. B. Anway, O.; J. Russell, L.; Benj. Wood, S.; F. Nebas, A. S.; Sister Knox, C.; Bro. L. Stone, T.; Sister J. Sharai, Sec'y; Sister Dennis, G. K.; Dora Anway, Ceres; Angie Wood, Pomona; Mary Anway, Flora; Roxie Deunis, L. A. S., and Maud Russell, Organist.

PESCADERO GRANGE, No. 32.—Election, Dec. 13th: I. C. Steele, M.; E. C. Burch, O.; George Thompson, L.; W. J. Thompson, S.; B. Hayward, A. S.; Mrs. Annie Weeks, C.; B. V. Weeks, T.; E. Leighton, Sec'y; A. Moore, G. K.; Miss Jessie Honsinger, Ceres; Miss Ettie Burch, Pomona; Miss Ellen O'Brien, Flora; Mrs. Ellen Burch, L. A. S.

PLYMOUTH GRANGE, No. 232, AMADOR Co.—Election, Dec. 13th: Isaac W. Whitacre, M.; Stephen C. Wheeler, O.; Reuben M. Ford, L.; Jonathan Sallee, S.; Leocunt Gregg, A. S.; Mrs. Charlotte Gregg, C.; Harding Vanderpool, Sec'y; John Sharp (re-elected), T.; Eleanor Sallee, Ceres; Orpha E. Wheeler, Flora; Christina Gregg, Pomona; Louise Vanderpool, L. A. S.; Milton S. Gregg, G. K.

STOCKTON GRANGE.—Election, Dec. 13th: C. Grattan, M.; A. Litchfield, O.; Mrs. W. D. Ashley, L.; J. B. Boddy, S.; J. B. Harelson, A. S.; Wm. Kuhl, C.; Israel Lander, T.; Wm. G. Phelps, Sec'y; Wm. L. Overhiser, G. K.; Mrs. C. Grattan, Ceres; Mrs. Wm. Kuhl, Pomona; Miss Lucy Harelson, Flora; Mrs. J. B. Boddy, L. A. S.; Martha Harelson, organist.

\*Secretaries of Subordinate Granges are invited to send, for publication, lists of officers as soon as they are elected; also dates of installation.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### BUTTE.

ANGORAS.—Record: H. Cummings has 250 goats at Chico, which are on their return to El Dorado county. Seven or eight years ago Mr. Cummings drove northward a flock of several hundred through this city. The enterprising breeder was then en route to his range on Deer creek, in Tehama or Butte counties, where his main flock numbers about 1,300 head. Mr. Cummings has succeeded in producing a very fine grade of this beautiful animal, and is entitled to much credit for his efforts to introduce this profitable and promising animal among our stock growers. He has been engaged for the past seven years in the endeavor to grade up and produce an animal that shall equal the thoroughbred Angora, and has succeeded beyond his most sanguine expectations. He has a large flock unexcelled in quality by any on the coast, and must soon realize handsomely for the expense and care bestowed upon them.

#### COLUSA.

EGYPTIAN CORN.—Sun: This grain seems to be growing in popularity. It can be planted on any of the overflowed land, after the water subsides, and will produce a large crop of grain, good for meal as well as for stock feed. Mr. George Packer has raised this season some 3,000 sacks. He had it gathered by hand, tramped out with horses, and cleaned by a hand mill. The cost of harvesting in this way was 20 cents a sack of 120 pounds. He has both the white and brown varieties. The harvesting is about half the cost of its production. A quantity of it was raised on L. F. Moulton's Manahan place, just above the head of Butte slough, and some of it has been ground, and the meal is on sale at R. C. Montgomery's store. We have tried it in bread and find it very superior. It is excellent for making into cakes. For feed for stock it is thought to be superior to barley.

#### EL DORADO.

FORMATION OF A DISTRICT AGRICULTURAL SOCIETY.—EDITORS PRESS: I send you a list of the officers elect of the El Dorado Agricultural Society; also some of the resolutions passed at the annual meeting, and a financial statement of the society's transactions. The meeting was held in Placerville, December, George G. Blanchard, President, in the chair. Minutes of the last meeting were read and approved. Report of the Board of Directors was read, including the report of the Treasurer, showing the total receipts for the last year to be \$5,053.60, and total expenditures \$4,901.71. The total debt of the society December 1st, 1879, was \$4,833.55.

The following resolution was offered by Thos. Fraser:

Resolved, That this Society be re-organized as a District Society, and be comprised of the counties of El Dorado, Amador, Placer and Alpine, to be known as the El Dorado, Amador, Placer and Alpine District Agricultural Society, whose principal place of business shall be Placerville, El Dorado county. That for the purpose of effecting such re-organization, a committee of nine, two from Alpine, two from Amador, two from Placer and three from El Dorado county be appointed.

The resolution was adopted by a unanimous vote. On motion the following were appointed as such committee: George G. Blanchard, W. H. Brown and Thos. Fraser, of El Dorado; C. Coleman and J. B. Scott, of Alpine; G. Norris and O. N. Morse, of Amador; J. R. Crander and Dana Perkins, of Placer.

The following officers were elected for the ensuing year: Geo. G. Blanchard, President;

Thos. Fraser and W. H. Valentine, Vice-Presidents; John Blair, Treas.; C. H. Weatherwax, Financial Sec'y; W. Wiltse, Jr., Recording Sec'y; H. S. Morey, Thos. Hardie, P. J. Ishell, Chas. McCuen, O. N. Morse, J. R. Crander, W. H. Brown, P. Kramp, H. Mahler and N. Gilmore, Directors. The meeting then adjourned.—W. WILTSE, Recording Secretary.

#### FRESNO.

RAISIN GRAPES.—Republican, Dec. 13: As the season for setting out vines and fruit trees approaches, it would be well for parties interested to thoroughly canvass the subject and determine which varieties are the most desirable. For the manufacture of raisins the Muscat of Alexandria, Muscatel Gordo Blanco and Seedless Sultana are the varieties most highly prized in this vicinity, and but few of the many other varieties will be set here this year. Of the Seedless Sultana, less is known than of the Muscat and Muscatel. But what is known is greatly in their favor, as an early and prolific bearer, and being free from seeds will always command a ready sale at good prices. Mr. Blowers, the well-known raisin manufacturer, states in a letter of recent date that his three-year-old Seedless Sultana vines yielded from 25 to 50 pounds each, many clusters weighing over four pounds each. The average was 12½ pounds of cured raisins per vine, which brought at wholesale 12½ cents per pound, \$1.50 per vine, over \$1,000 per acre, or a net profit over picking, curing and packing of \$680. These results may be obtained most anywhere in this vicinity by good cultivation and the judicious use of water.

MAMMOTH WAGON ROAD.—For the past two or three months parties have been engaged in viewing and surveying the different routes over the mountains in order to determine which is the most feasible for a wagon road from Fresno to Bodie and Mammoth City. The route selected by Charles O'Neal, by way of Crane valley, is objected to by many on account of its high altitude and consequent snow. Mr. McCullough of Fresno, and Mr. Chapman of Madera, have located a route following the San Joaquin river, which, though shorter, may cost somewhat more than that by the Crane valley route, but is free from the objections raised against that route, no snow being encountered until within twenty miles of Mammoth City. A slight additional cost of construction should have no bearing in the case. A good road will be a paying investment, let it cost what it may. It is reported that a company with ample means is being formed to build a road by the river route, and that its completion may be looked for early in July next. We have no desire to pour cold water upon any of the routes that have been suggested, but a road that can be traveled every day in the year is the only one that will meet our requirements.

#### MARIN.

HILL-TOP PLANTING.—Journal:—Those vast beds of seedling trees at Mount Tamalpais Cemetery are being rapidly transplanted, along the avenues, and in clusters about the hills. In a very short time they will transform the whole tract, and give it a much improved appearance. The avenue is now completed to the top of the high hill on the north, and the view from the summit is truly grand.

#### MERCED.

RESOWING.—EDITORS PRESS: Capt. Grey is resowing his early grain; also John O'Donnell and others. The grain has rotted. There was not sufficient moisture to carry it through, although started.—M. J. O'B.

#### MONTEREY.

WHAT HE BOUGHT WITH.—Democrat, Dec. 13: We report to-day, under real estate transactions, the purchase by H. W. Mayn, of 205 28-100 acres from Thomas Graves, in the sum of \$13,353. The fact has this significance that the money was earned by the purchaser in the cultivation, during four or five years, of a tract of the Sausal rancho corresponding in size with that just bought by him. While renting the Sausal land and netting such a sum as the proceeds of his labor and thrift, the proprietor, Mr. Sherwood, was entirely satisfied with his share of the crops.

SUCCESSFUL FRUIT GROWING.—We have an immense territory and a variety of climates, many exposures which have immunity from frost and upon which such plants as vines, olives, almonds, oranges and walnuts undoubtedly would flourish. We announced, a couple of years ago, the setting out by Mr. Escolle, on his place opposite Chualar, of an almond orchard, together with orange trees and a vineyard of foreign stock. The location selected by him is the mesa descending from the base of the Santa Lucia range to the edge of the river bottom, and while its soil is suited to the purpose the spot never knows frost. Being in a strip of territory extending up and down the river for many miles, his experiment has had great interest to us, and we have watched its development with much solicitude. The trees and vines planted by him having now some years of growth (they were several years old when planted where they now are), we asked Mr. Escolle, Tuesday, how they were getting on, and his reply was satisfactory. He has gathered this season a number of sacks of almonds, of the soft-shell variety, the nuts being well filled and of an agreeable flavor. His vineyard also has borne well, the fruit maturing perfectly, and the orange trees now have upon them oranges as large as those which are marketed from Los Angeles. Altogether, his experiment appears to be a success, so far as fitness of soil and climate are concerned, and he is well pleased with existing results.

#### NAPA.

LARGE SHIPMENTS OF SWINE.—Register, Dec. 13: The shipment of hogs per steamer from this city to San Francisco this season has been very large. One boat alone, took down over 2,000 during the month of November, sent by drovers and farmers. These came from various parts of the county, the largest shipper being King Watson, who bought one lot of six hundred in Berryessa valley. But three cents are offered for hogs on foot; a very low price, but as the stubble feed is gone and as farmers cannot afford to buy mill feed, they are obliged to sell. Lard retails for ten cents and hacon from twelve to fourteen cents per pound. Farmers would do far better to bacon their hogs than sell them alive at ruling prices.

#### SANTA BARBARA.

EDITORS PRESS:—Slight rain on the 8th, keeping the vegetation still growing. Farmers hopeful and hard times slowly breaking away. Sugar-beet industry still active, but I counsel all to move with caution. It is always better to begin these new industries slowly, and branch out after there is an assured success. The fruit business is looming up, and I think there will be many trees set this winter. The railroad fever still unabated, and if we do not make a place of Santa Barbara, we mean it shall not be for lack of effort. We certainly have nearly all the natural advantages the most sanguine heart of man can reasonably hope for in this mundane sphere.—S. P. SNOW, Santa Barbara Co., Dec. 10th, 1879.

#### SOLANO.

THE STORM.—Tribune, Dec. 13: The rain has continued in slight showers at intervals the present week and 3.03 inches has fallen in all up to this time. Farmers in some localities have been very busy plowing, and in other places the ground is too wet. Near Dixon it is not wet down more than six inches. That is enough, however, for the time being and everybody continues in good spirits.

#### SONOMA.

APPLE TREE.—Democrat: Our correspondent at Duncan's Mills sends us the following: "On the ranch of Samuel Dunkin, near Duncan's Mill, is an apple tree which has this year borne two crops of fruit. The first crop was more than an average in quantity and quality and the second very nearly equals it. Mr. Dunkin is an old resident of Sonoma county and one of its solid men." We ask our contemporaries to beat this, and although we do not hoast of a balmy climate like the southern coast, this is but an example of what occurs in this county almost within sight of the Pacific ocean.

THE TOKAY GRAPE.—Sonoma Index: We learn from an extensive vintner that the Tokay vine will resist the attacks of the phylloxera better than any known variety in the valley. It will make a good stock to graft on, for it is a great feeder and rapid grower. To parties proposing to plant new vineyards, I would by all means recommend the planting of the Tokay cutting first, and graft what is wanted afterward.

CROP PROSPECTS.—The amount of grain sown this season is much less than that of last year at this time, while the acreage plowed is much greater. The greater portion of the farmers in this section are desirous of a few weeks fair weather, in order to give them an opportunity to sow. Mr. James Gannon, of Sebastopol, informs us that he has 25 acres of wheat that is now over four inches high. The bulk of the grain in his vicinity, has not been sown. The long continued rains have rendered the adobe so that it can scarcely be worked. If the rain ceases in a few days, the prospect for a large acreage sown is excellent, and as a failure of crops in this county is unknown, a large yield of grain can be confidently expected. The grass is abundant, the warm, light rains being very favorable to its growth, cattle are looking well, and stock men are jubilant.

EDITORS PRESS:—Everything has been at a standstill for the past two weeks from the effects of the drenching rains. The last three days we have had fine sunny weather and feed is growing finely. In a few days the plows will be again in motion, and it looks favorable for another prosperous growing season.—E. H. CHENEY, Smith's Ranch.

#### STANISLAUS.

FARMING PROFITS.—News, Dec. 12: We have frequently been applied to by persons residing in other parts of this State, as well as in the East, for information respecting profits realized by our farmers. As an explanation to all such queries, we have applied to an intelligent farmer near this place for a statement of receipts and expenditures, which we herewith give. The farm is within three miles of Modesto, and consists of 640 acres of land. The yield for the present year was supposed to be about an average of this section of the county:

Value of farm.....	\$12,800
Value of teams and implements.....	2,000
Total valuation of property.....	\$14,800
EXPENSES.	
Hired help.....	\$300
Seed wheat.....	280
Cost of sacks.....	285
Cost of threshing grain.....	470
Cost of feeding teams.....	360
Total.....	\$1,695
RECEIPTS.	
Wheat sold in December above cost of storage....	\$6,408

The farmer informs us that he has reserved from his crop sufficient for both seed and feed for next year, which should be added to the receipts, and which would swell the total amount

for the year in the one item of wheat to \$6,988. This gives us as a balance above expenditures the sum of \$5,293. Of course the farmer's work should also be deducted. Yet there were other profits from productions of the farm, such as vegetables, fruit, hogs and fowls, which would probably swell the amount to more than enough to compensate him for his own labor. We have then for the year a profit from farming of \$5,293 on 640 acres of our plain lands. And it should also be remembered that the past season was comparatively a dry one; nor was the soil cultivated any better than the average of our lightest lands.

NEW PEST.—It is reported to us that in some parts of the county a species of earth worm or bug has been very destructive of seed wheat whilst in the ground. Several farmers report that the regularity or evenness of the young grain in their fields has been disturbed by the destruction of the seed wheat before coming through the soil. It is the first time we have heard of the ravages of the wheat worm amounting to any considerable damage in this county. We can, therefore, pronounce its appearance as a new pest.

#### SUTTER.

FARMERS JUBILANT.—Banner, Dec. 13: Farmers throughout the county are rejoicing over the prospect of a large harvest next season. Preparations are being made for planting a larger area than any previous year. In the vicinity of Live Oak Station a large tract of land on what is known as the "Goodwin tract" has been cleared and grubbed off and will be seeded this season for the first time. Land in that locality is very productive. The rainfall for the season at Yuba City is 6.27 inches.

### News in Brief.

DENIS KEARNEY has gone to Washington. The negro exodus from Texas to Kansas continues.

CALCRAFT, for 46 years the hangman of England, is dead.

ARMY officers predict that war with the Utes is a certainty.

This year's brandy crop in France amounts to practically nothing.

BROWN, the last of the Mendocino outlaws, was jailed at Ukiah Sunday.

The Chileans have obtained another victory over the opposing allied forces.

LORD LYTTON, Viceroy of India, has been fired at by a drunken native of Calcutta.

THERE has been further fighting in Afghanistan, the British troops being successful.

The Crown Prince advocates that Germany acquire territory in the Samoan Groups.

The libel suit of Carlotta Patti against the Post-Dispatch is being tried in St. Louis.

A GENERAL reduction of salaries in the municipal department of this city has been made.

MANY people are starving in Persia and Turkish Kurdistan, and the need of relief is urgent.

A UNITED STATES judge in Tennessee has decided that slavery is not punishable by indictment.

THE House Committee on Post Offices and Post Roads favors the bill establishing return letter offices.

A ST. PETERSBURG dispatch says that Russia is negotiating for a line of steamers between Siberia, China and Japan.

GENERAL GRANT has completed his tour around the world, and was given a reception at Philadelphia on the 16th instant.

A BIG strike is pending among the employees of the packing houses in Chicago. The Cincinnati brewers also threaten to strike.

THE work of extension of the Texas Pacific railroad is to commence immediately, and Jay Gould is reported to have full control.

REPRESENTATIVE PAGE has introduced a bill proposing an appropriation of \$100,000 for the erection of a postoffice at Sacramento.

THE Governor-General of Kharkoff, Russia, has issued an order prohibiting to the public the manufacture, sale or possession of any explosive materials.

JUDGE MYRICK, of this State, has decided that real estate owned by a spouse before marriage, with its increased value, continues separate property.

THE recent heavy rain storm in southern Oregon resulted in great damage. Immense quantities of lumber, several mill-dams and thousands of logs were swept away.

THE Omnibus Railroad Company has filed a protest with the Supervisors against the granting to Baldwin, Hallidie and others a franchise to run a railroad to the Presidio.

SARAH WINNEMUCCA has sent to Secretary Schurz an affidavit preferring charges against Agent Rhinehart, in charge of the Malheur Indian Reservation, and asking for his removal.

FOURTEEN THOUSAND immigrants arrived at New York during November. Since January 1st they number 125,000, being an increase of 40,755 over the corresponding period of last year.

SATURDAY, in the porch of the Limerick County Club House, an evicted tenant with a cudgel felled to the floor Lord Fermoy, who resides in County Limerick. Lord Fermoy remained senseless for a time. The assailant was immediately seized and taken to prison.

THE United States Board of Trade adopted a resolution for a committee to award a prize of \$1,000, offered by a member, to the person who should draw up for passage by Congress the best Act looking toward the regulation of the sale of food and the prevention of adulterations thereof.





### Christmas Thoughts.

At thy feet, like Mary, in the days of old,  
Fain would bow my spirit, and my faith be told;  
Going out to meet him, tearfully she cried,  
"Lord, with thee, my brother would not thus have died!"

At thy feet, like Mary, she of Bethany,  
I would fall, dear Saviour, and would worship thee;  
She the precious ointment in her hand did bear,  
And, his feet anointing, wiped them with her hair.

At thy feet, like Mary of the loving heart,  
Who, her cares unheeding, chose the better part,  
I would fall, dear Jesus, as she did of old,  
To thy voice would listen, and thy face behold.

—Ditson's Temperance Jewels.

### Repentance and Forgiveness,

#### A Christmas Story.

Few of the many residences that bestud the banks of the noble Hudson command such a magnificent prospect as Fairview. Here the eye could range for many a mile both up and down the busy river, while the lofty wall of the adjacent Palisades frowned down on and dwarfed the swift flowing stream at their base, by their imposing height and grandeur. Surrounding the princely mansion, itself a model of comfort and elegance, the beautifully kept grounds were such as betokened not only the wealth of the owner, but also his good taste.

But it was Christmas day, one of the old-fashioned, representative kind, and a heavy snow storm had obscured everything. The house, grounds and country were clothed in a deep, fleecy mantle, and in the still air the fast falling flakes were settling down as if with a steady determination to obliterate all that did not partake of their own nature and possess their own spotless hue.

The moon was up and full, but obscured. Still, aided by the snow, it gave sufficient light for an observer to notice the form of a man lying under the low overhanging branches of a thick Norway pine, where the ground was clear and dry, closely watching the windows of the neighboring mansion, illuminated for the quiet, family Christmas dinner.

The inmates of the house evidently did not fear prying people, as the blinds were up. They had no near neighbors, and little suspected that one pair of keen and eager eyes were fixed on them collectively, and scrutinizing every form and face which flitted to and fro in festive activity, as if watching for some particular person.

Presently his gaze was riveted on a small room, evidently a boudoir, at one end of the veranda, and, with bated breath, he saw two ladies enter. One, elderly, but hale and hearty, was helping the other—young, pale, feeble and sickly—and led her to an easy chair, where she tenderly seated, and after kissing, sat down beside her.

On witnessing this, the hidden man buried his face in his hands, threw himself flat on the ground, and groaned aloud.

"Would to God I could recall the past! Would to God I could recall the past!" he muttered in the anguish of his soul, and then the strong man burst into tears.

There was a good reason for Mark Smedley's regret, for one false step in life had made him lose much—all, in fact, that is worth living for—honor, wealth, friends, parental love, and the affection of one who had given him the priceless treasure of a true woman's heart-devotion. One unwise move had made him a wanderer and a vagabond on the face of the earth.

Mark's father was a self-made man, one of nature's nobility, who had risen by industry and integrity to great wealth and influence. On his only son he had, with parental pride, lavished every care to make him a still worthier American, but in vain. With scarcely a wish ungratified, and an unlimited command of money, Mark's career became anything but creditable, either to himself or to his friends. At college he got in debt, chiefly by gambling. After getting out of this scrape, he became junior partner in an embezzling firm. His father hoped thereby to steady him by contact with staid men of integrity and position.

For a time this kept him from his ruinous course, but at last, led by old companions who followed him to the city, he became deeper in debt than ever, and ultimately brought matters to a crisis by forging his father's name. Detection soon followed, and, conscience-stricken, he fled the country.

His father, against whom he had chiefly erred, was implacable, not so much from the pecuniary loss as from his high sense of honesty and honor. He felt ashamed that a son so beloved—on whom he had lavished so much money—and of whose future he had cherished such lofty aspirations, should have disgraced a name hitherto unsullied.

But there were two who clung to him through erratic career, and even his disgrace. His

mother and his cousin did not excuse his faults. Still they loved and pitied him, hoping ultimately to win him to mend his ways and lead a better life. Amy Stevens, a bright lovable girl and an orphan, had been adopted young, and brought up with Mark, than whom she was only a few years younger. Reared like brother and sister, their affection had ripened into love. Their betrothal, welcomed by the old folks, happened long before Mark's irregularities had become confirmed. When at length these were too open to escape her notice, Amy still hoped for amendment, and strove to further it by frequent counsel. His last and crowning error brought matters to a climax. Hope almost died in Amy's fond heart. After his flight her health fairly broke down. The change in her was now so great that in the thin, pale, sedate invalid whom his mother led in, Mark scarcely recognized the plump, active Amy, once the life and light of the household.

But two years of vagrant life in exile, during which he had often been in great straits, had also left their impression on Mark; and the jaunty, independent young fellow, once accustomed to command and denied no luxury, was now a careworn and crestfallen, badly-dressed wanderer, glad of a day's work or charitable meal. Conscience-stricken and repentant, he

"Who are you, and what do you want?" she asked.

"Mother, don't you know me?" replied Mark, in a pleading tone, afraid of a rebuff even from her.

"Mark is it you? Come in," was the answer.

As she said this a low shriek came from Amy, towards whom the mother and son now rushed, as she had fainted. Ere long she recovered, to find the sorrowing, repentant prodigal kneeling at her feet and his mother's; his attitude and an impressive silence implying far more than words could—his greatest earthly wish for forgiveness; that pardon which already beamed from the tear-laden eyes of those before whom his once proud nature now bent in abject humility.

"Mark," said his mother presently, "rise. Your father must not know of this just yet. You are aware how unbending he is and fixed in his opinions. But why do you look so?"

"I feel ill, mother, very ill. Fatigue, want and exposure have done their worst. But a few days' rest will make me all right, I trust."

"Come with me," said the mother, as she led him through the kitchen—she knew the old cook could be trusted with the secret—then up

"He may not need it soon, poor boy. Mark is ill, very ill, perhaps dying."

"Where?"

"Here, in his father's house. He came to beg your forgiveness."

"How is this? When did he come? Who gave him permission to enter my door?"

"Pardon me, Frank, for this. He returned on Christmas day. Then, of all the days in the year, could I turn away a repentant sinner, much less my own son? He was ailing. His sickness developed itself into typhoid. Dr. Bone says that his life now trembles in the balance. Our only son, Frank, raves for you, and for your forgiveness. Won't you grant it, dear, for my sake?"

Ere he could reply, a knock was heard and the nurse entered.

"Dr. Bone sends his compliments, and says that as the change is near at hand, you had better come at once, if you would see him alive." Saying this, the nurse withdrew.

"Frank," said Mrs. Smedley, pleadingly, "to err is human, to forgive divine. He is your son, our once noble boy. Do not deny him your blessing. He may never need more at your hands. Come with me, dearest."

The father was led into his son's sick room. The delirium had gone, and the patient was now sane. But, as the physician explained, this might be only a glimpse of reason before the spirit fled. As his parents entered, the sick man, who fully recognized them, clasped his hands before his eyes and burst into tears.

"Father," he wailed, "will you refuse me the pardon which God has granted?"

Mr. Smedley was little prepared for this. And as he gazed on the wasted face and form of his once idolized heir, his heart, already half melted, was fairly bowed. Flinging himself on his knees, he seized Mark's hands and sobbed out his forgiveness. The stubborn barrier of his earthly pride gave way in presence of the grim monster whose shadow was hovering over the sick man, so dear to him yet, even in his disgrace.

Even as the father knelt thus, Mark dropped off to sleep. On a precautionary signal for silence from the physician, Mr. Smedley rose and retired with his wife and Amy, who had also been summoned, fearing that it was Mark's last hour on earth.

But that slumber was the second and surest sign of permanent amendment. It lasted long, and Mark awoke refreshed, hungry and in the full consciousness of returning health and strength, his mind eased of a heavy load, and soothed by a sweet consciousness of a full restoration of parental affection.

Dr. Bone had serious fear of Amy's health, and long suspected incipient consumption. The anxiety attending Mark's illness of course did her no good, but rather aggravated her symptoms. His recovery, however, completely altered the state of affairs, so that her convalescence became as decided and rapid as Mark's. She was soon her ownself again, as healthy and as joyous. Her ailments had a mental and not a physical basis.

It was a happy and united household which welcomed Mark on his first descent from the sick-room to the parlor, where a special feast had been prepared for him. Ere long he was himself again, as hearty as ever, and as hopeful; for his father had forgiven him fully and had promised to start him afresh, while Amy had also decided on joining him as partner for life.

In a large Western city Mark worked steadily and prospered. From the small beginning which his father permitted him to make, he has worked up a prosperous business, and bids fair to be ultimately as wealthy as his father. His wisdom has grown with his wealth, and his name is fast becoming a synonym for independence and probity.

Amy's home is a model one. To the husband and wife Christmas day comes yearly as a special holiday. And in the midst of their festivities their glad hearts often think of the night of the prodigal's return, and of the happy days that have passed since. The old people often visit them. Nor has Mr. Smedley ever regretted having forgiven his erring but repentant son, who re-entered his old home on the day so eventful not only in his life, but in the history of the world.



A GLIMPSE AT CHRISTMAS IN THE HOME.

had tramped over Europe, till, weary almost of life, he resolved as a last resource to return and ask his father's forgiveness. Having worked his way in a sailing vessel to Boston, he walked home, sleeping in outhouses or the open air. All through the snow-storm he trudged, till, footsore and starving, he lay down under the pine tree to reconnoitre.

As Mark lay concealed, after watching the entrance of his mother and Amy into the boudoir, thinking of what might have been if he had not forsaken the path of duty and honor, a cold chill crept through his frame and made him shiver with a general feeling of illness.

At last sickness and despair nerved him with courage to face the ordeal. Of physical courage Mark had plenty, but the moral strength to meet an outraged and angry father was quite another thing. Seeing that now was his chance or never, he put a bold front on the matter, walked up to the steps, then along the veranda to the boudoir window and tapped gently.

Hearing the sound, his mother turned half way around to listen. A louder tap brought her to the window, where she could see the form of a man relieved against the white background of snow. Being neither of a timid nor of a suspicious disposition, and assured that he could not be a burglar, she opened the window, which brought him into the full blaze of the light.

the back stairs to a spare room, where he could be kept in concealment till the time should arrive for announcing his presence.

That evening's party went on, but two people were ill at ease lest their secret should be discovered. Next day, however, Mark was in a fever and unable to leave his bed, so that the physician who was attending Amy had to be taken into confidence. Old Mr. Smedley had forbidden Mark's name to be mentioned, and it would have been dangerous to transgress just then, and even to let him know that he had again received shelter under the paternal roof without his consent and knowledge.

A few days more decided that Mark's disease was typhoid fever of the worst type. At last he became delirious, and it was feared that his father would discover all by his loud ravings. The crisis of the disease soon came, but the issue was still doubtful. There was great danger. In a few hours he might be dead, or convalescent. The critical situation was fully explained to Mark's mother, who finally decided on telling her husband the whole affair. She found him in the library.

"Frank," she said, "I have news for you. Mark —"

"Mark's name, Mary, must not be mentioned here. I have already strictly forbidden it. Let it be forgotten. Never shall he have aid from me again."

LIFE.—Life is beautifully compared to a fountain fed by a thousand streams, that perish if one is dried. It is a silver cord, twisted with a thousand strings, that part asunder if one be broken. Frail and thoughtless mortals are surrounded by innumerable dangers, which make it much more strange that they escape so long, than that they sometimes perish suddenly at last. We are encompassed with accidents every day, to crush the moldering tenements which we inhabit. The seeds of disease are planted in our constitution by nature. The earth and atmosphere, whence we draw our breath, are impregnated with death. Health is made to operate to its own destruction. The food that nourishes contains the elements of decay; the soul that animates it by vivifying fire tends to wear it out by its own action. Death lurks in ambush along our path. Notwithstanding this is the truth, so palpably confirmed by the daily example before our own eyes, how little do we lay it to heart! We see our friends and neighbors perish among us, but how seldom does it occur in our thoughts that our knell shall, perhaps, give the next fruitless warning to the world!



## The Dusty Highway of Life.—No. 8.

[Written for RURAL PRESS by AGNES.]

A voice from the mountain-top questions: "Where are our contributors? Where is our cherished Agnes? Hope she is not overwhelmed in the dusty highway, etc." Well, friends, it is a satisfaction to realize that we are cherished in the memory of those who have, in time past, rejoiced in our rejoicings, and with firm and patient step walked with us through dark places. The very fact that we are kept in the hearts of companions and friends, goes far to keep us from being overcome with the cares and struggles of life.

The reason why I have not contributed more frequently to the columns of the PRESS during the summer is, that I have been obliged to resort to cutting, fitting and making for others, in addition to the care and much of the work for a family of five; that I might assist in keeping that worst of wolves, debt, from the door. No other excuse is necessary. Then since we are not overwhelmed by the "dusty highway," we will resume its onward course.

To make our life-travels pleasant on this road, we first have to secure a place to call home; a resting place, a camping ground, where the little we have to call our own may be gathered together; where expectant faces and fond hearts await our coming. It has been my privilege during the last five months to enter the homes of numerous kindred travelers. In this valley many were discouraged because they could not readily accept the state of equilibrium to which, from the very nature of things, the laboring classes were fast tending, and the universal cry was, "hard times, hard times." I did not wonder at hearing this, but noticed along with it a disposition to rest in the fact that farmers had too long been living extravagantly, beyond their means, upon their stilts—and must of necessity seek a lower level and there be content.

I object to the encouragement of this feeling; it savors too much of serfdom. A disposition to yield all their in our natures to servile obedience, because we are laborers (and no farmer can live and succeed by his wits alone, he must labor). Must agriculture, then, yield up the honors she justly deserves, and cringing, fawning, dependent, bow her servile knee in subjection to all other pursuits? Is this a republican spirit? This the outgrowth of a Government instituted for the good of the commonwealth? I apprehend we shall be left to do just this thing, if we join hands in saying "we will." But if we firmly and persistently assert our title to just remuneration for our labors, the time will come when our Government will be justly proud of her yeomanry, because of their independence. It remains with ourselves. Combined individuality, the only hand-maiden who can give the turning lift to the down-trodden and oppressed, must be encouraged, and with the inspiration which the word republic gives, I say combine! stand your ground! We can endure the hard times as well as any class of people, if hard times we must have. We are not ashamed to wear seedy clothes to church if clean and covering honest hearts, and most of us are pious enough to stay at home when our clothes are not good enough to wear abroad. Then, farmers, live within your means. Do not borrow the money that oppresses, neither yield to a treadmill life, thinking there is nothing else in store for you. No. In the last five months I have not entered a home that was any too much a home.

We need pleasant homes. Of all dull places a spiritless, cheerless farmer's home is the dullest. If he can only afford the one, it should be a cheery one, and many in this valley are such. Speaking of home, calls up so many endearing associations binding us to that resting place, no matter how simple it be. Even the little motto above the door of "Home Sweet Home" or "God Bless Our Home," wrought out by little hands, showing so early in life the soul-appreciation of the nestling nook by the selection of the very fittest motto.

In nine cases out of ten let a little girl have pocket money, to call her own, about the holidays, allow her to use her own taste in selecting presents, and before she is twelve years old there will be a motto, in some conspicuous part of the house, expressive of her love of home. The little hands that wrought the work may be moldering in the ground, but the motto remains to say that her highest and best thoughts were of her home. Then we cannot make them too lovely or too charming, too inviting and retentive.

Santa Clara, Dec. 6th, 1879.

Two Meriden men are in trouble over the ownership of a ladder, and are taking steps for a lawsuit. The result of this will be that one lawyer will get the sides and the other lawyer will get the rounds, leaving the holes to the litigants.

A MICHIGAN tramp who has been shot at five times by farmers' wives, says he has only to watch the end of the gun to avoid the contents, as a woman always shuts both eyes when she pulls the trigger.

KANSAS school-teacher. "Where does our grain go to?" "Into the hopper." "What hopper?" "Grasshopper," triumphantly shouted a scholar.

## Young Folks' Column.

## How the Girls had Two Christmases.

It was the night before Thanksgiving. Outside, the weather was almost cold enough to make the turkeys thankful that they were going into the oven so soon. But in the nursery, where Florence and Sue slept, it was warm as toast itself, for although the children had been in bed for three whole hours, the fire was still burning in the grate under the mantel. There goes a mouse right up the side of the bureau, and there he sits on his hind legs looking all around the room. He wonders what has become of Annie the nurse. He doesn't know that she thinks the children are big enough to stay all alone, now that Florence is almost six and Sue nearly four and a half. I call that pretty old for such little bits of girls as they. Don't you? There's the mouse on Florence's shoe, and if he doesn't look out—there, I knew it! Down the shoe he has tumbled, flat on the floor. "Was that you, Florence?" asked Sue, in a very sleepy voice.

"No," said Florence blinking at the fire, "but I was thinking."

"About what?"

"Santa Claus," said Florence. "Is he coming to-night?"

"Of course he isn't," said Sue, but she was wide awake in a minute. I can tell you. "Didn't he come last year one night when it was real cold, and when Aunt Bessie and Uncle Nat came next day?"

"Why yes, he did," replied Sue, and she sat up in bed and stared into the fire as she hugged her little white knees. But there was no chance of being cold in such a warm, soft nightgown as the one mamma had buttoned around her little girl that night.

"And won't Aunt Bessie and Uncle Nat be here to-morrow, and isn't there real snow out doors?"

"I know what you mean," said Sue; "it's the stockings."

"Let's hang 'em up!"

What little, little stockings! Last year, you know they had papa's, and Santa Claus filled them brimming full, till half the things stuck out at the top.

"O dear me!" said Florence, after she had crept out of her crib and pushed the chair up to the bureau so that she might reach the stockings; "O dear, they are so little that Santa Claus can't get his hand in, I know."

"I tell you what, we might get all our stockings out of the drawer and hang 'em in a row on the floor," said Sue; and if any little mouse could laugh it seems to me that that little mouse would have done so then; for as he sat with his nose out of his hole he saw the babies get all of their stockings and put them in a very crooked row along the edge of the carpet, and then climb back into bed again. But Florence wasn't satisfied.

"I guess I'll put my shoes down, too," she said, "for perhaps they might catch something just like the stockings do," which was not very good grammar, but she was so very sleepy, you know.

Then both of the babies went fast asleep, and when they opened their eyes again the fire was out and the room was cold. Florence sneezed and Sue sneezed just once apiece, and Florence said:

"I wonder—"

"If Santa Claus has been here," Sue had to finish the sentence, because Florence was asleep again.

"I guess I'll get out all alone and 'sprise Florence with lots of things in her crib," and Sue softly got out of bed and felt her way along by the wall, while the little mouse ran into his hole with a scamper.

Poor babies! There were the shoes and all the stockings, just exactly as they had been left—not a single toy or a drop of candy.

"Santa Claus must be sick," said Sue to herself; "he must be sick, for he always came before," and she went over to Florence's crib and called softly between the slats:

"Florence, Florence, wake up; can't I come into your crib? I'm so disappointed, for he sick and didn't come at all."

So into each others' arms the babies crept and cried just a little, but whether it was because Santa Claus was sick or because their stockings were empty, I can't say. But this I know, that when mamma came in and saw the stockings and shoes, and the babies fast asleep, she knew all about it right away, and as Uncle Nat and Aunt Bessie had lots of candy with them, every stocking had one piece at least, so that when the children woke up they had their Santa Claus after all, and that made two Santa Clauses that year, and they had a splendid Thanksgiving turkey beside!—N. Y. Tribune.

A FAMILY is leaving town. After the usual evening ceremonies, baby is being put to bed. She says carefully her prayers, and then adds of her own accord: "Dood-by. Dod, I am going into the country."—London World.

A LITTLE fellow, on going for the first time to church where the pews were very high, was asked on coming out what he did in the church, when he replied: "I went into a cupboard and took a seat on a shelf."

## GOOD HEALTH.

## Railroad Men and Colors.

A paper on "Libraries of Railroad Young Men's Christian Association," by R. B. Pool, librarian of the Y. M. C. A. of New York city, which was read before the second International conference of Christian railroad men at Altoona, Pa., in September last, contained, in addition to other excellent advice with regard to the collection and management of reading matter for railroad men, the following passage: "The question of color blindness among railroad men is one of vital importance to the great traveling public, one in which personal safety or peril is involved. We know of but two treatises in English on this subject, but every railway library should have one or both. The earliest treatise is by Prof. Holmgren, of Upsala, Sweden, and was published in 1877, entitled 'Color Blindness, and its Relations to Railroads and the Marine.' A translation was published in the report for 1877 of the Smithsonian Institute. Since Prof. Holmgren's work was published we have had Dr. Jeffries' 'Color Blindness, its Dangers and its Detection,' in which he copies a good part of Prof. Holmgren's book; but Dr. Jeffries has made 10,000 tests of his own, of which he gives the results. Those who wish to pursue the study further, in German and French, are referred to Hugo Mangus' 'Histoire d'Evolution du Sens des Couleurs, 1878 (History of the Evolution of the Color Sense); Herman Cohn, Studien ueber Angerorene Farbenheit, 1879 (Studies Relating to Inate Color Blindness)."

AMERICAN OVERWORK.—One need not dwell upon the desirableness of calm and seclusion for the production of the best literature. With individuals, as with nations, stirring periods of action are not favorable to idealistic art. There is much unfairness, however, in the blame to which public men in this country are subjected for their overwork. This is rather a matter of necessity than of choice. People in the Old World largely inherit their means and methods from their forebears. New men, even there, often have the habit of overwork fixed upon them by the time their footholds are secured. But the statesmen and thinkers of Europe start with assured incomes more commonly than do our own, and are not forced to earn their bread as they go along. Our Wilsons, Evertsens, Curtises, have had to consider first the means of living, and to be statesmen or writers in addition. Our Eastern Brahmins, happily, have had for the most part resources which they have enlarged by the help of such gentle, scholarly pursuits, as the service of a university affords. They have shown themselves quite willing to indulge a spirit of restfulness and calm. So long as Americans who do not inherit estates have the Anglo-Saxon pride and domestic tenderness, they will be tempted to do work elsewhere than in a garret, and rarely be able to drive from their minds the thought of its effect upon an income-paying constituency.—E. C. Stedman on Bayard Taylor, in Scribner for December.

MILK DIET IN HEART DISEASE.—M. See, in his book on the treatment and diagnosis of heart disease, regards milk as a powerful diuretic. He does not approve of exclusive milk diet, which, in his opinion, reduces the patient to a state of extreme inanition, but prescribes a mixed milk diet of about two liters and a half of milk per diem added to the patient's usual food. This does not in the least interfere with the diuretic effects of the milk. These effects must not be attributed merely to the water contained in the milk, as has been supposed by some authors, because the same quantity of pure water would in no wise produce the same results. It is evident, therefore, that only the sugar and salts possess the diuretic properties, their action being similar to that produced by salts of potash and soda by their osmotic power. These diuretic properties seem to be much more powerful when the milk has not been boiled. It should, therefore, be taken unboiled, and fresh from the cow if possible, or, at least lukewarm, as cold milk does not act in the same way. It seems as if boiling the milk destroyed these properties; nevertheless, it must never be forgotten that some patients can digest milk only when boiled, so that the rule is not without exception. Another curious point in the action of milk is that it is equally powerful in cases where the cardiac affection is not combined with dropsy. M. See has often observed that patients who either no longer suffered from dropsy, or never had suffered from it, were extremely benefited by a mixed milk diet. The action of the heart became much calmer and more regular and the palpitations disappeared altogether.

ALOE AS A DRESSING FOR WOUNDS.—Dr. Millet, a French army surgeon, recommends powdered aloes as a dressing for wounds, both as a means of favoring cicatrization and for closing them. It is said to relieve the severe pain of wounds almost immediately, and requires to be renewed only at long intervals.—Boston Medical and Surgical Journal.

## DOMESTIC ECONOMY.

## The Christmas Goose.

## How to Roast It.

After it has been picked and singed with care, put into the body of the goose two parboiled onions of moderate size, finely chopped and mixed with half an ounce of minced sage leaves, a salt-spoonful of salt, and half as much black pepper or a proportionate quantity of cayenne; to these add a small slice of fresh butter. Truss the goose, and after it is on the spit, tie it firmly at both ends that it may turn steadily and that the seasoning may not escape; roast it at a brisk fire, and keep it constantly basted. Serve it with brown gravy, and apple or tomato sauce. When the taste is in favor of stronger seasoning than the above, which occurs, we apprehend, but seldom, use raw onions for it, and increase the quantity; but should one still milder be preferred, mix a quantity of bread crumbs with the other ingredients, or two or three minced apples. The body of a goose is sometimes filled entirely with mashed potatoes, which, for this purpose, ought to be boiled very dry, and well blended with two or three ounces of butter, or with some thick cream, some salt and white pepper or cayenne; to these minced sage and parboiled onions can also be added at pleasure. A teaspoonful of made mustard, half as much of salt, and a small portion of cayenne, smoothly mixed with a glass of port wine, are sometimes poured into the goose just before it is served, through a cut made in the apron. One and a half to one and three-quarter hour.

## The Way to Carve a Goose.

In a matter of carving, which is an art of great responsibility in the season when fowls are eaten, and an art, too, which few of us excel in, a far greater responsibility devolves upon the carver when a goose instead of a turkey is the *piece de resistance*, for although the breast may be treated upon the same principles, it more often happens than in the case of the turkey that a limb has to be cut up to meet the demands of the table. Now, though the anatomy is similar again to that of the chicken, the greater size and strength of the bird give greater toughness to the joints, and call for the exercise of more force of wrist and hand in their separation. A call, too, will not unfrequently be made upon the carver's temper, showing that Robert Browning's test of character is a very fair one. The resistance to the knife, which will be met with if the goose be not very juvenile, creates a certain amount of irritation; but it is imperative that this should be resisted, and if the carver does not control it he will assuredly end with a splutter and a slip, to the inevitable splashing of his neighbors both right and left. The point of the stroug sharp blade must be made to find its way between the bones, as any attempt to cut through them will lead to disaster. Supposing the whole of the breast to be gone, then, and that the leg and wing bones have to be operated on, let the carver proceed upon the principles enunciated in the case of the chicken. He will have to turn the bird on one side, and after forcing with the blade of the knife the projecting angles or elbows of the bones back from the carcass, he must, when coming to the leg, separate the thigh from its socket, which will be a less easy task than in the case of the pinion bone of the wing. The merry-thought, if comparatively a small item for so large a bird as a goose, must be disengaged, nevertheless, upon the usual plan adopted when dealing with such a member, if our carving is to bear the impress of a master hand. Again, however, the dissection of the remainder of the bird, upon its re-appearance as a hash or what-not, will generally devolve upon the cook; but, come in what guise it may, most excellent picking may be found in every quarter. I need hardly remind the carver that the stuffing is an element of roast goose never to be overlooked; it is to be found and reached in the same way as in the duck. The skin of the apron and elsewhere is, as usual, on no account to be torn or left ragged, particularly as with this bird it is accounted very choice in flavor.

TURKEY SOUP.—A seasonable dish. Two quarts of medium stock, the remains of a cold roast turkey; two ounces of rice flour or arrowroot; salt and pepper to taste; one tablespoonful of Harvey's sauce or mushroom catsup. Cut up the turkey in small pieces and put them in the stock; let it simmer slowly until the bones are quite clean, which will be in about four hours. Take the bones out and work through a sieve; when cold, skim well. Mix the rice flour or arrowroot to a batter with a little of the soup; add it with the seasoning and sauce or catsup. Give one boil and serve. Seasonable at New Year. Instead of thickening this soup, vermicelli or macaroni may be served in it.

MINCED TURKEY.—Take the remains of cold turkey and cut into very small pieces; weight perhaps half a pound. Take half the amount in cold potatoes and cut also in pieces the same as the turkey. Put on the fire in a saucepan, with an ounce of butter and one small spoonful of flour. Stir with a wooden spoon until it bubbles, when pour on one gill of boiling milk or cream; then add the turkey and potatoes, a little salt, pepper and nutmeg. Serve very hot for breakfast.





DEWEY &amp; CO., Publishers.

A. T. DEWEY. W. B. EWER.  
Office, 202 Sansome St., N. E. Corner Pine, St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.	1 week.	1 month.	3 mos.	12 mos.
Per line.....	.25	.80	\$2.00	\$5.00
Half inch (1 square).....	\$1.60	\$3.00	7.50	24.00
One inch.....	2.00	5.00	14.00	40.00

The Scientific Press Patent Agency.

DEWEY &amp; CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. G. H. STRONG

Quack Advertising positively declined.

Our latest forms go to press Wednesday evening.

SAN FRANCISCO:

Saturday, December 20, 1879.

## TABLE OF CONTENTS.

EDITORIALS.—Cotton Culture in California; Irrigation Errors in India, 385. The Week; Our Journal and its Work; Traps for the Unwary, 392. Letters from Southern California—No. 8; Danger and Death in Sewers; Nevada County Strawberry; Hamilton College; Short Horn Herd Book, 393.

ILLUSTRATIONS.—Madonna Della Sedia, 385. A Glimpse at Christmas in the Home, 390. Bonne Bouche and Carolina Superba Strawberries, 393.

QUERIES AND REPLIES.—Pruning and Grafting Vines; Japanese Persimmon; The Largest Jap so Far, 392.

CORRESPONDENCE.—The Good Offices of a Botanical Garden; Marin County; Dr. Simus' Farewell to his Critics; Salt Marsh Reclamation; Conjectures of the Weather; The Salinas Valley, 386-7.

THE FIELD.—The Question of Sugar Supply in the United States; Machine for Harvesting Cane, 387.

THE PUBLIC LAND.—Sbasta County Government Land, 387.

PATRONS OF HUSBANDRY.—The National Grange; Our National Birthday; Eden Grange; Election of Officers, 388-9.

AGRICULTURAL NOTES from the various counties of California, 389.

NEWS IN BRIEF on page 389 and other pages.

HOME CIRCLE.—Christmas Thoughts (poetry); Repentance and Forgiveness; Life, 390. The Dusty Highway of Life.—No. 8, 391.

YOUNG FOLKS' COLUMN.—How the Girls had Two Christmases, 391.

GOOD HEALTH.—Railroad Men and Colors; American Overwork; Milk Diet in Heart Disease; Aloes as a Dressing for Wounds, 391.

DOMESTIC ECONOMY.—The Christmas Goose; Turkey Soup; Minced Turkey, 391.

MISCELLANEOUS.—Artificial Hay Maker; Grinding Wheat by Grooved Rollers; Two New Elements; The Hottest Spot on Earth, 394. Trade-Marks; Detestable Frauds; Rainfall Table, 396.

## Business Announcements.

Santa Clara Valley Nursery, B. S. Fox, Prop'r. Machinery, Tatum & Bowen, S. F. J. Hutchison's Nurseries, Oakland, Cal. Pringle's New Hybrid Wheat, B. K. Bliss & Co., N. Y. Land For Sale in Fresno Co., F. D. Cottle, S. F. Oakland Poultry Yard, Geo. B. Bayley, Prop'r. Hybrid Tomato, Severin Miller, Davenport, Iowa. Cooley Creamer, Vermont Farm Machine Co. Comb Foundation, Rufus Morgan, Bernardo, Cal. Agents Wanted, Chas. A. Reed, Santa Barbara, Cal. Australian Gum Trees, Jas. T. Stratton, Brooklyn, Cal. B. Koehler, Florist and Nurseryman, St. Helena, Cal. Stockton Business College, F. R. Clarke, Principal. Putah Creek Poultry Yard, Mrs. L. McMahan, Dixon, Cal. Land Wanted in Exchange, Dr. E. Kimball, Haywards.

## The Week.

This issue of the RURAL PRESS will come to California homes in time to join in the welcome to the Christmas holidays. We trust that the days may be full of joy to all our readers, both young and old. We would urge upon all to seize upon the occasion to make others happy. The effort is richly repaid by the consciousness of bringing a new gleam of joy to the eyes of loved ones. The giving of gifts is a time-honored custom, and one which, as the bard well says of mercy, is "twice blest," for both in giving and receiving there are awakened tender feelings which make us all better for their existence in the heart. So, too, the reunions which occur during the holiday season, give new life to loves, parental, filial and fraternal, which put selfishness to flight, and in the glow of true affection clearly is perceived the truth that our best life consists in living for one another. But as we feel the joy of unbroken household and circles unvisited by the grim messenger, let us not forget that there are other homes upon which rest the clouds of bereavement and affliction. To them let the sincerest sympathy be extended, and if words of consolation and deeds prompted by the fraternal spirit would lighten the pall, let them not be repressed.

To all readers the PRESS extends earnest congratulations upon the coming of the Christmas time, and in the good old words, which frequent speaking does not stale, we wish you all "A Merry Christmas and a Happy New Year."

ACCORDING to the Salt Lake City Treasurer's report, it cost \$157,372.96 to run the city government one year.

## Our Journal and Its Work.

Another year of journalistic endeavor on our part is drawing to a close and soon the two volumes for 1879 will stand side by side on the shelves, silent evidence of the measure by which accomplishment has approached our ideal of excellence or fallen short of it. A review of the numbers of the PRESS for the last year will plainly show, we think, that our journal is constantly taking a firmer hold upon the good opinion of our wide-awake agricultural population.

Never before have we secured wider co-operation with practical workers and investigators, and never have we received from them more valuable contributions of the facts and lessons of their experience for the public benefit. Our columns have also been well occupied by those who have examined the problems of practice from scientific points of view, and the result has been the application of many new truths to the details of daily labor. Our own studies have also, we trust, proved more productive of useful facts and suggestions—else we have lived and learned in vain. We believe the PRESS has shown itself a better paper during the last year than ever before, and for this confidence of progress we freely acknowledge our indebtedness to the hundreds who have aided us with their thoughts, experiences and counsels, and to the thousands who have paid their money for the paper, thus furnishing the motive power to keep the enterprise in motion. Every newspaper which is truly in the interest of its supporters is a co-operative concern in which each subscriber is a share-holder, and it is only by unity of effort and of interest between subscribers, contributors, publishers and editors that the best interests of all and the general good can be subserved. This is the idea which actuates us in our efforts to build up our journal, and to this end we earnestly solicit the aid of every friend we have.

It may not be inappropriate to review the ground plan of our paper that all may get a glimpse at our ideas in the classification of work which prevails in our columns. In our "Correspondence" we aim to present letters from all parts of the Pacific coast describing industrial conditions and resources, in order that resident readers may gain acquaintance with regions beyond their own neighborhoods, and that readers in the East and abroad may learn the truth concerning the "new land" of our Western border. Letters of this character are written by the intelligent agents and correspondents whom we send out and by voluntary contributors familiar with the regions they describe. All are charged to be truthful and to hold themselves well within the region of what is generally attainable in any forecasts of probabilities which they may make.

Our "departments," each devoted to some important specialty of agricultural work, are designed to give opportunity for the expression of the latest experience in the field, the orchard, the vineyard and the garden; in the dairy, the cattle, sheep and swine yards; in the apiary, the poultry yard, the fish pond. In short, in each and every special line of farm work we have a department devoted to promote the success of those pursuing it. We ask all to help us to make these departments full and practically valuable, in order that each may be profited by knowing all new and valuable things which arise in the experience of all. These departments are for the most part filled with fresh contributions from practical workers on this coast, and thus the facts and methods presented have a local application which cannot be found in other agricultural journals. These departments are really the foundation upon which the practical value of our journal rests, and we shall spare no pains to make them fresh, comprehensive and suited to the needs of readers. We have in mind to extend their scope the coming year, and to this end we invite the assistance of all readers.

The "Home Circle," "Young Folks," "Good Health" and "Domestic Economy" comprise another and a distinct group of departments, which have their field of usefulness in the home. We design to freight our "Home Circle" each week with true sentiments, which shall charm and ennoble those who will cherish them, and we shall keep these columns pure from the deadly sensations and insinuations which many other journals roll as sweet morsels. We shall guard the homes of our readers from the introduction of these evils of the press just as zealously as we protect our own loved fireside from them. Let us then cheer you, interest you, console you, perhaps mourn with you, in the paragraphs we present, but above all let us contribute something which will elevate and improve. If we cannot do this, let our journal fail; it will not deserve to live. And this good influence in the "Home Circle" we would supplement by entertaining our little readers with innocent amusement. In "Good Health" and "Domestic Economy," subjects closely allied, we aim to give hints of direct value, which will relieve the housewife's labor, both by bringing hearty, healthy eaters to her table and aiding her in ministering to them.

In "Agricultural Notes" we glean from the wide field of our interior exchanges, thus giving a succinct view of the progress which all our counties are making in materials and methods of agriculture and allied industries. In these condensed extracts we aim to give facts and hints which may be susceptible of application

and adaptation in other fields, and thus again let all profit by the work of each in progressive enterprises.

Of our editorial utterances we have little to say save that they are prompted by a disinterested zeal for the good of our readers. Our acquisition of new facts and our deduction from them are the result of honest application, with such measure of ability as we have, and as such they are entrusted to the kind judgment of the reader.

Our commercial columns are prepared with great care and with a constant effort to guard readers against the designs which interested persons are constantly endeavoring to carry out at the expense of producers. It is our disposition always to hold the markets for country produce to as full values as actual transactions warrant. The whole air is full of voices endeavoring to depress prices and to disguise favorable prospects for speculative purposes. Such influences we shun as enemies to our readers' welfare and our own, and this effort is recognized by our readers, as we learn from the abundant testimony to the value of our market reports which is found in our correspondence.

We would not trespass upon our readers' patience farther. What we have said may be taken as a frank statement of the faith that is in us and the spirit which guides our efforts. As we hold our journal too high in its mission to lend its influence to the advancement of swindling schemes, and the enrichment of quackery in all its forms, we lose in gold, although we gain in self-respect, and in consciousness that our readers are not visited by evil through our labors. To make a journal like the RURAL PRESS is a far more expensive task than to flood the State with a cheap and pernicious literature which robs people of their money, endangers their morals and oftentimes blights their lives. We are assured that our readers desire us to give them a pure sheet and an intelligent journal, even though the amount of money required from each is a little larger. We know, also, that another course would be far more profitable to the publishers, for the patronage which is promptly declined and finds its way into other journals is very lucrative. The reader needs but scrutinize the character of our advertisements and compare them with those in other papers to discover the truth of the statement we make.

Having confessed this much we will go forward. The measure of good we have attained shall be but the prompting to new and more zealous efforts. We ask all readers to join us in this work, and we will all advance together into the glorious future which now awaits the noble industries of our favored coast.

## Traps for the Unwary.

Now and then in every rural neighborhood there is a man who tires of the round of labor on the farm, and having secured a few hundred, or a few thousand dollars surplus, decides to come to the city and try to get into some "little business," thinking thereby to live an easier and, perchance, a livelier life. In all cities there are classes of sharpers who live upon what they can make out of these small capitalists from the country. There are the coarse operators who rely upon garroting their victims and extracting their money at a jerk. There is another class which trusts to a little finer practice, and relies upon lures to games of chance, and there is still another class which approaches nearest to respectability, and they operate by acting as friends, who can secure just the "little business chance" which the new-comer desires. They advertise openings in all kinds of business, from beer saloons to book-stores, and from blacksmith shops to iron foundries. For a certain sum of money they can buy partnerships in such concerns for their patrons. They will sell anything you can name, and often before the purchaser gets much older, he learns that he has bought nothing at a very high price.

Such has been the experience of many rural investors in Eastern cities, and many are the accounts of robbed and swindled people recorded in the papers. We were not aware that such was also the character of some of the "agencies" which operate in this city; but if a writer in the Vallejo Chronicle speaks the truth, San Francisco is well furnished with traps to catch the man who wants to get into "some little business." This writer, who styles himself "A Victim," tells of going to an "agency" and inquiring about an advertised "opening" in a machine shop. Under the pilotage of the agent, he goes to examine the opening. "Victim" gives the following account of the visit:

Arrived at a dilapidated building among the iron foundries in the southeastern part of the city, the victim is conducted into a "shop," where three or four men (hired for the occasion) are at work, steam up, and everything presenting a scene of bustle and activity. There is no denying the fact that it looks businesslike, and is easily calculated to impress any one with a sense of confidence. The "proprietor" (generally an uncouth-looking, illiterate mechanic, in collusion with the agent, of course,) presents himself, with sleeves rolled up, dirty, smoke-begrimed visage, and pants and overshirt shining with the oil and dust of the shop (the result, doubtless, of years of wear, but not by their present occupants), and is introduced by the swindler to the victim. The agent, by a series of winks and signs, conveys to the hard-working mechanic that this is a good bite, but says, "this gentleman has an idea of buying in with you and would like a little information." (I must here say this "business" had all been pre-arranged between the "mechanic" and the swindler, and it is only during certain hours in the day that victims must be brought to the shop, for coal is dear,

and it is quite expensive to keep two or three large wheels going all day, particularly when victims are scarce.) The "swindler" now leaves the victim to the tender mercies of the "mechanic," who, in his ingenious manner, begins a story of his business and its fine prospects, and for the truth of his assertions, he will allow Mr. Victim to converse with the workmen. If Mr. V. is not very quillible he generally takes advantage of the offer, interviews the "soot-covered gentlemen" and finds the "mechanic's" statement verified in every essential. A dirty cash-book is shown, with totals invariably large on the debit side, which at once assures the victim of the profitability of the business. This book has been prepared for the occasion and the entries are false. A dingy order book, also prepared, lies beside it, in which a multiplicity of hastily-written orders have been entered, the bibliography purposely made almost indistinguishable, so as to give a sort of "rough-and-tumble honesty" to it. Every device which a rascally brain can conceive is brought to bear upon the victim, who, after apparently satisfying himself that everything is as represented, pays his money, partnership papers in due form are drawn up and signed, and Mr. Victim is now a full-fledged partner in the manufacturing firm of "Mechanic, Victim & Co."

But a few days elapse before the victim discovers the business suddenly dwindle, and the worthless nature of the whole thing appears by degrees, the victim leaves in disgust, and Mr. Mechanic is once more in possession. As soon as he is effectually rid of his victim, he returns to his agent, who places another advertisement in the paper, and the operation is repeated. Sometimes the swindlers run across an obstinate customer, and to prevent exposure they compromise with him. But as a general thing they are successful in the "freeze-out" game.

We give this alleged experience of "Victim" at length in order that readers may see with what ingenuity and elaboration such snares for unwary people are laid. Although it is rather sad to reflect that suspicion must always play such a part in our thoughts, still in all matters of dealing with strangers, whose interest lies plainly in producing a good impression, it is well to exercise the closest scrutiny and seek indisputable proof of the truth of their representations. Those who are unused to city ways must be more on their guard against misrepresentations than those whom contact with many people gives standards of judging. Our advice to all our readers is to proceed with the utmost caution, and run the risk of appearing very stupid rather than seize, with what may appear like business-like celerity, bargains which are the snares arranged by unprincipled and designing men.

## QUERIES AND REPLIES.

## Pruning and Grafting Vines.

EDITORS PRESS:—When is the best time to prune grapevines? Does it injure them to bleed? When is the best time to graft them? What is the general practice in California as to time and manner of pruning and grafting?—READER, Lincoln, Cal.

Our correspondent will find vine pruning discussed by Mr. West, of Stockton, on page 344 of the RURAL of Nov. 29th, 1879, and there are numerous illustrated articles in former volumes which cover the subject pretty well. We have also had full descriptions of grafting, which are too long to reproduce. As an instance of successful practice we may cite the experience and method of two Solano county growers. Mr. D. Creighton, of Vacaville, saws off the vine from four to six inches below the surface of the ground. The stock is split in the center, and a wedge inserted until the graft is fitted in place. After the wedge is withdrawn, the crevice is filled with a piece of bark, to prevent the dirt from falling in while the work of closely packing the soil around the graft is going on. The best time for grafting is thought to be when the bud swells. Mr. John Wolfskill, of Putah creek, and the pioneer of the county in the fruit business, does not find it necessary to saw off the vine lower than the surface of the ground. He covers the graft with soil, at the same time making a little basin in the dirt, into which he pours mortar or a batter made of sand. Out of 320 grafts on wild-grape roots he only lost two. He uses no grafting wax.

## Japanese Persimmon.

EDITORS PRESS:—I send you a specimen of the Nihon variety of the Japan persimmon, imported by Loomis. The tree is a vigorous grower, and was full of fruit, but I pulled off all but 22 of the most perfect when about the size of a filbert; 14 of them are as per sample sent you. What are they good for?—JOHN LAWRENCE, Colton, San Bernardino, Co., Cal.

This fruit is handsome, but small; about one and a half inches in diameter. It is not the "Nihon," but resembles most closely a variety called by the Japanese "Jumonji," except that it is lighter colored than the Jumonji. Probably the Japanese propagators got the tree in with the Nihons by mistake or otherwise. The fruit will probably be good when it softens. It should be picked and laid away. It may keep two or three months. It is quite possible that the varieties of the persimmon will be modified somewhat according to the locations in which they are grown, as has been our experience with nearly all fruits introduced into this State.

## The Largest Japs So Far.

EDITORS PRESS:—Seeing that you are giving attention to the Japanese persimmon, I send you a short reference to my experience in its cultivation. Out of three trees I planted in the spring of 1878, one has borne prolifically this year. The fruit came out very large, and out of perhaps fifty persimmons all but two fell when they had attained about half growth. These two have developed fully, and I plucked them this morning. One measures 11½x10½, the other 11x10½. They weigh together one and a half pounds by common balance. They have assumed a beautiful golden color, and were greatly admired by all who saw them maturing on the tree. I have lost the tag that was on the tree when I planted it, and cannot remember the name of the variety. The fruit is flat, not oblong.—JAMES J. AYERS, Los Angeles, Dec. 14th.



## Letters from Southern California.—No. 8.

We have already spoken of the remarkable success which has attended the growth and productiveness of the colony of Riverside. It is literally a place

"—where the orange blooms along the way,  
Making a bridal of the fruited year."

Every street is lined with evergreen trees of some kind, and wherever the eye wanders it meets with an almost endless succession of orchards and gardens, of which the orange and the lemon form the most conspicuous and attractive feature. The work which has been done here in converting this late sun-burned expanse of desert into a wide-spread region of emerald green, dotted all over with lovely and beautiful homes, is really marvelous, and demonstrates, in a most unmistakable manner, the possibilities in store for the immense area of rich valley land which comprises so large a portion of southern California within easy reach of artificial irrigation. Such results could never have been attained except by the efforts of a really intelligent, enterprising and energetic people. The Riverside people seem completely absorbed in the character, value and importance of the work in which they are engaged, and it is patent to every visitor that a grand success has attended their efforts, and that Riverside is now well on the high road to permanent and useful prosperity.

Riverside is less than ten years old. It was founded in 1870, by Hon. J. W. North and others, from the East, who selected the site, in a large measure, on account of its desirableness as a sanitarium, but also for its peculiar adaptation for the growth of semi-tropical fruits. Its extent, topographical character, means for irrigation, etc., have already been alluded to at length in these letters. Nearly all who have gone there were men of more or less means; some, quite wealthy, have built themselves pleasant and, in some cases, elegant homes, because of the superior excellence of the climate. A place where children can play out-of-doors 350 days in the year, without inconvenience from heat or cold, wind or rain, must be a very desirable locality for invalids. During our visit there, we never heard of the first one who had the least desire to return to the East. All appeared to be satisfied, not only that it was exceptionally healthy, but that it also presented as good opportunities for a poor man, or one of moderate means, to get a living as any other locality on Mother Earth.

## Beauty and Comfort.

There is infinite beauty in the surroundings of Riverside, whether the eye rests upon the emerald green which immediately surrounds the beholder, or wanders to the distant mountains which arise like grand old emhatted walls upon every side. Every inch of the soil possesses unlimited vitality; warm, rich and mostly granitic, the land, when time has been allowed to do its work of development, fairly groans with every conceivable variety of product. The allotment of land to individual improvement is generally small—20 acres almost everywhere being enough, sometimes even 10—but the returns are great. Horticulture is the prevailing passion, and the orchards and gardens seem to be so many traps in which to catch and imprison the sunbeams, and to convert them into fruit of every variety, hue and taste. The climate is so genial and gracious; the atmospheric effects so cheery and invigorating; the steady smile of springtime and summer, without a sign of winter, is so grateful that indolence of character and inertness of action among the inhabitants is at once suggested. But no; there are no drones in all that hive of busy workers. Saloons and lounging places find no patrons there. Every man, and woman too, has something to do, and seems intent on doing it. Every one appears to have an honorable ambition to carry out to the best of his or her ability the great undertaking in which they have so heartily engaged as a community. Beautiful homes, domestic happiness, intuitive comfort, and a land redolent with poetry, with flowers and with fruit, is what everywhere meets the eyes and senses of the visitor to Riverside.

But it is time we began to attend to business, and tell what we know of practical value in regard to these people, their business, and the future prospects of this remarkable colony enterprise.

## Fruit Growing

Must always be the leading industry of this region, as the climate, soil and opportunities for a market are peculiarly adapted to that purpose. Semi-tropical fruits will be its specialty, and there is probably no place in California where the raisin grape can be more fully perfected than here. The earliest settlers in Riverside came with the view of confining their attention almost exclusively to the cultivation of the orange, the lemon and the lime; consequently the grape was neglected until some few years ago, when more attention began to be given to that culture. The result in both cases has proven most satisfactory. But if the grape had been planted at the same time with the orange, the fruit-growers then would have been receiving good returns for their labor for the last three or four years, instead of waiting, as they have been obliged to do, some seven or eight years, until now, when both classes of fruit are coming in together.

Probably there is no other locality on the

coast where more close attention has been paid to the quality of the fruit grown than here. The gathered experience of the earlier fruit-growers about Los Angeles and in the San Gabriel valley has been most carefully studied, and the fullest advantage taken of it. The result is fully shown in the fact that Riverside oranges have commanded a higher price in this market the present season than those from any other locality—the general average being nearly or quite double. The raisins produced there have also been pronounced very superior, and command the highest price.

In June last, Mr. Alhert S. White, one of the most intelligent fruit-growers in Riverside, made a very careful inquiry to determine the number of semi-tropical and deciduous fruit trees and Muscat grapevines which had been planted there up to that time. The result of his inquiries was as follows:

Orange trees.....	160,861
Lemon ".....	23,550
Lime ".....	28,642
Olive ".....	3,531
Apricot ".....	13,192
Other deciduous trees.....	30,677
Vines—mostly Muscat.....	221,465

This enumeration includes not only Riverside proper, but Sunnyside and Arlington as well, and gives a very good idea of the magnitude of the fruit-growing enterprise in that place. Of course the number has been largely increased during the past summer and fall; and it will be quite safe to set down the number of orange trees that will be set out in orchard by next spring at fully 200,000.

## The Profits of Orange Culture.

At the prices ruling at the present time the orange is probably the most profitable fruit which can be grown, and must continue to be so for several years to come; but the rapid increase in the planting and growing of these trees must soon greatly reduce the profit of their culture, and turn attention more to the cultivation of the grape for raisins and for wine, for which purposes there is an unlimited demand.

An orange orchard of ten acres, with land at \$40 per acre, and set out with three-year-



BONNE BOUCHE AND CAROLINA SUPERBA STRAWBERRIES.

old trees, one hundred trees to the acre, will cost at the end of the fifth year, including all labor for setting out the trees, cultivation and expense of water for irrigation, \$2,000. At the end of the fifth year the owner should be able to gather from fifty to seventy-five oranges to the tree. This number should gradually increase, say to 400 the seventh year and 800 to a 1,000 the tenth year. The care of ten acres after the fifth year, including water for irrigation, will be about \$200 per year. With oranges in this market from sixteen to twenty-five dollars per thousand according to quality, the reader can easily calculate the profits of an orange orchard, upon a basis which will hold good, probably, for the next six or eight years. From the result of this calculation it will be seen that the cultivator can readily afford to reduce the price of his fruit from, say \$20 per thousand to less than \$5, or half a cent apiece; even at that price orange culture may be made profitable, when fair rates for transportation can be obtained; and with oranges at half a cent a piece, by the hox, their consumption would more than double. We shall endeavor to finish up our notes on Riverside next week. W. B. E.

**PLOWING PEATY SOIL.**—We find the following note of the manner of using steam-plowing tackle on reclaimed land in Scotland, in the *Agricultural Gazette*. Fowler's steam plow is used, and it has been lately much improved. The two furrows it now cuts, one behind the other—in place of only one furrow—have added greatly to the efficiency of the work done by the implement. The soil to be reclaimed is, as stated, peaty, with no great number of fast boulders or points of rock. The upper surface consists largely of a tough "divot" of considerable thickness. The first furrow made by the plow turns this tough sod and throws it to the bottom of the furrow—the average depth of which is at least two feet—while the second furrow coming directly on lifts the lower half and throws the soil from below on to the top, thus leaving the work in a very complete state by a single operation.

**ON FILE.**—"Limburger," J. B. A.; "The New Culture," J. R. S.; "Potato Tests," E. H. C.; "Extractor," U. K. L.

## Danger and Death in Sewers.

Within the last two weeks there have been terrific explosions of gas in sewers in this city and in Oakland. In both cases the evil was from the collection of illuminating gas from faulty pipes in the adjacent sewers and rising thence into the dwellings communicating with the sewers. In Oakland there was a house well nigh demolished by the explosion which followed the ignition of the gas. In this city the gas was also ignited in a dwelling, but the main explosion occurred in the sewer in the street, the earth giving way, great jets of flame hursting forth, and then a great chasm appearing through the street along the line of the sewer. Such alarming occurrences as these are rare, and they can happen only in towns furnished with illuminating gas and street sewers, and in such situations they are always liable to endanger life and destroy property, unless far better systems are adopted in sewerage. Notwithstanding nearly all men know that sewers are receptacles for gases which may at any time bring disease and death to citizens, there still exists a sublime indifference to the deadly menace, and no attempts are made to ventilate the sewers by shafts, which would draw off the gases into the upper air, where they would be dissipated and carried away. This must ere long be done, or untold loss of life and property may occur from causes which have thus given some inkling of their power.

But it is more with reference to the evil of gas generated in rural cesspools and drains that we would speak at this time. City explosions may call attention to another class of dangers which are most insidious, unattended by frightful explosions, but are far wider reaching in their effects. The dread fevers and other diseases which break out here and there in districts apparently the most salubrious are doubtless most of them due to the folly of residents rather than to what are termed natural causes. This

quire emptying at least once or twice a year, and frequent disinfection. As commonly built they are mere holes, loosely bricked or boarded up in such a manner as to permit the percolation of their liquid contents into the surrounding soil, thence to flow, it may be, into the well from which the drinking water is supplied. Too many instances have been recorded of the dangers arising from these sources to permit a doubt of their reality. However these conditions may be—whether intended to convey the contents of water-closets or of sinks or bathtubs, or a mere kitchen drain leading, as is often the case, to an open hole dug in the ground nearby, whether designed to connect with the main sewer of a city or with a cesspool—the drain must be ventilated.

Various plans have been adopted to effect this purpose. One of the most efficient—the only certain method—is to be found in the construction of the soil-pipe, its continuation above the roof of the building, thus forming a ventilating shaft, which should be without abrupt or angular curves, and of equal diameter in its entire length. In carrying the ventilating pipe above the roof of the house, care is to be taken that it does not terminate near the windows, or even the flue of a chimney. In certain directions of the wind, or under certain conditions of temperature, incursions into the house may be established, which will carry with them the gases but just escaped from the soil pipe.

## Nevada County Strawberries.

Last year we gave engravings of groups of "Bonne Bouche" and "Carolina Superba" strawberries, as grown by Felix Gillet, of Nevada City. After another year's experience he informs us that he finds these varieties have repeated the fine results obtained the previous year, and he was so much pleased with them that he had single berries photographed for the engraver. The photographs were taken by Charles Ferrand, of Nevada City, and are most correct representation of the fruit in size, shape and appearance.

The "Bonne Bouche," which was originated in the Royal Gardens of Frogmore, England, is an extraordinarily large berry; especially so when the size of the berry is considered in connection with the enormous crop the plants bear. The plants are very vigorous and quite hardy; and it is a characteristic of this fine variety, that almost every rooted runner bears a crop the ensuing spring, and all very large berries. The berry is almost round, regular, full, firm, juicy and sweet; color, light crimson.

The "Carolina Superba" is a berry two inches long, conical in shape, regular and firm; flesh, rosy, juicy, rich flavor; color, rather bright scarlet. It is quite a sight to look at the rows of large, long, scarlet berries lying on the ground all round the upright leaf-stalks. The plants, though being hardy and vigorous, are not so stout and large as those of "Bonne Bouche."

Mr. Gillet has continued his importations of European varieties, and promises next season to tell our readers what results he obtains with his latest importations, which comprise the following: "Flora," "Belle Bretonne," "Docteur Moree," "Belle Bordelaise," "La Petite Marie," "Ruhis" (French); "Goliath," "Duke of Cornwallis" (English); "Gloire de Zuidwyk" (Dutch).

**HAMILTON COLLEGE.**—We have read with much pleasure the last annual catalogue of Hamilton College, at Clinton, Oneida county, New York. This honored institution is the *Alma Mater* of a host of honorable sons on this coast, and we are pleased to see that the dame takes kindly to her years and is advancing with a vigor and zeal which are usually counted prerogatives of youth. The number of students is considerably larger than when we shared their troubles a decade ago, as 196 are now enrolled, including two from this State: Joseph McChesney, of Sacramento, and W. W. Stow, Jr., of San Francisco. We notice too that the faculty has built upon the strong foundation of a few honored names, a superstructure of specialists whose work will keep the institution in the front rank of industrial and scientific progress. These signs of growth are all gratifying to the alumni on this coast, and we trust they will be multiplied by the unknown number of the coming years, that the light of hill-top Hamilton may still attract inquiring minds three thousand miles away.

**SHORT HORN HERD BOOK.**—We learn by a report of a meeting of Kentucky Short Horn breeders, in the *Live Stock Record*, that the Short Horn Herd Book, by the late Major Humphrey Evans, styled the "Short Horn Record," will be purchased by a stock company composed of breeders and issued hereafter under its auspices. The company pays the estate of Major Evans \$10,000 for the copyright of the "Record," and for the volumes now on hand. The shares of stock in the company are valued at \$50 each, and some of them are, we understand, open to purchase by any Short Horn breeder of good repute. Among those named as taking stock in the company is Hon. J. D. Carr, of California, owner of the Gahlan herd, in Monterey county. The proprietorship of the Herd Book by an association of breeders is an eminently proper thing. This is the case with the Short Horn Herd Book of Great Britain, and we believe more general satisfaction is given than when the official registering is in the hand of private parties.



## Artificial Hay Maker.

The London Graphic says that a successful method of artificially drying hay has been long desirable on account of the excessive moisture in the British Isles. Mr. W. A. Gibbs, of Gillwell Park, Chingford, Essex, a gentleman engaged in mercantile pursuits in the city, and also, we may venture to observe, favorably known among the poets of the day, has also devoted much attention to the hay-saving problem. By slow degrees he invented a really practicable process, which is thus described:

"Streams of hot air from the mouth of a hot blast fan, connected with a portable engine, are directed upon masses of wet hay or grain laid in open troughs, and brought in turn, by occasional lifting of forks, under the direct action of the air. By increasing the temperature of the blast it was found that the drying process could be proportionately expedited. Eventually the scheme was perfected by bringing the hot blast fan to bear upon a shed divided into two compartments by an iron partition, and having a space between the iron floor and the ground. Hot air, supplied from the hot-blast fan by means of a duct from an underground furnace, communicates with 32 conical perforated tubes on the floor, on which are spiked the wet corn sheaves. These tubes of course are used only for grain. The crowning success of the whole process is an atmospheric hoist, worked by the same engine as the hot blast, which elevates and sends up to the top of a stack, 22 feet high, as many as 960 sheaves per hour.

This year, owing to the unprecedented wet summer, Mr. Gibbs' invention has come to the front and been recognized by practical men as one of extreme value. He says, in a letter to the Field: "On Tuesday in last week I lent one of my hay driers to Mr. Ashcombe, of Sewardstone, a practical farmer of long experience and large 'holding.' He started it at 9 A. M., and in 10 hours had dried and stacked the produce of 10 acres, estimated at 1½ loads per acre. The total cost was £5 10s. for the 10 acres, rather less than it would have cost to make the hay in the field, had that been possible. The hay was made from unripe, rank, weedy grass which had been perpetually rained upon; Mr. Ashcombe, and his men were inexperienced in the use of the machine, and had no help from me; the hay drier was wholly uncovered and heavy showers fell on the hay while it was being dried. In spite of these unfavorable conditions, however, the result was a complete success."

GRINDING WHEAT BY GROOVED ROLLERS.—A German correspondent says the grinding of wheat by grooved rollers is getting more and more preference over the millstones everywhere where hard wheat is to be had. This is also the case in the United States, where in Minneapolis and Milwaukee, millers are going in heavily for the roller system; but for the breaking of wheat, grooved chilled iron rollers will take the lead over other materials. Our correspondent continues: "The new mills of Governor Washburn, that of Messrs. J. A. Christian & Co., of Mr. Archibald, in Dundas, and quite a number of other mills in Minnesota and Wisconsin, are being erected on the pure Hungarian roller principle from the beginning of the grinding process to the end. I am fully convinced that in the next decade the Americans will be at the head of all milling communities, for even the Pesth mills, although their system is very highly developed, are far behind the Americans, with their mill arrangements, their labor contrivances, and their finely-finished machinery."—*Cor. London Miller.*

TWO NEW ELEMENTS.—*Silliman's Journal* for November contains an account of the discovery of two new elements by Cleve, which he has named respectively as thulium and holmium. He was led to investigate the earth erbia in which Marignac had discovered ytterbium, and Wilson scandium, in order to distinguish the substance in this earth which gives the red color and the beautiful absorption spectrum to its salts. As the salts of ytterbium and scandium are colorless, the question was of interest to ascertain whether the substance possessing these peculiarities was erbium itself or some now elementary substance. After a large number of experiments, he announces, chiefly on the strength of spectrum observations, the existence of two new elements, as above noted. The name thulium is from Thule, the ancient name of Scandiuavia; and that of holmium from the Latin name of Stockholm. Since the announcement of Cleve's discovery, two other observers, Soret and Boisbaudran, confirm the accuracy of his spectrum observations.

THE HOTTEST SPOT ON EARTH.—One of the hottest regions on the earth is along the Persian Gulf, where little or no rain falls. At Bahrin the arid shore has no fresh water, yet a comparatively numerous population contrive to live there, thanks to the copious springs which break forth from the bottom of the sea. The fresh water is got by diving. The diver sitting in his boat, winds a great goatskin bag around his left arm, the hand grasping its mouth; then takes in his right hand a heavy stone to which is attached a strong line and thus equipped he plunges in and soon reaches the bottom. Instantly opening the bag over the strong jet of fresh water, he springs up the ascending current, at the same time closing the bag, and is helped aboard. The stone is then hauled up, and the diver, after taking breath, plunges again. The source of the copious submarine springs is thought to be in the green hills of Oman, some five or six hundred miles distant.

## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

PETER Saxe & Son, 520 Bush St. S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

## SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

## POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Dogs, etc. Eggs for hatching. Send for price list.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Poland-China Swine and Black Cochon Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

## BEES.

JOS. D. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## PIANOS

## LARGEST MUSIC HOUSE

On the Pacific Coast.

WHOLESALE AND RETAIL.

Lowest Prices and Best Goods.

Write for information concerning any Musical Instrument, and terms of sale. It will be given with pleasure.

ESTABLISHED IN 1850.

## KOHLER &amp; CHASE,

137 and 139 Post Street, San Francisco.

PACIFIC DEPARTMENT  
LONDON AND  
LANCASHIRE  
Fire Insurance Company,  
OF LIVERPOOL.

CAPITAL.....\$7,500,000  
CASH ASSETS.....1,709,976  
U. S. BONDS, deposited in America 400,000

BALFOUR, GUTHRIE & CO.,  
General Agents,  
316 California Street, - - - San Francisco

## 507 Mechanical Movements.

Every mechanic Should have a copy of Brown's 507 Mechanical Movements, illustrated and described. Inventors, model makers and amateur mechanics and students will find the work valuable far beyond its cost. Sold by DEWEY & Co., Patent Agents and publishers of MINING AND SCIENTIFIC PAPERS, San Francisco. Price, \$1, (post paid).

50 Perfumed, Snowflake, Chromo, Motto Cards, name in gold and jet 10c. G. A. SPRING, E. Wallingford, Ct.

Dewey & Co. { 202 San- } Patent Ag'ts  
                          some St.

## RED CROSS OIL!

The Safest and Most Reliable Illuminating Oil. Water White and High Test. Brilliant, Pure and Economical.

C. T. RAYNOLDS & CO., Sole Agents, No 9 Front Street, San Francisco.

## Lands for Sale and to Let.

## TO LET.

THE CELEBRATED

## BARTON VINEYARD,

Situated at Old San Bernardino, in San Bernardino Co., Cal., consisting of eighty (80) acres of Mission Grapes, together with two (2) cellars, one brick and one adobe, a small lot of tubs, vats and pipes, distillery and brick dwelling house. Location good and crop sure. Would prefer to let for a number of years on easy terms. For particulars address H. M. BARTON, P. O. Box 88, San Bernardino, Cal.

## FARMING LAND

For Sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

## GRANGERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000,

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$400,000.

## OFFICERS:

G. W. COLBY.....President  
JOHN LEWELLING.....Vice-President  
ALBERT MONTPELLIER.....Cashier and Manager  
FRANK McMULLEN.....Secretary

## DIRECTORS

G. W. COLBY.....Butte Co  
JOHN LEWELLING.....Napa Co  
J. V. WEBSTER.....Alameda Co  
URIAH WOOD.....San Benito Co  
J. C. MERYFIELD.....Solano Co  
THOMAS MCCONNELL.....Sacramento Co  
I. C. STEELE.....San Mateo Co  
SOLOMON JEWETT.....Kern Co  
C. J. CRESSEY.....Stanislaus Co  
SENECA EWER.....Napa Co  
A. D. LOGAN.....Colusa Co

The Bank was opened on the first of August, 1874, for the transaction of general banking business.

CURRENT ACCOUNTS are opened and conducted in the usual way.

GOLD and SILVER deposits received.

CERTIFICATES OF DEPOSIT issued for Gold and Silver.

TERM DEPOSITS are received and interest allowed as follows: 6% per annum if left for 3 months; 7% per annum if left for 6 months; 8% per annum if left for 12 months.

EXCHANGE on the Atlantic States bought and sold.

ALBERT MONTPELLIER,

Cashier and Manager.

San Francisco, Oct. 15th, 1879.

## THE DEAF HEAR

THROUGH THE TEETH!  
PERFECTLY, all Ordinary Conversation, Lectures, Concerts, etc., by NEW Channel, to the Series of Hearing, by a wonderful New Scientific Invention, THE DENTAPHONE.  
For remarkable public tests on the Deaf and Dumb—See New York Herald, Sept. 28, Christian Standard, Sept. 27, etc. It displaces all Ear-trumpets. Size of an ordinary Watch. Send for our FREE pamphlet. Address AMERICAN DENTAPHONE CO., 257 Vine St., Cincinnati, Ohio.

## SEASIDE RESIDENCES AT SANTA CRUZ.

A charming Homestead in the very choicest position may now be secured at a really tempting price. State requirements and receive suitable particulars from the Real Estate

EXCHANGE & MART,

Santa Cruz, Cal.

MEYRICK & Co., Insurance and Money Brokers and Agents

## TOBACCO SEED of the following

varieties: 1. LATAKIA (from Turkey); 2. NEW PERSIAN; 3. NOVARA (from China), which in good quality and fine flavor EXCELS any of the American varieties, will, if ordered now, be sent at the following rates: 1 package, 10 cts.; 3 packages, 25 cts.; 7 packages, 50 cts.; 15 packages, 100 cts.; if you remit by money order, have it drawn on Mineral Point P. O., Wis. Stamps not accepted, unless 20% is added to prices quoted.

J. OSWALD, Martinsville, Grant Co., Wis.

## ROOMS TO RENT.

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

50 Perfumed, gilt edge & chromo Cards, elegant case, name in gold, 10c. ATLANTIC CARD CO., E. Wallingford, Ct.

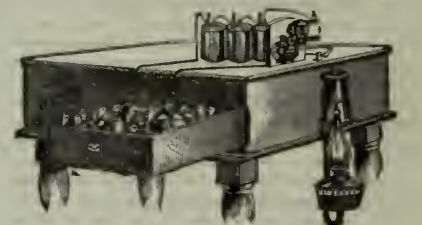


My Annual Catalogue of Vegetable and Flower Seeds for 1880, rich in engravings from photographs of the originals, will be sent FREE to all who apply. My old customers need not write for it. I offer one of the largest collections of Vegetable Seed ever sent out by any Seed House in America, a large portion of which were grown on my six Seed Farms. Full directions for Cultivation on each package. All seed warranted to be both fresh and true to name; so far, that should it prove otherwise, I will refill the order gratis. The original introducer of the Hubbard Squash, Phinney's Melon, Marblehead Cabbages, Mexican Corn, and scores of other Vegetables. I invite the patronage of all who are anxious to have their Seed directly from the grower, fresh, true, and of the very best strain.

New Vegetables a Specialty.

JAMES J. H. GREGORY, Marblehead, Mass.

## MONEY in CHICKENS



If You Want to Make Money

By raising any number of Chickens at any season of the year without setting hens, procure an

## ECLIPSE INCUBATOR

(E. A. SAMUEL'S Patent.)

In both public and private trials on this coast as elsewhere, the "ECLIPSE" has proved itself a perfect and successful Egr. Hatcher. It may be examined and its merits proven to customers before they make purchases. Write for particulars and circulars to

G. G. WICKSON, 319 Market Street, S. F.  
Agent for the Pacific Coast.

## ST. DAVID'S.

A FIRST-CLASS LODGING HOUSE.  
CONTAINS 113 ROOMS.

715 Howard St., near Third, San Francisco.

This House is especially designed as a comfortable home for gentlemen and ladies visiting the city from the interior. No dark rooms. Gas and running water in each room. The floors are covered with body Brussels carpet, and all of the furniture is made of solid black walnut. Each bed has a spring mattress, with an additional hair top mattress, making them the most luxurious and healthy beds in the world. Ladies wishing to cook for themselves or families, are allowed the free use of a large public kitchen and dining room, with dishes. Servants wash the dishes and keep up a constant fire from 6 A. M. to 7 P. M. Hot and cold baths, a large parlor and reading room, containing a Grand Piano—all free to guests. Price single rooms per night, 50 cts.; per week, from \$2.50 upwards.

R. HUGHES, Proprietor.

At Market Street Ferry, take Omnibus line of street cars to corner Third and Howard.

## WANTED!

Reliable, competent, active Agents for the sale of my Orange and Lemon Trees,

In all the counties and cities of the State adapted to Citrus culture. The best of references required for competency and reliability. Address with references,

THOS. A. GAREY,

P. O. Box 188, Los Angeles, Cal.

## Mission Rock Dock and Grain Warehouse.

San Francisco, Cal.

40,000 tons capacity. Storage at lowest rates.

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. - - - Proprietors.

Office—318 California Street, Room 3.

## SITUATION WANTED.

A Mechanic, 41 years of age, desires a situation on a Farm. Wages not so much of an object, for the first six months, as a wish to remove from the city for the winter, and to gain some general information of farm work, before going into the farming business for himself. Address,

J. SHOERS,

No. 639 Mission St., S. F.

AMERICAN  
MACHINE AND MODEL WORKS.

Experimental and Fine Special Machinery, Planing, Gear Cutting, Patterns, Models for Inventors, etc. Printing Press and General Machine Repairing. Punches, Dies, Taps, Reamers, etc., made and repaired

I. A. HEALD, Proprietor.

514 Commercial Street, above Sansome, San Francisco.

## CERTIFICATE OF CO-PARTNERSHIP.

We certify that we constitute a partnership transacting business in this State; its principal place of business is San Francisco, California; its name is RANKIN, BRAYTON & CO. The full names and respective places of residence of all its members are signed hereto. San Francisco, Dec. 6, 1879.

IRA PACKARD RANKIN, of San Francisco, Cal.  
ALBERT PAULING BRAYTON, of Oakland, Cal.  
Duly acknowledged Dec. 9th, 1879, before James C. Ward, Notary Public, Endorsed: Filed December 9th, 1879. Wm. A. Stuart, County Clerk. By Jerry Whalen, Deputy Clerk.



**Nurserymen.****Berries and Small Fruits.**

The most certain and best paying Market Berries and well tried sorts.

**Monarch of the West  
STRAWBERRIES.**

Most Productive, Largest Berries and Healthiest Grower.

**English Red Antwerp, Naomi & Hersteine  
RASPBERRIES,**

Best paying for market, and are perpetual bearers when irrigated.

**KITTATINNY BLACKBERRY,**

The most prolific, largest and most popular sort.

I offer also a large assortment of new and old varieties of

**STRAWBERRY, RASPBERRY,**

Blackberry, Gooseberry and Currants.

For full Price List send for a Catalogue.

To secure a crop of Berries the first season it is important to plant very early.

**JOHN ROCK,**

San Jose, Cal.

**LOS ANGELES NURSERY.**

The undersigned will furnish Fruit Trees of all kinds at low rates. We offer an unusually large stock of

Apple, Peach and Apricot Trees,

— ALSO —

**Orange and Other Fruit Trees.**

Our Trees are free from Disease or Blight of any kind. We have

**WOOD'S EARLY APRICOT,**

That bears four weeks earlier than any known variety. We also have new Apples and Peaches of much promise.

Send for catalogue at once.

**MILTON THOMAS,**

Los Angeles, Cal.

**THOS. MEHERIN,**

516 Battery St., San Francisco.

**Seeds, Trees and Plants.**

We offer for sale the present season the largest and best collection of Fruit and Ornamental Trees ever offered on the Pacific Coast, at REDUCED PRICES. Also,

Vegetable and Flower Seeds,

KENTUCKY, AUSTRALIAN and ITALIAN RYE GRASS, RED and WHITE CLOVER, Etc.

Agent for the

**Nurseries of B. S. Fox.**

Send for Price List. 516 Battery Street, San Francisco

**1,000,000!**

Strawberry, Raspberry, Blackberry and Cranberry Plants.

**STRAWBERRY PLANTS.**—The Essex Beauty, Crescent, Cinderella, Forest Rose, Glendale, Jucunda, Monarch of West, Langforth Prolific, Triomphe d' Gand, Wilson Albany.

**RASPBERRY PLANTS.**—Cuthbert Early, Early Prolific, Reliance, Pride of the Hudson, Brandywine, Herstine, Philadelphia Red, Clark, Henrietta, Hornet, Belle de Fontenay, Delaware Bristol.

**BLACKBERRY PLANTS.**—Deering Seedling. Early and the most productive of all. I will give satisfactory proof that these Berries have realized \$750 per acre. It paid more than twice as much as the old varieties; also the Early Cluster, the Vina Seedling, Kittatiny, the Mammoth Cluster, Missouri Mammoth, Dorchester and Lawton.

**CRANBERRY PLANTS.**—The Cherry Cranberry Vines at \$10 per 1,000, by mail 64 cents more. I will sell to responsible parties on time, part cash, 10-acre field of Cranberry vines under cultivation. Can be seen at the place. Send for Catalogue.

**H. NYLAND,**

Boulden Island, San Joaquin River.

**Phylloxera-Resisting Vines.**

Vineyard proprietors desiring to plant American Grape Vines, which resist the attacks of the Phylloxera, either as Grafting Stock, or for direct production, which proves to be the only salvation and means of reconstructing the destroyed Vineyards of France, will do well to address

**BUSH & SON & MEISSNER,**

Bushberg, Jefferson Co., Mo.

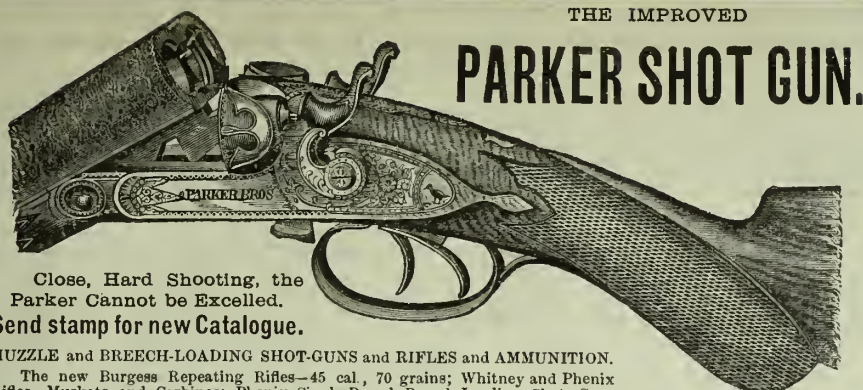
**PEPPER'S NURSERIES.**

(Established 1858.)

For sale at reduced prices, a general assortment of Fruit Trees and Small Fruits; also choice Ornamental Shrubs, Roses, etc. A limited supply of Cook's Seedling Apple, one and two years old. Catalogue and list of prices furnished on application. Address

**W. H. PEPPER,**

Petaluma, Sonoma Co., Cal.



THE IMPROVED

**PARKER SHOT GUN.**

Close, Hard Shooting, the Parker Cannot be Excelled. Send stamp for new Catalogue.

MUZZLE and BREECH-LOADING SHOT-GUNS and RIFLES and AMMUNITION.

The new Burgess Repeating Rifles—45 cal., 70 grains; Whitney and Phenix Rifles, Muskets and Carbines; Phenix Single-Barrel Breech-Loading Shot Gun; Allen Rifles, 22, 32, 38 and 44 caliber, rim fire, very cheap; Lovell & Sons Revolvers, the best and the cheapest.

**E. T. ALLEN, Agent for Pacific Coast,**

NO. 515 MARKET STREET, - - - - - SAN FRANCISCO, CAL.

**DEWEY & CO.'S****Scientific Press****Patent Agency.**

(ESTABLISHED 1860.)

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old, experienced, first-class Agency. We have able and trustworthy associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other Agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, 202 Sansome St., S. F.

A. T. DEWEY.

W. B. EWER.

GEO. H. STRONG.

**HANNAY'S NURSERY.**

San Jose, Cal.

I offer for sale this season, a large and well assorted stock of

Fruit, Shade and Ornamental Trees.

My trees are WELL GROWN and HEALTHY, and of the

Best Known Varieties.

**JOHN HANNAY.**

Successor to Hannay Bros.,  
San Jose, Cal.

**TAKE NOTICE!**

To those contemplating planting ORANGE and LEMON Trees, I would recommend only the Best Varieties of THORNLESS TREES.

Catalogue containing full particulars furnished free on application. Address **THOS. A. GAREY,**  
P. O. Box 188, Los Angeles, Cal.

**HEALD'S**

**BUSINESS COLLEGE,**  
24 Post Street  
Near Kearny,  
San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

**LADIES' DEPARTMENT.**—Ladies will be admitted for instruction in all the Departments of the College.

**TELEGRAPHIC DEPARTMENT.**—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, **E. P. HEALD,**  
President Business College, San Francisco, Cal.

**ASSESSMENT NOTICE.****The California Fruit Growing Association.**

Location of principal place of business, San Francisco. Location of works, El Dorado county, California.

Notice is hereby given, that at a meeting of the Directors, held on the 24th day of November, 1879, an assessment (No. 10), of \$4.00 per share was levied upon the capital stock of the Corporation, payable immediately in United States gold coin, to the Secretary, at the office of the Company, 641 Sacramento street, San Francisco.

Any stock upon which this assessment shall remain unpaid on the 8th day of January, 1880, will be delinquent, and advertised for sale at public auction; and unless payment is made before, will be sold on Monday, the 2d day of February, 1880, to pay the delinquent assessment, together with costs of advertising and expenses of sale.

D. A. BROWN, Secretary.

Office—641 Sacramento Street.

**THE EXHIBITOR'S Printing Press**

Prints cards labels &c. (Self-Inker \$5) 18 larger sizes For business or pleasure, young or old. Do your own advertising and printing. Catalogue of presses, type, cards, &c., for 2 stamps. **Kelsey & Co., Meriden, Conn.**

60 Chromo, perfumed, Snowflake & Lace cards, name on all 100. Game Authors, 15c. Lyman & Co., Clintonville, Ct.

**CALIFORNIA  
SUGAR REFINERY,**

Cor. Brannan and Eighth Sts.

Office, 215 Front Street.

This Company manufactures all grades of

**HARD AND SOFT SUGARS,**

And a Superior Quality of Syrup known as

**DIAMOND S  
SYRUP.**

Supplies only Exporters and Jobbers.

**Napa Valley Poultry Farm.**

Headquarters for all the leading varieties of

PURE BRED POULTRY,

WHITE and BROWN

LEGHORN'S,

PLYMOUTH

ROCKS,

AYLESBURY

DUCKS, BRONZE

TURKEYS, TOULOUSE

GEESE, ETC., ETC., ETC.

Price of Fowls and Eggs as low as the high standing of

the stock will permit. Send stamp for Illustrated Catalogue and Price List.

**R. G. HEAD.**

Napa, Cal.

**CARD.**

The undersigned having purchased the business of the Marin and Sonoma County Land Office, and recognizing the necessity for a radical change in the matter of conducting it, have made arrangements to carry it on upon a basis and principles such as must insure satisfaction to our patrons. No shading descriptions permitted; all guaranteed. **LINGLEY & BEATTY,** 702 Market street.

Refer to Hon. C. Palmer, Hon. C. Clayton, R. McElroy, Esq., L. Shore, Esq.

N. B.—All descriptions of farms and city and Oakland property for sale and exchange. L. & B.

GILES H. GRAY.

JAMES M. HAVEN.

**GRAY & HAVEN,**

Attorneys and Counsellors-at-Law,

In building of Pacific Insurance Co.,

Corner California and Leidesdorff streets, San Francisco.

**Seedsman.****SEEDS!****Thomas A. Cox & Co.,**

Importers and Dealers in

Vegetable, Flower, Field, Grass and Tree Seeds.

We wish to announce to country merchants and the trade generally that we are ready to supply all descriptions of Seeds of the New Crop of 1879. Special prices on application.

Vegetable and Flower Seeds put up in small packets for the retail trade.

**FRESH AND TRUE TO NAME.**

We will send the following Seeds, postpaid, on receipt of price. Remit by P. O. Order or postage stamps:

Beets, per oz. .... 10c	Parsnips, per oz. .... 10c
Carrots, per oz. .... 10c	Radish, per oz. .... 10c
Cabbage, per oz. .... 25c	Spinach, per oz. .... 10c
Lettuce, per oz. .... 15c	Turnip, per oz. .... 10c
Onion, per oz. .... 15c	Tomato, per oz. .... 25c

We will mail to any address a collection of 20 packets of choice Flower or Garden Seeds for \$1.

Fruit and Ornamental Trees at Nursery Prices.

**THOMAS A. COX & CO.,**

409 Sansome Street,

San Francisco.

**J. P. SWEENEY & CO.'S****SEED WAREHOUSE,**

409 &amp; 411 Davis St., San Francisco.

ESTABLISHED IN 1853.

Keep constantly on hand the largest stock of FIELD, ARDEN, CONIFER, or

**CALIFORNIA TREE SEEDS,**

On the Pacific Coast. Seeds all FRESH and GENUINE. Our Stock is large, especially of the following varieties:

**ALFALFA, BLUE GRASS,**

Red and White Clover, Red Top, Timothy,

Australian Rye Grass, Mesquit Grass,

Lawn Grass and Millet Seeds

Of different varieties. Field Seeds, Mangel Wurzel and Sugar Beets, Rutabagas, Carrot Seeds of all varieties, Peas, Beans, etc. Our assortment of GARDEN and FLOWER SEEDS are full and complete. Also, FRUIT and ORNAMENTAL TREES at Nursery Prices.

**Trees For Sale at Lowest Market Rates.**

For Catalogue, Price Lists, etc., apply as above.

**SEVIN VINCENT & CO.,**

Importers, growers of, wholesale and retail dealers in



Field, Grass, Flower and Tree Seeds.

CLOVER, ALFALFA,

BULBS, FRUIT, ORNAMENTAL TREES, ETC.

We call the attention of farmers and country merchants to our unusually low prices. Trade price list on application.

We issue the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is handsomely illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

**SEVIN VINCENT & CO.,**

607 Sansome Street, S. F.

**SEEDS. TREES. SEEDS.**

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses, RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

**B. F. WELLINGTON,**

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.

**EXOTIC  
GARDENS.**

F. A. MILLER & CO., Mission St.,  
opposite Woodward's Gardens. Send  
for Catalogue and Price List.

**KEATING'S COUGH LOZENGES!**

The Great British Remedy. There is unquestionably no other remedy so certain in its effects. ASTHMA, WINTER COUGH, BRONCHITIS and DISORDERS of the THROAT alike yield to its influence. The highest medical testimony states no better cure for these complaints exist (now proved by over a half a century's experience.) They contain no opium, morphia, or any violent drug. KEATING'S COUGH LOZENGES prepared by THOMAS KEATING, London, Britain, are sold by all Druggists.

**Engraving**

Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the Mining and Scientific Press, San Francisco, at favorable rates.



## RAIN TABLE FOR SACRAMENTO.—PREPARED BY THE LATE DR. T. M. LOGAN AND DR. F. W. HATCH.

Arranged according to the seasons, showing the amount in inches of each month, during thirty years, and for each rainy season, to December 14th, 1879; also the quantity for every month, and the annual amount of rain.

MONTHS.	1849	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	
September	0.250	0.000	1.000	0.003	0.000	sp'kle	sp'kle	sp'kle	0.000	sp'kle	0.025	0.063	0.000	0.000	0.003	0.004	0.080	0.000	0.006	0.000	sp'kle	0.000	0.001	0.002	0.000	0.050	0.000	sp'kle	0.000	0.290	.....	
October	1.500	0.000	0.180	0.000	0.005	1.010	0.000	0.195	0.655	3.010	0.000	0.914	sp'kle	0.355	0.000	0.120	0.480	0.001	0.000	0.000	2.120	0.020	0.210	0.230	0.310	2.259	0.440	3.320	0.690	0.385	0.758	
November	2.250	sp'kle	2.140	6.000	1.500	0.650	0.750	0.651	2.406	1.070	6.485	0.181	2.170	0.005	1.490	6.718	2.427	2.436	3.806	0.774	0.850	0.584	1.220	1.930	1.210	3.801	6.206	0.320	1.120	0.415	1.700	
December	12.500	sp'kle	7.070	13.410	1.640	1.150	2.000	2.336	6.632	4.329	1.834	4.282	8.637	2.327	1.815	7.867	0.364	9.511	12.850	2.612	1.962	0.971	10.990	5.388	10.009	0.440	5.525	0.000	1.227	0.476	1.685	
MONTHS.	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	
January	4.500	0.650	0.580	3.000	3.250	2.670	4.919	1.375	2.444	0.964	2.310	2.668	15.036	1.733	1.977	4.776	7.699	3.440	6.036	4.790	1.371	2.075	4.040	1.230	5.200	8.705	4.790	2.770	7.475	3.769	.....	
February	0.500	0.350	0.120	2.000	8.500	3.400	0.692	4.801	2.461	3.906	0.931	2.920	4.260	2.751	0.136	0.712	2.010	7.104	3.147	3.630	3.236	1.919	4.740	4.960	1.856	6.550	3.050	1.400	6.229	3.240	.....	
March	10.000	1.880	6.400	7.000	3.250	4.200	1.403	0.675	2.878	5.110	3.320	2.800	2.360	1.303	0.481	2.018	1.010	4.348	2.942	1.642	0.690	1.936	4.740	4.960	1.856	6.550	3.050	1.400	6.229	3.240	.....	
April	4.250	1.140	0.190	3.500	1.500	4.320	2.132	sp'kle	1.214	0.981	2.874	0.475	0.821	1.693	1.080	1.370	0.476	1.805	2.306	1.240	2.120	1.454	0.610	0.512	0.890	0.002	1.090	0.000	3.223	4.377	.....	
May	0.250	0.690	0.300	1.450	0.210	1.150	1.841	sp'kle	0.203	1.037	2.491	0.590	1.808	0.355	0.742	0.460	2.252	0.008	0.270	0.648	0.270	0.756	0.280	0.000	0.370	0.040	1.090	0.640	0.160	1.318	.....	
June	0.000	0.000	0.000	0.001	0.310	0.010	1.033	0.350	0.098	0.000	0.017	0.135	0.011	0.000	0.087	0.000	0.100	0.000	sp'kle	0.008	sp'kle	0.001	0.025	0.002	0.002	1.100	0.000	0.200	0.000	.....	.....	
July	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.030	0.549	0.000	0.000	0.000	0.000	0.004	0.018	0.000	0.000	0.000	sp'kle	.....	0.000	0.015	0.001	0.000	0.210	0.000	0.000	0.000	.....	.....
August	0.000	0.000	0.000	0.000	sp'kle	0.000	0.000	sp'kle	sp'kle	0.000	0.000	0.000	0.006	0.000	0.085	0.000	0.000	0.000	0.000	0.000	0.001	.....	0.000	sp'kle	0.000	0.000	0.020	0.000	0.000	sp'kle	.....	.....
Total	38.000	4.710	17.980	36.365	20.065	18.620	13.770	10.443	18.991	16.041	22.626	15.548	35.549	11.579	7.868	22.512	17.924	25.305	32.769	16.644	13.572	8.470	24.032	14.208	22.898	23.647	25.671	9.325	21.249	16.772	4.043	

## Trade-marks.

The following circular has been issued from the office of the Mining and Scientific Press Patent Agency, San Francisco:

DEAR SIR:—We beg to call your attention to the following remarks relative to the trade-mark law, which will prove of great interest to all those who have trade-marks now in use or who may be about to adopt one:

The recent decision of the Supreme Court of the United States adjudging the law regulating the registration of trade-marks to be unconstitutional, has naturally created a deep concern in the minds of those who are the proprietors of valuable trade-marks, and a doubt as to whether their property of this class has any future value or not. Much has been published since the decision which has a tendency to create false impressions, and these we desire to correct.

## The Act of Congress.

Which has just been decided unconstitutional did not profess to create or destroy any lawful trade-mark. The right to such mark is a common law right, and has always been enforced. The object of the statute was only to allow of the registration of trade-marks at a central point, as a matter of convenience and proof. For this registration the party registering paid a fee, and obtained a certificate. With this certificate, he could sue in the Federal courts, while under the common law he would have to sue in the State courts.

The great benefit arising from registration then, was that jurisdiction was given to the Federal courts, and proof was made inexpensive. Registration was granted for 30 years. At the end of that time it could be renewed, or the owner could cease to be a registrant.

## The Common Law Right

Would not cease, however, but would be made only the more certain by the thirty years registration. The more perfect means for the protection and enforcement of the right, which was provided by this registration, with its annexed penalties for infringement, are, of course, lost by the overthrow of the statute, and the owner is remitted to his common law right. This right is generally recognized, and some of the States have laws upon the subject, among them California.

## The Law of California

Provides for the registration of trade-marks in the office of the Secretary of State, with penalties for the infringement of such marks, so that, with a certificate, the registrant is in position to protect his rights.

## Present Status of Trade-marks.

The practical effect of the late decision is of little consequence. It merely leaves rights in trade-marks and protection for them just as they were before the said United States law was passed. Trade-marks are property now, and will be legally protected to the same extent and in the same manner as though the United States law had been declared valid. About the only difference will be that in most cases suits for the protection of trade-marks will be brought in the State courts instead of the United States courts, and in such actions evidence that the trade-mark was registered in the Patent Office will not be received. No trade-marks are destroyed or lost or impaired by the said decision. The United States law did not make or create or strengthen any trade-marks. It merely undertook to extend a protection to them under United States laws. That same protection, however, had been for ages extended to trade-marks by the laws of the different States in this country and by the laws of the various nations in Great Britain and Europe.

California has a trade-mark law which provides for registering the trade-mark in the office of the Secretary of State. It makes an official record of the trade-mark in a public office, and makes an authenticated copy of such record competent evidence by which the trade-mark can be proved in a court of justice. It also provides remedies for the protection of the trade-mark thus registered and punishments for the infringements. It practically does all that the United States law was intended to do.

It will thus be seen that the registration of trade-marks in the office of the Secretary of State and the possession of a certified copy of such registration, will be of advantage to all who have hitherto registered their trade-marks in the United States Patent Office alone.

We are prepared to attend to the registration of all trade-marks in this manner, and to furnish certified copies thereof at a small cost.

In this connection it is proper to add that we have just received advices from Washington, informing us that Congress will, undoubtedly, make an appropriation for the return of the fees which have been paid for registration, under the now defunct law. As soon as this is done, we shall inform our readers and shall also advise them as to the formalities necessary for its return. Yours respectfully,

DEWEY &amp; CO.

## Detestable Frauds.

The innumerable swindlers who operate through the mails are being made known through the Postoffice authorities. The *Western Rural* prints an alphabetical list of names which represent people whose letters the Postoffice officials have ordered retained in the hands of the Postmasters of the several towns because the parties are doing a fraudulent business through the mails. It would be well for our readers to preserve this list for reference, and whenever they see an advertisement of questionable character, to examine the list and ascertain if it contains the name or names of the advertiser or advertisers. The list is as follows:

Allen, H. D. P., alias W. T. McCall, National Banking Co., New York city.  
American Coral Co., Pittsburg, Pa.  
Arizona Lottery, Prescott, Arizona.  
Bartelle & Co., B. C., Gloucester, N. J.  
Bennington & Co., A. B., alias Jace Marks, Lansing, Iowa.  
Benton, D. V., Laramie City, Wyo.  
Bishop, L. D. S., Cincinnati, Ohio.  
Brain, John C., alias Excelsior Mfg. Co., Sheffield Fire Arms Agency, New York city and Chicago.  
Bristol Piano Co., New Bedford, Mass.  
Burrow, John, Bristol, Tenn.  
Burnett, H. A., New York city.  
Coldwater, Michael, Prescott, Arizona.  
Clark & Co., alias Silver Mining Co., New York city.  
Cosmopolitan Stamp Co., alias Philadelphia Stamp Co., Giovanna Patroni, Philadelphia, Pa., and Camden, N. J.  
Crest, John, alias W. J. Hill, C. H. Walker, C. Wade, Elkhart, Ind.; Augusta, Mich.; Battle Creek, Mich.  
Eastern Manufacturing Co., Boston, Mass.; Rockland, Me.; Chicago, Ill.  
Egerton & Co., Camden, N. J.  
Edmunds & Co., J. P. Webster, Mass.  
Eggleston, Edward A., Rosita, Col.  
Elias, Ellis H., alias Russell & Co., New York city.  
Florence Jewelry Co., Pittsburg, Pa.  
Franklin, George W., Louisville, Ky., and Glasgow, Ky.  
Freshman & Co., Pittsburg, Pa.  
George & Co., Jas. W., New York city.  
Gustavus & Co., alias F. E. G. Lindsay, Holston, W. Va.  
Hall & Co., H. J., Baltimore, Md.  
Hall & Co., J. H., New York city.  
Hamilton & Co., J. B., New York city.  
Heister, Charles E., alias U. S. Syndicate, New York city.  
Henry & Co., J. C., alias Clarence W. Miller, Glen Falls, N. Y., and Chester, Pa.  
Hill, W. J., alias C. W. Whitney & Co., Elkhart, Ind.; Augusta, Mich., and Battle Creek, Mich.  
Hurlburt, William H., alias Western Gun Co., Chicago, Ill.  
Jones & Son, A., Hopkinton, Mass.  
Jones, Edgar W., alias Harry J. Littleton & Co., Union Purchasing Agency, Union Publishing Co., Magnetic Watch Co., Ashland, Mass., and South Framingham, Mass.  
Kentucky Land Co., Louisville, Ky.  
Leavitt & Co., alias Russell & Co., Sunbeam Publishing Co., New Bedford, Mass.  
Lindsey, F. E. G., Holston, W. Va., and Abingdon, Va.  
Littleton & Co., Harry J., Ashland, Mass., and South Framingham, Mass.  
McCall, W. T., New York city.  
Magee, John W., Laramie City, Wyo.  
Magnetic Watch Co., Ashland, Mass., and South Framingham, Mass.  
Marks, Jace, La Crosse, Wis.  
Miller, Clarence W., Chester, Pa.  
National Art Co., Cincinnati, Ohio.  
National Banking Co., New York city.  
Paris Novelty Co., Boston, Mass.; Rockland, Mass.; Chicago, Ill., and Camden, N. J.  
Pattee, J. M., Mauneger, Cheyenne, Wyo., and Topeka, Kan.  
Premium Art Co., Pittsburg, Pa.  
Reade & Co., New Haven, Conn.  
Royce, J. M., Grafton, W. Va.  
Russell & Co., New York city.  
Russell & Co., New Bedford, Mass.  
Russell, Hopping & Co., Riversdale, N. J.  
Silver Mining Co., New York city.  
Sine, L. D., alias L. D. S. Bishop, Cincinnati, Ohio.  
Slocumb, E. Ellsworth, alias Paris Novelty Co., Eastern Manufacturing Co., Boston, Mass.; Rockland, Mass.; Chicago, Ill.  
Stewart, Frank, Philadelphia, New York.  
Sunbeam Publishing Co., New Bedford, Mass.  
Texas Gift Concert Association, Dennison, Texas.  
Tomlinson, James A., New York city.  
Tyner & Co., J. C., alias American Coral Co., Florence Jewelry Co., Freshman & Co., Premium Art Co., Pittsburg, Pa.  
United States Syndicate, New York city.  
Union Publishing Co., Union Purchasing Agency, Ashland, Mass.; South Framingham, Mass.  
Union Silver Plating Co., Cincinnati, Ohio.  
Wade, C., alias C. H. Walker, Elkhart, Ind.; Augusta, Mich.; Battle Creek, Mich.  
Webber & Co., alias National Art Co., Union Silver Plating Co., Cincinnati, Ohio.  
Western Gun Co., Chicago, Ill.  
Whitney & Co., C. W., Glen Falls, New York, Chester, Pa.  
Willcox & Co., Windsor, Pa.

## Rainfall Table.

The above very useful table of rainfall at Sacramento has generally been taken as representative for the whole State, since at no other point, except of late years, have such full statistics been preserved. The work commenced by the late Dr. Logan is now ably continued by Dr. F. W. Hatch. The table explains itself, and the figures are brought down to the 14th of this month.

The rainfall at Sacramento may be taken as a rough average of the State, when the results in the wet and the dry regions are compared with each other. This year so far the rainfall in this city and at some points in the northern interior has nearly reached seven inches, and further north the figures are still higher.

Nearly everywhere enough rain has already fallen to set every one to work, and to fill all hearts with anticipations of a prosperous year in 1880.

THE OUTLOOK IN WOOL.—Wool growers will be soon looking with interest for the prospective value of the spring clip and wonder whether recent activity will be maintained. Walter Brown & Co., of Boston, take a most hopeful view of the situation, in the following words: "We might look upon the rapid advance of the

past eight weeks as a decidedly unhealthy one, were it not warranted by a corresponding activity in the goods market. The general revival of trade throughout the country has probably been felt as much by the woolen interest as by any other branch of industry; the lower and middle classes, who have suffered so severely during the past five years, have been the first to benefit by the improvement, and from this source springs the great demand, resulting in larger sales of wools than for any season since 1873. A strong evidence of the bettered condition of the working classes is the increased demand for the finer qualities of goods, which our manufacturers are endeavoring to meet by the production of cloths of so much improvement in fabric and style as to almost exclude the importation of the foreign article. With a continuance of this prosperity, which it is reasonable to expect, the recent advance in the raw material has taken place on a sound basis, and is likely to be firmly established so long as the production of goods is not in excess of the requirements of the people."

CATTLE FOR THE SANDWICH ISLANDS.—We hear that Mr. Ashburner, of Badeu farm, has selected and shipped, through Bowley Bros., 11 high-grade Short Horn cows and 4 young bulls, by the ship *Eureka*, for Honolulu. They also send 12 cows by the *Lady Lamson* this week. One young bull and some of the cows were bred by Mr. Ashburner; all the rest were selected by him from two or three of the best dairies in this neighborhood. The Sandwich Islanders will no doubt receive animals of the highest excellence, as Mr. Ashburner is a breeder and judge of cattle of long experience.

A NOVELTY IN ROSES.—Buds of the new striped tea rose—"American Banner"—were worn for the first time in New York by the ladies waiting on the tables at the great fair of the Seventh Regiment on the evening of Wednesday, Dec. 3d. This rarity among flowers from its novelty and scarcity, is likely to become in great demand this winter; but as it can only be supplied in small quantities, it will probably cost more than its weight in gold.

FINE POULTRY.—Mrs. McMahon, of the Putah Creek Poultry Yard, has an advertisement in this issue of surplus stock which she wishes to sell at cheap rates. Our correspondent who visited that region last winter alluded to Mrs. McMahon's birds and breeding arrangements as of high order, and her present offer is doubtless worthy of consideration.

HATCHING OUT.—The eggs in the Eclipse Incubator, working at 319 Market street, are beginning to hatch as we go to press, and Mr. Wickson, the agent, will be pleased to show its work to any one interested. The eggs were put in at intervals, so there will be continuous hatching.

## PATENTS AND INVENTIONS.

## List of U. S. Patents Issued to Pacific Coast Inventors.

(From Official Reports for the "Mining and Scientific Press," Dewey & Co., Publishers and U. S. and Foreign Patent Agents.)

FOR THE WEEK ENDING DECEMBER 2d, 1879.

222,222.—PILLOW SHAM FRAME AND HOLDER—John R. Adams, Oakland, Cal.  
222,226.—CASTER—Geo. S. Andrews, S. F.  
222,252.—HANDCUFF—Robert H. Daly, Napa, Cal.  
222,294.—VEHICLE WHEEL HUB—August McKellar, Camp Douglas, Utah Ter.  
222,296.—COOKING UTENSIL—Jas. McMurray, East Portland, Ogn.  
222,298.—DOUBLE CHAIN STITCH SEWING MACHINE—John H. Mooney, S. F.  
222,310.—APPARATUS FOR GUIDING HEALERS—Joshua M. Steves, Stockton, Cal.

FOR THE WEEK ENDING DECEMBER 9th, 1879.

8,993.—STREET LAMP—E. Boesch, S. F. (re-issue).  
222,380.—DREDGING MACHINE—E. Chaquette, S. F.  
222,381.—MACHINE FOR RAISING TAILINGS IN MINES—E. Chaquette, S. F.  
222,415.—OPERATING PUMPS—J. Moore and G. W. Dickie, S. F.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

THE TULARE LAND QUESTION.—In the case of the Southern Pacific Railway vs. Pierpont Orton, Judge Sawyer has rendered a decision in favor of the plaintiff. This is the issue which the settlers in the Mussul Slough district of Tulare county have long been making in defence of their homes. Judge Sawyer decides that the land belongs to the Railroad company. This decision gives the company another assurance of their title, but the end is not yet, for the issue will be carried to the United States Supreme Court, and the final adjudication of the matter must be obtained there. We are informed that the settlers will make every effort to obtain what they believe to be their rights in the matter.

SEEDS AND PLANTS.—Many readers will recognize a familiar name in the advertisement of J. Hutchison's Bay Nursery, which appears in another column. Mr. Hutchison is one of our pioneer horticulturists and nurserymen, and has rendered his position even more valuable by keeping abreast of the times in new and valuable growths. His place should be visited by all within reach, and his catalogue examined by all.

GRAPE CUTTINGS, ETC.—The attention of those about to plant vineyards is called to the advertisement of B. Kohler, of St. Helena. Mr. Kohler is prepared to furnish desirable varieties and to give any information which planters may desire.

## Squirrels and Gophers.

EDITORS PRESS:—The destruction and loss occasioned the farmer by these pests is so great that any mode for their riddance is worthy of attention, though it be far from perfect; and if each one will give his experience in destroying them the best plan will finally be reached. I was occasioned some loss this year by squirrels carrying away my almonds—the animals going so far as to amputate small limbs that would not sustain their weight, and forced me to apply some remedy. I met with success in the following method: In the morning, with a can of Wakelee's squirrel poison, I visited all the holes that gave evidence of having an occupant and placed a teaspoonful of poison in the hole, using an iron spoon inserted in a wooden handle two feet in length, which will deliver the grain so far in the ground that chickens, etc., will not get it. In the evening I went over the ground again and filled all the holes up. Two days afterward I again visited all the holes, and if any were opened, placed more poison in it. One or two trips generally did the work for the pest; still, I found eternal vigilance to be the price of deliverance from this troublesome rodent, because squirrels will come from distant parts and retentive homes whose former occupants have been killed. This plan I found to be the most cheap and effective of the many tried; still, I would like to hear of a better one.

For the destruction of gophers I have found plenty of water to work to the most advantage—copious irrigation, if you please. Especially in alfalfa fields can this plan be most successfully worked. It not only kills the old ones, but the young succumb to the treatment. Turn on the



water until it stands three or four inches deep all over the land. But water is not always to be had in sufficient quantity, and, besides, would not do for some crops. In such cases squirrel poison can be most effectively used. This season I cleared them all out of a watermelon plot where they had nothing to feed on but the vines. With the same spoon used in squirrel poisoning, I cleaned out the hole, where a gopher had been at work, until the roadway was found; care being taken not to disturb the runway, as that would cause the animal to throw up a fresh lot of earth. In the passage I placed 40 or 50 grains of Wakelee's poison, and carefully closed the opening with a clod or weeds. Close up tight. Prosecute this work in the morning. Gophers eat this poison more readily than squirrels. By this means gophers may be cleared out from among choice or rare flower plants. J. R. F. San Bernsrdino, Dec. 4th, 1879.

Fresh attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

THE RIVERSIDE HOUSE is pleasantly located in the center of the town in Riverside Colony, San Bernsrdino Co. It is a new two-story brick building, containing some 40 rooms. Health-seekers and other visitors to this most favored climate will find good boarding accommodation at favorable rates. For further information address the proprietors, CUNNINGHAM & MOODY, Riverside, San Bernsrdino Co., Cal.

How to STOP THIS PAPER.—It is not a herculean task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired, you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate the copy sent.

EXTRA COPIES can usually be had of each issue of this paper, if ordered early. Price, 10 cents, postpaid.

## S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

### Weekly Market Review.

#### DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, December 17th, 1879.

The chief activity and best tendency in prices is in Meat and Meat Products. The Grain trade is dull and sales few. Dairy goods are weak and Butter is falling a little. Vegetables are stationary. Nuts and Fruit are selling readily in the holiday demand, and California Walnuts and soft-shell Almonds have advanced. In Merchandise there has come a drop in Sugar prices, so that they now stand nearly the same as before the late rise. Dry Goods and Fancy Goods are now in the midst of the Christmas harvest.

The English Wheat market has gained 1d during the week, as may be seen from the following:

#### Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday....	10s	7d@11s	7d	11s	7d@11s	10d		
Friday.....	10s	9d@11s	9d	11s	8d@12s			
Saturday....	10s	7d@11s	7d	11s	7d@12s			
Sunday.....	10s	9d@11s	9d	11s	8d@12s			
Tuesday....	10s	9d@11s	8d	11s	7d@11s	11d		
Wednesday..	10s	9d@11s	8d	11s	7d@11s	11d		

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1877.....	12s	7d@12s	11d	12s	10d@13s	2d		
1878.....	9s	1d@9s	6d	9s	6d@9s	10d		
1879.....	10s	9d@11s	8d	11s	7d@11s	11d		

#### The Foreign Review.

LONDON, December 16.—The *Mark Lane Express* says: Great distress has prevailed in the agricultural districts, owing to the severity of the weather, which is now, however, somewhat ameliorated. Farm work has been almost at a standstill. Root crops have suffered severely from intense frost. Some of the land intended for Wheat is still unsown. Young Wheat has scarcely begun to show itself in England, but on the Continent the appearance of growing crops is satisfactory. The condition of English Wheat sent to the markets was somewhat better, but deliveries were small, and notwithstanding its defective condition, many samples have been advanced a shilling. Feeding stuffs have also shown an upward tendency. Foreign importations still continue liberal. Last week's arrivals in London and Liverpool were over 154,000 quarters. But despite these imports the tone has unquestionably improved. There has been some desire to speculate in Wheat, but the business of consumption was chiefly confined to supply immediate wants of country millers. Others do not wish to increase their stock before the holidays. Large American arrivals have prevented an advance in American Wheat. Russian, however, has risen a shilling in consequence of the closing of the Baltic. Great confidence is felt in the firmness of prices after Christmas, in consequence of scarcity. A good business was done in Maize at 6d to a shilling improvement. Arrivals at ports of call have been moderate. There has been a better demand for Wheat off coast, and the latest prices show an advance of 1s 6d to 2s per quarter; but the firmness of sellers rather checked the demand at the close. There was an improved demand for Maize at 6d to 9d advance. There was but little direct business done in forward Wheat, either for Red Winter or Spring, owing to high American quotations, but there was a good demand for California and Oregon, which advanced 1s per quarter. Maize was in better request. Barley was quiet, but steady. Sales of English Wheat last week amounted to 41,665 quarters, at 46s 2d per quarter, against 61,963 quarters, at 44s 10d per quarter, during the corresponding week last year. Imports into the United Kingdom during the week ending December 6th, were 1,357,423 cwt of Wheat, and 209,699 cwt of Flour.

#### Freights and Charters.

The following charters are reported: Ship *John Bryce*,

1,976 tons, Wheat for Liverpool or Havre, at £3; ship *Importer*, 1,276 tons, for Wheat to Liverpool or Havre, £3 6s; to Cork or Havre, £3 7s 6d; and to the Continent, £3 12s 6d.

#### Eastern Grain and Provision Markets.

New York, December 16.—The general markets are rather quiet, but prices in some cases are firm. Breadstuffs are dull, lower; Flour being 10¢15c, and Wheat 1¢2c lower. Barley is lower. Pork is neglected, 20¢30c lower. Lard is more active, 15c lower.

Chicago, December 13.—The Grain markets for the past week have been very active, but unsettled. Wheat fluctuating from 1c to 4c daily, with a good chance for speculators and scalpers. Receipts have been good, but not excessive. The long-predicted break has not come yet, and the extremely bullish operators claim that Wheat will yet sell this season at \$1.50 per bushel. Prices closed at nearly the outside for the year. Sales for January were: Wheat, \$1.27¢1.34; Corn, 40¢43¢; Oats, 34¢37¢. Provisions are very unsettled, and tending to lower prices nearly every day. Hogs have been coming in at a rapid rate, and with the brisk packing operations now going on not only here but throughout the Northwest, lower prices are not improbable, especially as the present supplies have come too rapidly after the long depression to make their continuance a matter of certainty. Sales for January: Pork, \$12.95¢13.90; Lard, 77¢78.5¢. Closing January prices were: Wheat, \$1.32; Corn, 41¢41¢; Oats, 35¢; Pork, \$13.25; Lard, 77¢. Closing cash prices: Wheat, \$1.30¢1.32¢, according to date of receipt; Oats, 35¢; Rye, 79¢79¢; Barley, 90¢; Pork, 13¢; Lard, 74¢.

#### Eastern Wool Markets.

Boston, December 13.—The Wool market is quiet, but prices are very firm for all kinds, holders being indifferent about selling even at the full current rates. With a more active movement prices would again have a decided upward tendency. In combing fleeces there was considerable doing. Sales of foreign and domestic this week, 53,300 lbs. Transactions in California Wools were very light, comprising only 140,500 lbs of Fall and Spring. There is fair assortment of Fall Wool to select from, but the bulk of the California clip has already passed into the hands of manufacturers, and stocks in Eastern markets are now smaller than for many years. The supply of Oregon and Territory Wools is also very small. Pulled Wools are in fair demand, at higher prices. Eastern and Valley Oregon, 33¢44¢; Mission, 36¢42¢; Territory, 27¢33¢; scoured, 45¢48¢; tub washed, 50¢; Super and pulled, 42¢46¢; Spring California, 25¢34¢; Fall, 22¢40¢. Sales of domestic for the week aggregated 1,438,400 lbs.

New York, December 13.—Wool of all kinds is firm; holders are confident, but the demand is less active, as is usual at the close of the year. California grades form a large bulk of the transactions. Sales include 250 bales Fall, at 23¢32¢; 200,000 lbs do private; 28,000 lbs Spring, 27¢.

#### New York Dried Fruit Markets.

New York, December 16.—Raisins are somewhat firmer, with sales of Layers at 12¢; loose Muscates, \$2.05¢2.10; London Layers, \$2.30¢2.40; Prunes are barely steady and demand light; Pigs are in fair demand and steady; Dried Apples are very firm, with an upward tendency.

#### Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Nov. 25.	WEEK. Dec. 3.	WEEK. Dec. 10.	WEEK. Dec. 17.
Flour, quartersacks..	32,060	99,904	56,274	28,691
Wheat, centsals.....	212,344	115,490	321,990	298,158
Barley, centsals.....	17,742	18,628	14,530	21,728
Beans, sacks.....	12,977	21,290	9,901	11,149
Corn, centsals.....	1,896	7,151	6,376	8,866
Oats, centsals.....	27,186	3,801	28,399	7,784
Potatoes, sacks.....	27,346	20,895	19,490	18,259
Onions, sacks.....	1,972	1,274	1,570	1,271
Wool, bales.....	1,120	274	376	144
Hops, bales.....	179	128	160	
Hay, bales.....	1,271	932	1,328	741

#### BAGS.—There is no change.

BARLEY.—Prices are generally the same as last week, except that 82¢ is now about as high as Feed Barley can be carried. Sales have been rather more free than for the last few weeks. We note sales: 1,600 sbs choice Bay Brewing at 97¢; 1,000 do Light do, 85¢; 600 do good Bay Feed, 82¢; 700 and 200 do good Coast Feed, 75¢, and 200 do fair do at 72¢.

BEANS.—Beans are a shade lower, as shown in our price list.

CORN.—Corn has picked up new life, and sales have been free at slightly improved figures. We note sales: 850 sbs Small Round Yellow at 97¢; 154 do Small White, 97¢; 300 do Small and 100 do Large Yellow, 95¢; 400 do Small Yellow, 360 do Small Round White, 350 sbs do do, and 300 and 75 do Large Yellow, 92¢, and 175 do Pop-Corn, \$1.50 per cbl.

DAIRY PRODUCE.—Butter has lost another cent, and the fancy Dairies now go at 28c, with, perhaps, an occasional reach higher. Cheese is unchanged.

FEED.—There is no change in Bay or Ground Feeds.

FRUIT.—Our list shows a few unimportant changes.

FRESH MEAT.—Mutton and Lamb are higher. Pork is a fraction lower, owing to large supplies coming in.

HOPS.—The best Hops are now held for 40c, but there are no takers. For such lots as are selling, probably 35c is about the top notch. Emmet Wells reports the New York market for the week ending December 5th, as follows:

The market continues dull and prices show a further decline of 2c per lb, 43c now being the top cash price attainable for choice Hops. The dullness of trade is attributed to a weakening tendency in the London market, and the absence of fresh orders for export; but a more direct cause of the present stagnation is the continuance of arrivals of German Hops. But little alarm was created by the receipt of the first one or two hundred bales, as a few German Hops are imported to this country every year, but further importations (some by brewers direct), has caused no little uneasiness on the part of holders of and speculators in the home article, who had hoped to reap a fine profit on their investments before the close of the season. We know of one Hop firm who have already received over 500 bales and who report more on the way.

LIVE STOCK.—We note the following sales: 400 Wethers (2-yr old, fine), \$3.12¢, in Solano county; 1,600 Ewes and Lambs, sheared, \$1.50, in San Francisco; 7,000 Wethers, in Los Angeles, Wool on, \$3 each; 5,000 Wethers, Los Angeles, sheared in September, \$2.50 each; 3,000 Wethers, Merced, Wool on, choice lot, \$3.25 each; 2,790 Wethers and Ewes mixed, \$2.25, on the San Joaquin; 2,300 Hogs, 3¢; 790 Hogs, 3¢; 462 Hogs, 3¢, very choice, from Los Angeles; 350 Hogs, Petaluma, 3¢.

OATS.—Oats are still lively and prices unchanged.

ONIONS.—Our list shows that supplies are now arriving from more producing regions, and prices are rather lower, except for the favorites.

POTATOES.—Prices are about the same, except that Early Rose take a lower range.

PROVISIONS.—California Hams and Bacon have

dropped off a fraction, because of the lower rate for Fresh Pork. On the other hand the excitement in the Eastern Provision Markets has elevated the rates on imported Meat Products.

POULTRY AND GAME.—There is no change in winged Fowl. Hares are now up to \$1.50¢2 per doz.

VEGETABLES.—Mushrooms are coming in by the cord since the rains. The present rate is 5¢6c per lb. Garlic is 2c higher per lb. Tomatoes have dropped to ante-rain figures.

WHEAT.—Prices are reported lower, but little can be bought at the rates offered, consequently sales are few. Sales: 180 sbs choice Milling at \$2.05; and 500 do, different kinds, in lots, at \$2.

WOOL.—The feeling for the future is strong, but trade amounts to but little, as the Wool is well cleaned up.

## DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., December 17, 1879.

### BEANS & PEAS.

Bayo, otl.....	1 10	21 20
Butter.....	1 25	21 40
Castor.....	3 50	21 50
Pea.....	1 37	21 50
Red.....	90 01	21 50
Pink.....	90 01	21 50
Sm't White.....	1 37	21 50
Lima.....	6 00	21 50
Field Peas, yellow.....	1 37	21 50

### BROOM CORN.

Southern.....	14 2	21 50
Northern.....	2 24	34

### CHEESE.

California.....	4 44	44
German.....	6 47	44

### DAIRY PRODUCE, ETC.

Cal. Fresh Roll, lb.....	25 27	27
Fancy Brands.....	25 27	27
Pickle Roll.....	22 24	27
Firkin.....	18 22	27
Western.....	12 24	15
New York.....	—	—

### CHEESE.

Cheese, Cal, lb.....	14 17	17
N. Y. State.....	—	—

### Cal. fresh, doz.....

Ducks.....	—	30
Oregon.....	—	30
Eastern, by expts.....	27 30	30
Pickled here.....	—	30
Utah.....	30 32	30

### FEED.

Barley, ton.....	15 00	17 00
Corn Meal.....	22 50	23 50
Hay.....	8 00	13 00
Middlings.....	—	22 00
Oil Cake Meal.....	34 00	—
Straw, bale.....	40 00	—

### FLOUR.

Extra, City Mills.....	12 62	62
do, Country Mills.....	5 75	62
do, Oregon.....	5 25	62
do, Walla Walla.....	5 75	62
Superfine.....	3 50	62

### FRESH MEAT.

Beef, 1st qual, lb.....	6 7	7
Second.....	4 42	5 1
Third.....	3 42	4
Mutton.....	4 42	5
Spring Lamb.....	6 7	7
Pork, undressed.....	3 32	32
Dressed.....	5 54	54
Veal.....	5 54	54

### MILK CALVES.

Milk Calves.....	6 62	62
do, chob.....	6 62	62

### GRAIN, ETC.

Barley, feed, cbl.....	70 82	82
do, Brewing.....	85 00	82
Chevieler.....	1 50	75
do, Coast.....	1 00	20
Buckwheat.....	—	21 30
Corn, White.....	90 32	32
Yellow.....	92 32	32
Small Round.....	92 32	32
Oats.....	1 00	35
Milling.....	—	21 50
Rye.....	1 10	25
Wheat, No. 1.....	2 00	22 05
do, No. 2.....	1 92	21 97
do, No. 3.....	1 70	21 75
Choice Milling.....	2 05	22 07

### HIDES.

Hides, dry.....	20 20	20
Wet salted.....	9 10	10

### HONEY, ETC.

Beeswax, lb.....	22 24	25
Honey in comb.....	18 20	20
do, No. 2.....	12 17	17
Dark.....	10 12	12
Extract.....	10 12	12

### HOPS.

Oregon.....	35 40	40
California, new.....	35 40	40
Wash. Ter.....	32 35	35
Old Hops.....	—	15

### NUTS.—Jobbing.

Walnut, Cal.....	12 14	14
do, Chile.....	12 14	14
Almonds, hd sbl.....	8 10	10
Soft sh.....	17 20	20
Brazil.....	15 16	16
Chestnuts, Italian.....	25 32	32
Pecans.....	16 17	17
Peanuts.....	8 9	9

### WHEAT, ETC.

Crude, lb.....	5 6	6
Refined.....	7 7	7

### WOOL, ETC.

San Joaquin and S. Coast.....	—	—
Burry.....	13 15	15
Free (dusty).....	14 16	16
Free (choice).....	16 18	18

### FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., December 17, 1879.

### FRUIT MARKET.

Citrons, Cal., 100— — @— —	Pears, sliced....	5 @ 6
Cocoanuts, 100.. 4 00 @ 5 00	do, peeled...	9 @ 11
Crab Apples..... — — @— —	Plums.....	3 @ 4



## Agricultural Articles.

## The Famous "Enterprise."

PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.



These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babitted boxes. Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

**HORTON & KENNEDY,**

GENERAL OFFICE AND SUPPLIES, LIVERMORE,  
ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE  
& CO., 401 Market Street.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knobs without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

**MATTESON & WILLIAMSON,**  
STOCKTON, CAL.

## The Boss Pruner.

Patented Jan. 8, 1878.

## ENTIRELY NEW!

Works on a cog principle. Smallest size cuts one inch, and largest size two inches in diameter. Has been thoroughly tested, and gives perfect satisfaction. Sold by

**GEORGE LARKIN,**  
Newcastle, Placer County, Cal.

**ARITHMETIC MADE EASY  
BY ROPP'S  
EASY CALCULATOR.**

This valuable work is used by thousands of farmers, mechanics and business men, and is highly recommended for its practical utility and convenience.

It embodies an entirely new system of calculation, by which a vast amount of figures and mental labor—required by the ordinary methods—and fractions with their complexities, are absolutely avoided.

It is so simple and easily comprehended that even the most illiterate is enabled, in a few minutes, to reckon with absolute accuracy and speed; while its original and rapid methods, benefit and delight the most scholarly.

It shows at a glance the accurate value of wheat, corn, rye, oats, barley, cattle, hogs, hay, coal, lumber and merchandise, from one pound to a car load, and for any price the market is likely to reach.

It gives the interest, simple and compound, on any sum, or any time, at six, seven, eight, and ten per cent.; the exact measurement of boards, scantlings, timbers, saw logs, cisterns, tanks, wells, granaries, bins, wagon beds, corn cribs, etc., the wages at various rates, for hours, days, weeks and months; besides numerous other important methods, rules and tables.

It is printed on fine tinted paper, is well and elegantly bound in pocket-book shape, and accompanied by a silicate slate, pocket for papers, and memorandum, which can be replenished in the two latter styles.

It answers the purpose of a pocket book and diary, and costs no more, although it was gotten up at great expense and labor, and is unquestionably one of the most useful publications ever issued from the press.

Price, bound in Fine English Cloth, \$1.00.

Sent direct from the Eastern publisher, postpaid, on receipt of price, by P. O. order, registered letter or receipted by express. Address

**DEWEY & CO., San Francisco.**

**DO**

NOT FAIL to send for our NEW PRICE LIST. More complete than ever. Contains descriptions of every thing required for personal or family use, with over 1000 illustrations. Send nine cents for it. (Stamps will do.) We sell all goods at wholesale prices in quantities to suit the purchaser. The only Institution in America who make this their special business. Address,  
**MONTGOMERY WARD & CO.,**  
227 & 229 Wabash Ave., Chicago, Ills.

**JOHN ROGERS & SONS,**

**GENERAL STOCK AND SALE YARD,**

Corner Market and 9th Sts., San Francisco.

HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN. Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

## SUB-IRRIGATION.

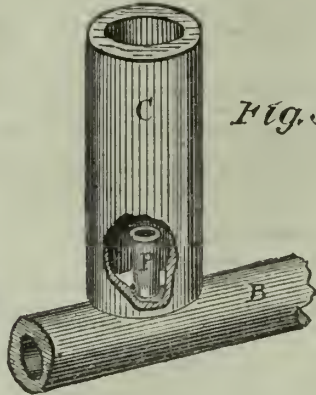


Fig. 3.

Fig. 4.

—FOR—

**Orchards, Vineyards, Small Fruits, Alfalfa,  
Lawns, Vegetables, Etc.**

The Asbestine System consists in conducting the water in concrete pipes laid below reach of the plow.

It saves from three-fourths to nine-tenths the water used in surface irrigation.

It is under perfect control, and can be applied wherever irrigation is needed.

The surface remaining dry there is no need of Summer Cultivation, either before or after irrigating.

The soil is never excessively wet and cannot bake, but remains moist, loose and at a nearly uniform temperature, promoting a long-continued Summer's growth.

Anything which the soil lacks as plant food (manure, lime, etc.,) can be easily, directly and economically applied in liquid form; the pest of the vineyard—phylloxera—can thus be easily reached.

No grading is necessary, as the system works perfectly on hillsides and undulating land.

Roots cannot get into the pipe, neither can it suck mud—difficulties never overcome by any other system of sub-irrigation.

The pipe is made continuously with a recently patented machine which makes and lays it in the trench, following all the undulations and curves.

Water is not kept in the pipes; but is applied about twice a month.

Three men will easily lay 1,200 feet of two-inch pipe in 10 hours.

This system and machines used are fully protected by U. S. Patents.

Our pipe machine makes the cheapest and best tile drain known. Nothing can compare with it in cheapness and durability.

For further information, circulars, etc., address

**Asbestine Sub-Irrigation Co.,**

**Los Angeles, Cal.**

**Nathaniel Curry & Bro.,**

**113 Sansome Street, San Francisco,**



Sole Agents for the

**Sharps Rifle Co., of Bridgeport, Conn.**

FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO.

Also Agents for W. W. GREENER'S Celebrated Wedgelastr, Chokebore, Breech-loading DOUBLE GUNS; and all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America. AMMUNITION of all kinds in quantities to suit.

**Improved Short Nose, Dish-Faced Berkshires.**

A portion of my stock were purchased at great expense of

**H. M. Queen Victoria,**

Having been BRED and RAISED at the Prince Consort's Show Farm, Windsor, England. "The Improved Berkshire is a natural grass hog; is the most prolific and most docile of any breed."

My Berkshires are recorded in the American Berkshire Record—the authority for the United States on thoroughbred Berkshires. Also,

**MAGIE POLAND-CHINA PIGS,**

Bred from Stock imported direct from the MAGIE COMPANY. All animals sold are guaranteed as represented. Crating or boxing, and lead for shipping, FREE. Prices for Pigs, very low. I mean that every animal sold shall be a standing advertisement for my stock. Orders solicited, and satisfaction guaranteed.

**THOROUGHbred POULTRY—all of the Leading Varieties.**

**WILLIAM NILES, Importer and Breeder,**  
**LOS ANGELES, CAL.**

**WELLS, RICHARDSON & CO'S  
PERFECTED**

**BUTTER COLOR**

Gives Butter the gilt-edge color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. **WELLS, RICHARDSON & CO.,** Proprietors, Burlington, Vt.

OBTAINED IN U. S. AND FOREIGN COUNTRIES; copyrights registered through DEWEY & CO.'S MINING AND SCIENTIFIC PRESS Patent Agency, San Francisco. Send for free circular.

Patents

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. **STEVENS, BROS.,** Northford, Conn.

60 Elegant Perfumed Cards, Chromo, Motto, Lily, Etc., 15c. Gift with each pack. **H. M. SMITH,** Clintonville, Ct.

## PHOSPHATE SOAP



THE BEST soap for toilet use ever manufactured. BEST because it contains all the excellencies of the most expensive foreign or American soaps without their defects. BEST because it combines strength with delicacy in such a way that its strong detergent qualities do not injure the skin. BEST because it is the result of years of study and experiment in the soap manufacturing business, assisted by modern chemical discoveries. BEST because it contains ingredients beneficial to the skin, which unite chemically with the soap in such a manner as to increase its saponaceous qualities. Every chemist familiar with soap manufacture knows that some ingredients which are in themselves beneficial to the skin cannot be saponified; some are partially neutralized, while others injure the quality of the soap. There are soaps in the market which are to some extent beneficial to the skin, but they are inferior articles for toilet use. PHOSPHATE SOAP is the ONLY article offered to the public which combines all the best elements of toilet soap with medical ingredients beneficial to the skin.

If you wish to make your hands soft buy a cake of PHOSPHATE SOAP, and when that is gone you will buy a dozen and recommend your friends to do the same.

Ladies who wish to make the skin look beautiful and natural should use PHOSPHATE SOAP.

For chapped hands the constant use of PHOSPHATE SOAP will be recommended by all who give it one fair trial.

## TESTIMONIALS.

SAN JOSE, September 24, 1879.

To the Standard Soap Co.—Gentlemen:

It affords me pleasure to say to the public that I have used and prescribed your PHOSPHATE SOAP as a remedy in various forms of cutaneous diseases with the happiest results. I am of the opinion that it is the mildest and most perfect detergent that can be used, either for cleansing the skin and leaving it soft and healthy, or for removing the fetor and corroding influences of sores and ulcerations. I should be sorry to be without it in shaving my face or making my toilet, to say nothing of my good opinion of its remedial qualities.

**A. J. SPENCER, M. D.**  
SAN FRANCISCO, Aug 27, 1879.

Gentlemen:

I received a package of your soap (Phosphate Soap) and it gives me great pleasure to testify as to its superior excellence. As a toilet soap I have never seen anything to surpass it. It also possesses superior remedial qualities. I have used it in two cases of obstinate skin disease, one of intolerable itching, Pruritus, the other an Eczema. In both great relief was obtained. Its emollient properties are remarkable. Respectfully,

**W. A. DOUGLASS, M. D.,**  
126 O'Farrell St.

To the Standard Soap Company.

SAN FRANCISCO, July 19, 1879.

Standard Soap Co.—Gents:

I have tried your PHOSPHATE SOAP, and have no hesitation in saying that it is the best toilet soap I ever used. My wife has used it and is of the same opinion. I have paid as high as fifty cents per cake for an article in every respect inferior to what you sell for twenty-five cents. **HENRY H. LYNCH,**  
515 Haight street.

The genuine merits of PHOSPHATE SOAP and persistent advertising will force every druggist, groceryman and general dealer to order it by the gross sooner or later. Ask for it in every store. The retail price is 25 cents per cake. We wish to sell it only at wholesale, but in case you cannot find it we will send a nice box of three cakes by mail, postage paid, on receipt of 85 cents in stamps.

Address **STANDARD SOAP CO.,**  
204 Sacramento St., San Francisco



# LATEST WINCHESTER REPEATER.

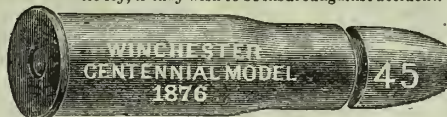
MODEL 1879—TARGET RIFLE—45 CALIBRE. 60 GRAINS POWDER.



With Pistol Grip, Vernier and Wind Gauge Sights.

Uses Central Fire Cartridges (straight shell) 45 calibre, 60 grains powder, 300 grains lead. This splendid Gun is perfection as a Sporting Rifle, for defense or as a target Rifle.

**CAUTION!** The W. R. Arms Co. manufacture Cartridges for their own arms, and persons are hereby cautioned against using those made by any other Cartridge Companies who have no interest in such arms or their efficiency, if they wish to be insured against accident.



The SAN FRANCISCO AGENCY is now fully supplied with this splendid Arm—Standard blued or extra finish—set or plain Trigger. Also with the

## New Winchester Express Rifle,

50 Calibre, straight Cartridge, 95 grs. powder, 330 grs. lead. Also the

## NEW HOTCHKISS REPEATER,

Just out, using the U. S. Government Cartridge, 45 calibre, 70 grains powder. Both Sporting and Military styles of this fine Arm are ready for delivery to the trade. Also a large and complete stock constantly on hand of Models, 1866, 1873 and 1876, as well as all other kinds of goods manufactured by the Winchester Repeating Arms Co., viz.:

## CARTRIDGES,

Both RIM and CENTRAL FIRE, by the million, for all kinds of Rifles and Pistols.

Brass and Paper Shot Gun Shells, Primed Cartridge Shells, Reloading Tools, Primers, Percussion Caps and Gun Wads.

**JOHN SKINKER, 115 Pine St., S. F.,**

[Sole Agent for the Pacific Coast.

## HOLIDAY MUSIC!

**Six Christmas Carols.** 25 Cts. New. By H. N. BARTLETT. Also many other fine Carols. Send for lists.

**Christmas Gifts.** Nothing is better than an elegant volume of Bound Sheet Music, such as GEMS OF ENGLISH SONG, CLUSTER OF GEMS, SUNSHINE OF SONG, or one of the 30 others of similar style, costing from \$3 to \$4 each, and including each from 100 to 200 popular Songs or Pieces.

**Christmas Gift.** Nothing is better than a Band or Orchestra Instrument, a music box (large or small), a drum, or any Toy Instrument. Full stock. Send for lists.

Organists will do well to present themselves with DITSON & CO.'S ORGAN SELECTIONS (\$1.50), containing 52 pieces by the best composers. May be used as Voluntaries.

The sweet Sunday School Song Book, WHITE ROBES, (30 cts.) will be a most acceptable present for a Sunday School.

The bright Temperance Song Book, TEMPERANCE JEWELS (30 cts.), just out, will give new interest to Lodge and Reform meetings.

Any book mailed for retail price.

**OLIVER DITSON & CO., BOSTON.**

C. H. Ditson &amp; Co., 843 Broadway, N. Y.

P. JONES.

J. THOMPSON.

**JONES & THOMPSON,**

Wholesale and Retail Dealers in

## Hay, Grain and Feed.

Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,

1535 Mission St., San Francisco.

M. COOKE.

R. J. COOKE

## PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order, AND IN SHOOKS.

Communications Promptly Attended to.

COOKE &amp; SONS, Successors to COOK &amp; GREGORY.

## PLEASANT SUMMER READING.

### THE NEW PENELOPE

— AND —

## Stories of California Life.

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. Agents wanted for this popular work. Easy sales and large commissions. Address

MRS. F. F. VICTOR,

721 Market St., S. F., Bancroft's Building, top floor.

PRICE, \$2 00.

## MONEY TO LOAN

AT LOWEST RATES

On Country Real Estate and Grain in Warehouse.

McAFEE BROTHERS.

202 Sansome Street, San Francisco.

## A Card to Grangers and Farmers.

HAY, GRAIN, HORSES and CATTLE.

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nos. 11 and 13 Bluxome St., San Francisco.

TRADE



MARK.

## LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price reduced to \$1.60 per gallon. For directions and testimonials apply to FALKNER, BELL & CO., Sole Agents, 430 California Street, S. F.

## SEND FOR THE

\$1.50

## Homœopathic Medicine Case.

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address BOERICKE & TAFEL, Homœopathic Pharmacy, San Francisco.

## Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.

## MONEY | FOOD For Farmers. For Hogs. CHEAP PORK. The Brazilian Artichoke.

Is the cheapest and best food for Hogs, being ahead of anything in existence for that purpose. 600 to 1,000 bushels to the acre. Little trouble. No harvesting. No feeding. The Hogs will help themselves if allowed to do so.

I have eight acres of Artichokes this year, and will furnish seed for half the price of last year, when my seed cost me 25 cents a pound.

PRICE—I will send by Express or common freight, 50 to 300 lbs. at 31 cents a pound. Over 300 lbs., 3 cts.; 1,000 lbs. and over, 24 cts.; 3 lbs. by mail for \$1. I will send a circular with each package giving all information. Send all money in draft on San Francisco or P. O. Order on Hollister Post-office.

Winter is the best time to ship Artichokes. Frost does not hurt them.

150 lbs. plants an acre. For further information send for circular. Address

J. H. F. GOFF,

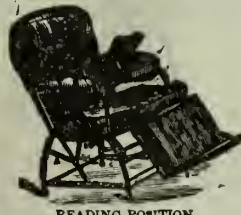
San Felipe, Santa Clara County, Cal.

## THE WILSON ADJUSTABLE CHAIR,

With 30 Changes of Position.

Patented in the United States and Foreign Countries. BEST CHAIR IN THE WORLD.

Parlor, Combining  
(LIBRARY, Beauty,  
Invalid Chair, Lightness,  
Rocker, Strength,  
BED or Simplicity  
LOUNGE, and  
READING POSITION, Comfort.

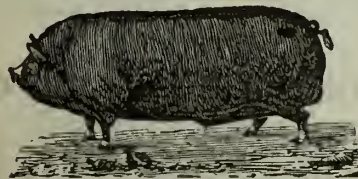


Same Chair in Cane Seating, very desirable for summer. Manufactured of the best of wrought iron and rivets. Castors made purposely for the Chair. Everything to an exact science. IT WILL LAST A LIFE-TIME.

Has been awarded Medals, Prizes and Diplomas for its superiority and merit wherever it has been exhibited. Orders by mail promptly attended to. Goods shipped to any address, C. O. D. Send for Illustrated Circular.

Address the WILSON ADJUSTABLE CHAIR M'fg Co., 535 Washington St., Boston

## BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

18th and A Streets, Sacramento City, Cal.

## CARP FISH FOR SALE

— BY —

LEVI DAVIS,

At Forestville, Sonoma County, California.

IN LOTS TO SUIT.

## The New Beekeepers' Text Book.

By N. H. and H. A. KING. The latest work on the Apiculture, embodying accounts of all the newest methods and appliances. Fully illustrated. Sent by mail, post-paid, for \$1. DEWEY & CO., 202 Sansome Street, S. F.

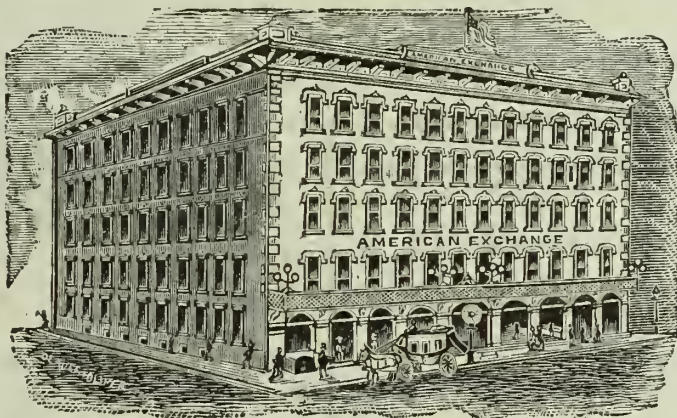
## The American Exchange Hotel,

SAN FRANCISCO, CAL.,

Is situated on Sansome street, next adjoining Bank of California, and is in the very center of the great city.

Sansome Street is one of the finest and principal business streets in S. F.

The Hotel is situated within two blocks of the U. Land Office and U. S. Surveyor General's Office; also within



two blocks of the City Hall, Supreme Court and all the District Courts; within two blocks of the Postoffice and Custom House. All places of amusement are convenient to the Hotel. Street cars for all parts of the city pass the Hotel every minute.

## THE AMERICAN EXCHANGE HOTEL

Having been recently renovated and refurnished throughout is in every respect the BEST FAMILY HOTEL San Francisco. It has Two Hundred Rooms, well ventilated and neatly furnished, and being easy of access, fire-proof and sunny is decidedly the Hotel for comfort and convenience for the traveling public.

— OFFICE OF THE —

## BLACK POINT PACKING AND SLAUGHTER HOUSE.

MERRY, FAULL &amp; CO., Proprietors.

## TO OWNERS OF LIVE STOCK!

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

## SQUARE DEAL and FULL MARKET PRICES

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices. Please address our

Principal Office, No. 125 &amp; 127 California Street, San Francisco.

In consequence of spurious imitations of

## LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature thus,

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS &amp; CO., San Francisco.



## Commission Merchants.

CHAS. RYHNER,  
(Member of the S. F. Produce Exchange.)  
**GENERAL COMMISSION MERCHANT.**  
— Dealer in —  
FLOUR, GRAIN, FEED AND PRODUCE.  
216 Davis Street,  
between Clay and Commercial, - - SAN FRANCISCO.  
Consignment of all kinds of Produce solicited.

DAVIS & SUTTON,  
No. 75 Warren Street, New York.  
Commission Merchants in Cal. Produce  
REFERENCE.—Traders' National Bank, N. Y.; Ell  
wanger & Barry, Rochester, N. Y.; C. W. Reed; Sacra  
mento, Cal.; A. Lusk & Co., San Francisco, Cal.

CHARLES NAUMAN. FRANK NAUMAN.  
G. & F. NAUMAN & CO.,  
Wholesale Commission Merchants  
— AND DEALERS IN —  
GRAIN, POTATOES, FRUIT, BUTTER, POULTRY,  
EGGS, GAME, ETC.  
227 & 229 Washington St., San Francisco.  
Consignments Solicited.

OAKLAND POULTRY YARDS,  
Cor. Sixteenth and Castro Streets, Oakland.



Constantly on hand and for sale, choice specimens of the  
following varieties of Fowls:

Dark and Light Brahmas, Buff, White and  
Partridge Cochins, White and Brown  
Leghorns, Dorkings, Polish,  
Hamburgs, Plymouth Rocks, Game  
and Sebright Bantams, Bronze Turkeys,  
Pekin, Aylesbury and Rouen Ducks.

Safe arrival of Fowls and Eggs Guaranteed.

Satisfaction Guaranteed.

For further information send stamp for Illustrated  
Circular, to  
GEO. B. BAYLEY,  
P. O. Box 1771, San Francisco, Cal.

## Rare Opportunity

— FOR A —

## COLONY

— OR —

## Farming Enterprise!

A tract of land, comprising 20,000 acres, lying in Town-  
ship 16, south, range 19 and 20 east, in

## FRESNO COUNTY,

is offered in whole or in part, as a very desirable location for  
a Colony or extensive farming enterprise.  
This land is in the immediate vicinity of several Colon-  
ies, which are already in successful progress.  
Work for bringing water upon the land has already  
been commenced, and the land is so situated that it can  
be irrigated at very little outlay. It is also convenient for  
Railroad transportation.

Terms Reasonable.

For further particulars inquire of FRANKLIN D.  
COTTELL, No. 932 Howard Street, San Francisco, or of  
COTTELL & LUCE on the premises, or at Fresno  
City, Cal.

100,000

## AUSTRALIAN GUM TREES.

First-Class Plants.

Six to 12 inches high, transplanted into boxes, in good  
condition for transportation. Price, \$6 to \$12 per 1,000.

JAS. T. STRATTON, Agent,

Corner 12th Street and 9th Avenue,  
Brooklyn, Alameda Co., Cal.

## WANTED!

To exchange 4,000 or 5,000 well-grown Orange Trees,  
from four to six feet high, for land in the Thermal belt  
of the Sierras, or of Yolo or Solano counties. Land must  
be easy of irrigation and accessible to market.

Address DR. E. KIMBALL,  
Haywards, Alameda County, Cal.

B. KOHLER,

Florist and Nurseryman,

St. Helena, Napa Co., Cal.

Will send Grape Cuttings of the principal varieties grown  
in St. Helena District, Napa Valley, to any part of the  
United States at Moderate Charges.

Correspondence on Viniculture invited.

**WELL AUGER.** Ours is guaranteed to be the  
cheapest and best in the  
world. Also nothing can beat our SAWING MA-  
CHINE. It saws off a 2-foot log in 2 minutes.  
Pictorial books free. W. GILES, Chicago, Ill.

## Geo. F. Silvester,

IMPORTER, WHOLESALE AND RETAIL DEALER IN

## SEEDS,

Fruit and Evergreen Trees, Plants, Etc

ALFALFA, GRASS AND CLOVER SEEDS

In large Quantities and offered in Lots to suit Purchasers.

GREAT REDUCTION IN PRICES.

Seed Warehouse, 317 Washington Street, San Francisco.

## J. Hutchison's Nurseries,



OAKLAND, CAL.

Established in 1852.

An immense stock of NEW and RARE PLANTS, Ever-  
green Trees and Ornamental Shrubbery.

## CYPRESS FOR HEDGES,

One to three years old.

Roses. Fuchias, Pinks. Magnolias,  
Camelias, Daphnes. Etc., Etc.,

In endless variety, at

**BEDROCK PRICES!!**

SEEDS and BULBS of all kinds. Send for Catalogue.

## Santa Clara Valley Nursery,

B. S. FOX, Proprietor.

I offer for sale this season a large general assortment of  
Nursery stock,

FRUIT TREES. SMALL FRUITS,

Shade and Ornamental Trees

— AND —

PLANTS, ROSES, ETC.

Apple and Pear Seedlings

AT REDUCED PRICES.

Also the MYROBOLAN PLUM STOCK, which does  
not sucker.

To parties buying largely I offer Special Inducements.  
Address B. S. FOX, San Jose, Cal.

THOS. MEHERIN, Agent,  
516 Battery St., San Francisco.

## WANTED!

Agents to sell the most interesting Illustrated book in  
the market. All about the North Pole. Large discount  
and quick sales. Address

CHAS. A. REED,  
Santa Barbara, Cal.

JAMES HANNAY'S NURSERY,  
SAN JOSE, CAL.

I offer for sale at low prices a well assorted stock of  
one-year-old

Apple, Pear and Cherry Trees.

Also, a large stock of Apricot, Peach, Pear, Cherry and  
Plum, in the dormant bud, for \$60 per 1,000. Address  
JAMES HANNAY, San Jose, Cal.

## Putah Creek Poultry Yard.

Plymouth Rocks and Brown Leghorns, bred from the  
best imported strains, offered cheap for the next six  
weeks to reduce stock.

MANMOTH BRONZE TURKEYS, the best in the State,  
all last spring's hatch, bred from the finest imported  
stock, offered for sale cheap. For price list address

MRS. L. E. McMAHON,  
Dixon, Solano Co., Cal.

## Comb Foundation.

Any size sheets and any quantity, 40 cents per pound.  
Feeders, 50 cents each.

Sample Simplicity Hive, \$3 00. Address

RUFUS MORGAN,

Bernardo, San Diego Co., Cal.

## Acknowledgement and Thanks

LAKEPORT, Lake Co., Cal., Nov. 2d, 1878.  
MESSRS. DREW & Co.—Gentlemen:—I hereby acknowl-  
edge receipt of patent, for which please accept my sin-  
cere thanks. When I have any further business in this  
line I shall certainly employ you. With kind regards, I  
am, Yours very truly, CHAS. SLATTERBECK.

1879-80.

## W. R. STRONG &amp; CO.,

Field, Garden, Lawn and Tree

## SEEDS.

Our stock is FULL, FRESH and RELIABLE. In these  
essential particulars we claim to be unsurpassed. We  
have largely increased our list of varieties by importations  
from the best growers in the East and Europe. We make  
specialties of

ALFALFA, RED CLOVER,  
Timothy, Red Top, Kentucky Blue Grass,  
HUNGARIAN GRASS, MILLET,

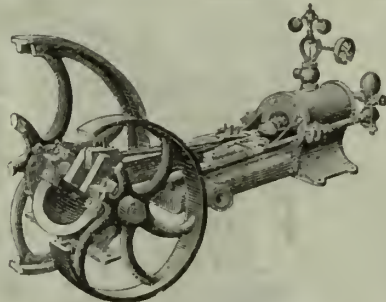
Mesquit Grass, Lawn Grasses, Etc.

Also, DUTCH FLOWERING BULBS of every descrip-  
tion. Catalogue mailed free on application. We also do a

## Wholesale Commission Business,

Handling all kinds of California and Tropical, Green and  
Dried Fruits, Nuts, Honey and General Merchandise.  
All orders promptly attended to. Address

W. R. STRONG & CO.,  
6, 8 and 10 J Street, Sacramento, Cal.



## TATUM &amp; BOWEN,

Sole Agents for the following Machinery, which is entirely  
different from any other:

Stearns Mfg Co's Pacific Saw Mill Machinery,  
BALL PATENT VALVE,

Saw Mill, Automatic and

Corliss Engines and Boilers,  
RHOE & CO'S PRINTING MACHINES, and  
CHISEL TOOTH SAWS.

## COOLEY CREAMER.



Supersedes large and small  
pans for setting milk.

It requires no milk  
room. It requires capac-  
ity for one milking only.

Impure air, dust or flies  
cannot reach milk set  
in it.

It makes more butter,  
because it raises all of the  
cream, and the quantity is  
never lessened by unfavor-  
able weather.

It makes better Butter. It requires less labor. It is  
cheaper. Butter made by this process took the Highest  
Award at the INTERNATIONAL DAIRY FAIR, held in New  
York, December, 1878, and at the Royal Agricultural Ex-  
hibition, held in London, June, 1879, and brings the high-  
est price in all the great markets.

Send stamp for the DAIRYMAN to

VERMONT FARM MACHINE CO.,  
Bellows Falls, Vermont.

## A NEW VARIETY!

Examined and endorsed by Agricultural Department at  
Washington.

A Large and Luscious

## HYBRID TOMATO.

Superior to all other Species, taste and flavor assimila-  
ting orchard fruit.

This species of Tomato, the Yellow Large and Red  
Medium, each equally delicious in flavor, may be pro-  
duced in packages of about 50 seeds, and will be sent to  
any address on receipt of 25 cents.

Address SEVERIN MILLER,  
P. O. Box 394, Davenport, Iowa.

## STOCKTON

Telegraph Institute  
and  
NORMAL SCHOOL.

Open day and evening for  
both sexes. Expenses less  
than one-half the usual  
rates. Excellent board in  
private families from \$8 to \$10 per month. Ad-  
dress, for College Journal and Circulars,  
F. R. CLARKE, Principal, Stockton, Cal.

Baling  
Fencing  
Telegraph  
Telephone  
Galvanized

## WIRE

## Barbed Fence Wire.

All kinds of Wire—iron, steel,  
Bessemer, spring, copper, brass  
and galvanized—on hand  
or Made to Order.

Note the  
Trademark.



## A. S. HALLIDIE

Wire Mills.

Office, No. 6 California St.  
SAN FRANCISCO.

## WIRE ROPE and CORDAGE

Of every kind on hand or Made to Order.

## R. J. TRUMBULL &amp; CO.,

SUCCESSORS TO

R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail  
Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND  
ORNAMENTAL TREES, ETC. FANCY WIRE  
DESIGNS, GARDEN TRELLISES, SYN-  
INGES, GARDEN HARDWARE.

Comprising the Most Complete Stock  
EVER OFFERED ON THE PACIFIC COAST.  
Prices Unusually Low.

\*"Guide to the Vegetable and Flower Garden  
will be sent FREE to ALL CUSTOMERS. It contains in-  
structions on the culture of Fruit, Nut, and Ornamental  
Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL & CO.,  
419 and 421 Sansome Street, S. F.

## THOROUGHbred POULTRY.

SAFE	UNLIMITED
ARRIVAL	RANGE
OF	
POULTRY	Healthy Stock
AND	116 ACRES
EGGS	Devoted to the
Guaranteed.	Business.

LANGSHANS. I now breed this justly celebrated  
Fowl. Send 3c. stamp for price list and circular describ-  
ing the different breeds I keep. Incubators.

M. EYRE, Napa, Cal.

Pamphlet on Breeding, Hatching, Diseases, etc.,  
adapted especially to Pacific Coast, sent for 15c.

## CHEAPER YET!

## Tension Sewing Machines!

A large number of nearly new genuine SINGER,  
WHEELER & WILSON, HOWE, WOOD, WILSON,  
GROVER & BAKER, DOMESTIC, etc., will be sold very  
cheap, many as low as \$10. These Machines were taken  
in exchange from families for the "AUTOMATIC" or

## NO TENSION MACHINE.

Wilcox & Gibbs' S. M. Co.,

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.

## PRINGLE'S

New Hybrid Wheats,  
Champlain and Defiance.

Heads 6 in. long—128 bushels to the acre.

Illustrated circulars showing different methods of cul-  
tivation by which this and other wonderful yields were  
produced, mailed to all applicants. Price of each variety,  
\$2.00 per peck, \$7.00 per bushel. Bags containing two  
bushels, \$13 00. Prices for larger quantities on applica-  
tion. Trial packages by mail, 1 lb., 40 cts.; 3 lbs., \$1.00.

B. K. BLISS & SONS,  
P. O. Box 4129,  
34 Barclay St., N. Y.

This paper is printed with Ink furnished by  
Chas. Eneu Johnson & Co., 609 South 10th  
St., Philadelphia & 59 Gold St., N. Y. Agent  
for Pacific Coast—Joseph H. Dorety, 120  
Sutter St., S. F.





Volume XVIII.]

SAN FRANCISCO, SATURDAY, DECEMBER 27, 1879.

Number 26.

### The Flight of Time.

We are quite sure that "winged moments" is a term sanctioned by some one of the old head-lights of literature. "Time flies" is certainly as hoary as the classics, and to fly certainly implies the presence of wings. At all events, whether there is the sanction of antiquity for it or not, we have decided for the once to rule out the naked baby element from our symbolry of the New Year's coming, and choose the pretty group which appears upon this page to express the exclamations and the interrogations, and the feelings of wonder and unsatisfied longings after the unknowable, which come to all of us as we are brought to the birthday of a new

our acts that the trust implanted in us is not abused; is there a better precept for our guidance in life's affairs?

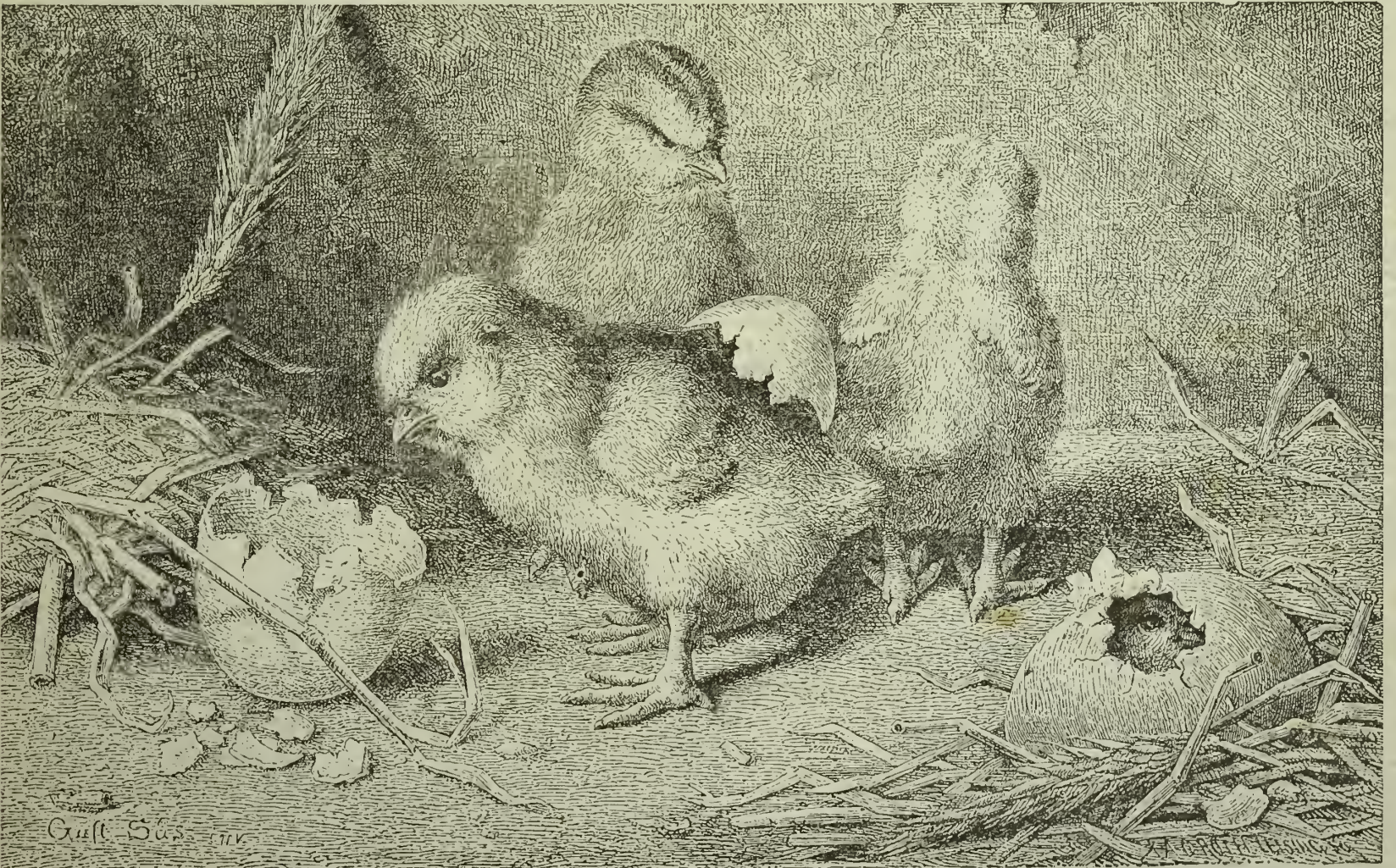
But suppose we have not thus ruled our lives, is the error final? Perhaps not; there is another chick still in the shell and his exit will be speedy. Herein is the opportunity. Let those who have strayed far from their own standards, or from what in their better natures they know to be a better standard than they have carried, take the true position with the opening of the year. Let each strive to live closer to the line of duty, the effort will be salutary although the approach be not so near as one could wish.

We trust the New Year may prove a happy one to all our readers; that their resources, moral, mental and material, may all increase with the advance of the months, and that a feeling of new joy may suffuse all hearts and

### The Zante Currant Industry.

We have seen fine samples of Zante currants produced in this State, notably those of W. B. West, of Stockton. The currant industry does, not, however, keep pace with the progress of its twin sister, the raisin interest. There may be several reasons for this, one of which is the fact that many of those who have introduced the Corinth grape have found them bearing seeds, which is not for the welfare of the currant. This in California, as in Australia, has been held to be owing to the influence of the situation and climate upon the habits of the vine, but whether this is to be accepted as a finality in the matter, is, we believe, not yet determined.

import duty 21,117 drachmes; together, a total of 453,464 drachmes. From the other ports of the kingdom the following quantities had been shipped up to the above-named date. From the city of Zante, 830,292 pounds; from the province of the same name, 3,088,584 pounds; from Cephalonia, 4,984,553 pounds; from Catacolo, 7,223,461 pounds; and from Egis, 12,505,107 pounds; together, 28,631,997 pounds, which, with the Patras contingent of 32,488,260 pounds, gives a grand total of 61,120,257 pounds. The probable production of the present year is estimated at 185,000,000 pounds, which, with a stock in hand of 30,000,000 from last season's crop, gives a total of 215,000,000 pounds available for disposal. Taking the average annual consumption as 150,000,000 pounds, there remains available for distribution a surplus of about 65,000,000 pounds, most of which may



### NEW YEAR'S REFLECTIONS—WHENCE CAME I? WHY AM I HERE? WHITHER SHALL I GO?

year. The picture has lessons which must be regarded as wholesome. Inquiries as to our origin and our destiny, the highest themes which can occupy the mind of man, should certainly claim our most earnest thoughts, but to pass all our days in vain imaginings is certainly in itself a perversion of our being. Let the chicks then teach us this lesson. The little fledgling which is peering into its shell may symbolize the proper thought concerning whence we came. The little one above, evidently in a brown study, typifies the other query—what are we here for? The third, plainly having his mind made up on these points, now turns his back upon perplexities, and in full confidence that he is created for some wise purpose, sets out at once to catch his first breakfast as the starting point in an honorable career. If all of us would exhibit in our lives the straightforward purpose which these tiny birdlings manifest, the world would be the better for it. Think earnestly upon origin and noble design in our lives, and then proceed forthwith to show by

prosperity bring new light to all homes.

**A NEW WHEAT COUNTRY.**—The newest competitor in supplying wheat to England is the Province of Santa Fe, Argentine Republic. They have made their first considerable shipments this year, and the figures are as follows: 215,787 quarters, representing a sterling value, at 40s. per quarter, of £431,574. Flour—shipped direct to Europe and the Brazils, 8,900 sacks of 280 lbs. English; do. to Buenos Ayres and other riverine ports, 71,964 do. Total, 80,864 sacks, representing a sterling value, at 36s. per sack, of £153,641. The above figures show that the value of exports of bread-stuffs from the Province for eight months, is £585,215 sterling. This being the first year that Santa Fe growers have entered the market as exporters of cereals on any scale, they have no need to be discouraged at the result obtained.

AN official decree in France pardons 150 more Communists.

The subject is worthy of attention, and the experience of all who have introduced the Corinth grapes should be collected and published. We therefore invite correspondence upon this subject from all readers who have aught of facts to give.

The currant interest of Europe is large, and the purchase of the fruit by this country is considerable. Therefore, we cite the latest statistics in order that trade facts may incite productive interest. Our European exchanges state that the quantity of currants exported from Patras from the commencement of the season down to the end of the third week in September was 32,488,260 pounds, of which 28,440,121 pounds found their way to England, 3,480,410 pounds to America, 542,374 pounds to Marseilles, and 25,345 pounds to Trieste. The packing of this bulk was effected in 41,327 barrels and 263,296 boxes or cases. The treasury drew in the form of tax upon the land under currant crops 422,247 drachmes, and as

probably be held over until next season's crop is harvested.

This summary would seem to indicate that foreign production is ample if not excessive. Still the demand in this country might prove a field for some enterprise in spite of the amounts abroad. Certainly if a general crop can be turned out here as good as the experimental samples we have seen, it would not be long before the foreigners would be compelled to improve their product or eat it up at home.

**REPRESENTATIVE POUND** will introduce, at the earliest opportunity, a joint resolution proposing a Constitutional amendment making the Presidential term six years, with no second term, and the Congressional term three years.

**EDISON**, the wizard of Menlo Park, says he has perfected his electric light, and will give an exhibition of it on New Year's Eve. The new light is simply produced from a little prepared strip of paper.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents. — Eds.

### Observations in Kansas.

EDITORS PRESS:—After a sojourn of two months in Kansas, I essay to give the readers of the RURAL PRESS the result of my gleanings. I came here from California on account of ill health and other reasons needful to mention, but with the idea that California was the banner State of the Union; but the more I learn of Kansas, the stronger is my conviction that this State is very desirable for poor men to emigrate to. There are no monopolies of land, transportation, nor of labor. Land titles are secure. The negro exodus from the South into this State has not been burdensome; of the large number that have come, not a half dozen, except young children, but are self-supporting. Only yesterday, I heard a lady tell of stopping in Kansas City, opposite Wyandotte, where there are at least 2,000 of these refugees, and trying to get a little colored girl to adopt. She had the colored pastors of both African churches and a member of the Immigration Bureau to help her, but could not find a colored child in need of a good home; at least the parents will not let them go while they can support them.

The climate here in the summer is very much like the interior of California—very hot through the day, but with a pretty constant breeze that tempers the heat very decidedly. The winters are more severe and winds more constant and sharp than in California. Last winter the snow was six inches deep in December, but that was unusual for this State. In February, it began to be warm enough to do without fire (except for cooking) most days; in March they made gardens, but there was a late frost that cut off the fruit, and a scarcity of rain during the warm weather. This year the first snow came (one inch) on Thanksgiving day; till then we had fine weather, with occasional showers and not enough frost to kill the grass.

#### The Land in Eastern Kansas

Is a rolling prairie, with plenty of running streams and timber, mostly black walnut and cottonwood. The soil along the streams and in the valleys is a black, rich loam, and very productive. In very hot weather, in the absence of rain, it seems to bake on the surface and retain the moisture underneath, but the crops keep on growing bravely. This last summer there was no rain for 10 weeks, yet wheat did not yield but little less than an average crop. Potatoes suffered most of any crop.

Nice cold springs are abundant, and where it is necessary to dig or drive wells, they get good hard water at less than 30 feet on the low land. There seems also to be subterranean streams of good water in the earth. This fall, a man boring a well on high land, where he expected to have to dig from 60 to 90 feet to get a good well, at 30 feet the tools dropped six inches, and they could hear running water, and it proved to be a subterranean stream of good cold water.

There is a substratum of limestone all over this part of Kansas; it sometimes crops out on the surface. It quarries easily, and is much used for corals, fences, underpinnings for barns and for houses. It is so soft when first taken out that it can be planed with a jack plane, but grows hard by exposure to the air. It does not crumble, and can be used with safety in buildings four stories high.

#### There are Large Coal Beds

In the eastern part of the State. In the Flint hills the coal formation has been traced over 75 miles. The coal we burn here is dug along the line of the Atchison, Topeka & Santa Fe railroad. It is bituminous, but contains so much sulphur that it is not suitable for open grates and for broiling meat. It slacks after a few months' exposure to the air. It retails here from \$5 to \$6 per ton, and makes good fuel; but black walnut wood, at \$3 to \$4 per cord for stove wood, is plenty, and many prefer that to coal. The coal mines I saw along the railroad are worked on a very small scale, in comparison with the great coal works I saw in Pennsylvania at the anthracite coal mines. Here they raise the coal with a horse wheel, and the whole works cannot cost any great amount. What was in sight could not cost any more than the machinery of a brick yard, and none of the mines are of any great depth. One man told me he thought none were much over a hundred feet deep.

#### Corn, Cattle, Wheat, Etc.

Corn is easily raised here, but does not yield so largely as at Los Nietos and El Monte, in Los Angeles county, neither does the land cost only a quarter as much. This is a very fine country for stock and raising hogs. It pays here to raise hogs at \$1.80 per hundred. This year they have sold at this place from \$2.75 to \$3, at Kansas City \$3.40 to \$3.60. Wheat is mostly sown in the fall. Fultz, Clawson, Gold Drop, Big May, Little May, White Winter, Mediterranean, Red Sea, Walker and Lancaster, are among the varieties sown. The Oleson (the Black Sea wheat) is sown both as fall and spring wheat. The seed came originally from Russia. This is

#### A Natural Fruit Country.

Grapes grow readily, and I am told there is a good variety, but have not heard of any of the

foreign varieties so common in California. Poultry is very cheap and raised with very little trouble and expense compared with any other State I have lived in.

The western part of the State is not as good soil as the eastern, and is more subject to drought; but the face of the country throughout the State is much more pleasing than a large share of California. As yet I have not seen anything that looks so desolate as the alkali or hog-wallow lands of California, and from the abundance of running streams and timber there is a greater diversity of landscape.

There is scarcely any land subject to entry in this part of the State. Lands vary so much in price according to locality, that I can hardly say what is an average price per acre. The Atchison, Topeka & Santa Fe railroad is now built into New Mexico, and the intention is to continue it to the Pacific coast. It is mostly owned by Boston capitalists. Jay Gould owns four out of the seven railroads in Kansas, and will try to head off the A. T. & Santa Fe, but it is to be hoped there will be a competing road to the Pacific coast ere long. [The latest reports are that Jay Gould has been headed off himself. — Eds. Press.]

Some time during the winter I will endeavor to give an account of the Mennonites, a religious community of Russians, who own and till a large body of land in Kansas.

I hope the time will come when immigration of a different kind of people from the Chinese will be pouring into California, as is now into Kansas, that will be a blessing instead of a curse. Hoping for all good things for the future of California and my friends there, I bring to a close this long letter.

MRS. M. A. SHELDON,  
El Dorado, Butler Co., Kansas.

## THE DAIRY.

### Limburger.

EDITORS PRESS:—It is said and sung that a race by any other name smells as sweet. That rule also applies to Limburger cheese. The Spaniard esteems his national diet of tortillas and red pepper; the Italian clings to garlic, and both yearn for them on this distant coast. So with the German, who cherishes fragrant memories of *schweitzer kase*. We bring it from the father-land, and travel and age only ripen and flavor it. But Limburger *kase*! Ah! shall we who have partaken of lager beer and Limburger on the joyous occasion of a Schuetzen-fest ever forget it? *Nein!*

We make *smar kramt* and cheese in California; but they lack a something missed by the cultivated palate—that odor which is truly nameless. My friend M— imports Limburger *kase* in tin boxes all the way from his native hamlet in the Tyrol. It arrives with every sign of mature age, redolent of antediluvian smells and dense as cannon balls, or like specimens of unstratified rocks. He keeps it, for prudential reasons, in the little warehouse back of the store. There is no lock on the door, and the writer said:

"But, my friend, are you not afraid some one will carry off your goods?"

"Oh, nobody will steal my Limburger!"

Then he tenderly lifted the lid of a box. Ah! There was more than enough stuff to go around, while we both inhaled it and exclaimed, with one breath, "Oh, mine country!"

F. Kerbel & Bros. are making Limburger cheese at their dairy in the redwoods on Russian river. The enterprise deserves a chronicle; and it was the pleasant rumor above related that caused the writer to look after this undertaking in the interest of the PACIFIC RURAL PRESS. So we drove out there, 18 miles, to investigate the matter. Towards evening we descended the hills from Pocket canyon to the river, in view of Kerbel's ranch. Fording the stream where it was knee-deep, the horses took a long drink, while we looked down through the clear water at the sand and pebbles for undiscovered nuggets of gold, or shining agates, or stray gems, which might have been neglected. There was a large field of alfalfa on one hand, and a corn field full of huge stumps on the other. In front, on rising ground, are situated the farm buildings overlooking the valley. An amphitheater of hills, nearly surrounding the place, rises terraced above terrace to the Mount Jackson range, whose summit shows bare and brown with a faint blush of tender green since the rains. Lower down there are clusters of woods and lines of fences, indicating the encroaching settlement. The other side of the river is a dense forest, clothing the hills from base to summit. Many millions of lumber were taken off the ground hereabout, leaving the rich bottom littered with a vast accumulation of debris. The brothers, appreciating the value of the land, expended \$60 an acre in clearing it up and fencing.

It was evening when we arrived, and a purple haze of Indian summer shrouded the wooded canyon. The sun's setting rays shone through rifts in the tree tops, like the spokes of a great wheel, radiating in yellow bars across the smoke

of the valley, and flamed on the opposite peaks, where they toyed a minute at gilding the rocks and projecting long shadows. Then, turning scenic artist, as it were, with a pot of aniline dyes, changed the summits to red and purple, which faded out into the gray of approaching night. Since the beginning, we suppose, never two sunsets were alike. The mottled flecks of clouds at varying heights, and the ocean mist showing seaward, all were there, with an opalescent back ground, for the admiration of a poor scribbler. But nature seemed to divine the so-called occasion of our visit, and, as if careless of the ignoble worship of the Limburger pool, dashed her pot of colors, brush and all, at the declining orb, splashing the red and the purple, the amber and azure, against the drop-curtain of a mountain night.

The next morning we viewed the place, beginning with the alfalfa, of which there is 40 acres. It is thickly set and bears cutting three times a year. One of the fields is five years old. Geophers do not seem to war on it, because the soil is deep and moist. Some cows were pasturing in another field; but this, we were informed, was to be discontinued. There are several acres of hosts and mangos looking in good plight, and yet growing. Some of the alfalfa is seeded to grain and pasture; and another hundred acres will be sown to wheat and alfalfa before spring. The great redwood stumps are a novel feature. At first glance they seem to take up about one-third of the ground; but, as the roots lie deep, the plow can be run quite close to them.

As much water is used about the dairy, there are two large tanks supplied by windmills. The buildings comprise a barn (50x140 feet, with an L-30x140 feet), fitted up for cattle, with stalls and proper appliances for soiling, drainage and saving manure. The barn is well stored with hay, fodder, pumpkins and corn. We saw no arrangement for steaming the feed, but learned that a straw cutter is used for the hay and fodder. There are two large dwellings for the proprietors, a boarding-house, a store-house, blacksmith shop and other necessary buildings, besides a small depot building on the railway, which runs through the place.

At this time there are on the premises forty common cows, an imported Jersey bull, and a few Jersey heifers. Most of the half-bred calves show enough marks of their Jersey parentage to justify the owners in this plan of stocking their ranch. In a few years the majority of their cows may be three-quarters-Jersey, or even more. But the writer's experience proves that great care must be exercised to prevent close breeding, and in-breeding can only be avoided by a change of sire every year or so.

A professional cheese-maker has charge of the dairy, where we found the tables and shelves as white as soap and could make them, and long rows of bright tin pans, setting in the sun, attested the scrupulous cleanliness of the place. If there is any difference, in the manipulation of the milk, between the making of Limburger and other cheese, we did not find it out. A thirty-two gallon kettle is used for heating the milk (that of the previous evening being mixed with the morning's milk), and the curd is poured into perforated wooden boxes, holding a gallon each, to drain. After standing one day, the contents are turned into square molds, the size of a small brick, where it remains two days, turned over daily, but without the least pressure. These then go to the cellar, where they are removed from the molds, rubbed twice a day with salt, and turned, for eight weeks, when they are ready for market. If there are any secrets in the making of this cheese, they are guarded with such jealous care that the interviewer failed to find them, though he does not say but there may be. The cellar did not smell at all like an ancient kitchen cupboard. The peculiar flavor of the cheese even was lacking. So far, your reporter acknowledges he was beaten. No Western reserve dairy could be kept in better condition.

This brings us to the objective point of our journey. It is plain that red clover will not grow in this dry climate, and farmers must rely upon other methods of restoring the fertility of the soil. Many years ago, when lucerne (alfalfa) was introduced, the event was hailed as a solution of the problem. Without regarding it in exactly that light, alfalfa will doubtless prove the most important factor in rendering our moist, rich lands immediately valuable. The examination of the Kerbel ranch showed its adaptability, with profit, to the newly cleared redwood lands along our rivers, where the soil is rich and deep and moist, with a habit to overflow once or twice during the season. Last winter most of the fields along Russian river were flooded, with but slight injury to the alfalfa, though some of it was for a few days 10 or 15 feet under water.

Californians, whether justly or not, are accused of being too imprudent. But the resources of soil and climate make some wild agricultural dreams realities, when they come to be worked out with intelligence, so that the while and profitable cultivation of alfalfa is no longer an experiment.

J. B. ANDERSON,  
Santa Rosa, Cal.

In RUSSIA, at the present time, there are 205 distinct establishments engaged in the manufacture of agricultural machinery. Eighty are driven by steam power, seven by water power, ninety by horse power, and the remainder by hand power. From the description of the power employed, it is reasonable to suppose that most of these establishments are on a small scale.

## THE SWINE YARD.

### Origin of the Poland-China Breed.

As the Magie or Poland-China breed of swine is now bred by quite a number of our readers and is exciting inquiry among many more, it will be interesting to present the facts of the origin of the breed, as set forth by D. M. Magie, the originator. Mr. Magie is a resident of Oxford, Butler county, Ohio, and since 1840 has bred the hogs which now bear his name, "Magie," as a synonym of "Poland-China." At the meeting of the Ohio Poland-China Swine Breeders' Association, at Dayton, Ohio, February 12th, 1879, Mr. Magie made a statement setting forth the following facts:

When quite a young man I commenced operations in forming this breed of swine, while living with my father, who was a farmer and breeder of this stock generally. He lived on his farm near Monroe, in Butler county, Ohio, but being more interested in hogs than any other stock, and not having seen any that came up to my idea of what they should be, I conceived the thought of how I might possibly improve them, and at once began operations as follows:

I determined to purchase a few of the best swine then bred in our community, and I obtained the best specimens which I could find of the following four species, of which I will soon give a description, namely, the Poland, Irish Grazer, Big China and Ryfield. Though these were the best swine of which I then had any knowledge, yet none of them exactly filled my ideal.

I commenced the crossing in 1837, and in 1840 had so far realized my ideal as to get an altogether new species of swine, which was called for a long time by my own name, which name was also adopted by the Illinois Swine Breeders' Convention. Some of these swine I purchased of the following gentlemen: Of the Irish Grazers, I obtained some of Mr. A. Kaefer, of Warren county, Ohio; the Ryfields I purchased of Mr. Vandylke, of Butler county, Ohio; and the Poland I got of my father, Benjamin Magie, of Butler county, Ohio, and Mr. Michael Brown, of Warren county, Ohio; and the China hogs I purchased of the Shakers, of Union Village, Warren county, Ohio. The following is a description of the four breeds used in the formation of this swine:

The Poland was a spotted swine, with more black than white. The hair was pretty heavy, often curly, and of medium quality. He had a tolerably fine head, a long round body, fine drooping ears, dished face, good hams, fine, tapering limbs, pretty square hams and shoulders, but was not so deep a swine as the China. He had good early fattening qualities, and was a fine grass hog, had a good, hardy constitution, and was a quiet, docile swine, and was the best of any of the four crosses which I used, and yet it was my desire to improve on him.

The Ryfield was a coarse, lop eared, deep-shouldered, heavy limbed, and a slow fattener while young; flat in the hams and shoulders, short on the back, grew very tall, and had rather ill shaped limbs; he was a spotted swine, the color being what is commonly termed a muddy sandy, not a clear and distinct white or black; he was not a very good grass hog; he would grow in time to be the largest hog of any of the four crosses.

The Irish Grazer was a white, thin-baired swine, with a few dark colored spots on the skin; had rather small and erect ears; had a small head and dished face; his neck was not very heavy, and his body was rather long and round, and his legs were not very short; his hams were light, his shoulders and hams were good; his temperament was rather nervous; his constitution not the strongest when young, but he fattened well when one year old and over; he was a good grass hog, and one of the best breeders we had.

The Big China was mostly a white swine, with a blue skin and a few black and sandy spots; he had a good constitution, was a large hog, and of the coarse order; had a coarse head and ears; good neck and jaw; was broad in the face and heavy in the muzzle; had short legs; not very deep when young; he did not fatten very readily when young; in comparison to the Irish Grazers, he was more docile, but not so good a grass hog.

Now these are the foundations of the present popular and profitable swine in question. From these I undertook to get a hog which would fill my thought. I bred the Poland to the Irish Grazer, and the Ryfield to the Big China, and consequently, as the result of the crosses, I had two new and distinct species of swine. But I was not done; so then I bred the best specimen of the offspring of the two, and then I found what I had long been looking for—a fine hog, and much better than any which had yet come to my knowledge.

I wish to state that my father assisted me both with money and good advice, when I was engaged in originating this swine. The Berkshire hog is claimed by a few to be one of the crosses that constitute the Magie or Poland-China swine. All that I have to say on this point is that I never used any swine of the Berkshire breed when I was producing this swine or since then, and I never purchased a pig or a hog of a man that claimed his stock was part Berkshire; I do not consider it a desirable cross, and I think its use should never be encouraged.



## THE FIELD.

## The Potato Disease.

EDITORS PRESS:—You recently requested me and others to give to the readers of the PRESS the results of our experience and observations upon the potato and its diseases this season. I cheerfully comply with your request and hope others, if they have any new points, will give them through your columns for the general good. Further experience and observations has confirmed and strengthened my convictions that the potato blight is caused by long continued planting of the same variety without change. All farmers know that any long continued planting of grain on the same soil tends to deteriorate it. The quality of the grain becomes inferior and the crop unprofitable, while careful selection and cultivation and frequent changes keep up the standard of excellence and improve it.

It is questionable whether the longevity of any variety of potato can be indefinitely extended and its standard of excellence kept unimpaired by any system of rotation, change or mode of cultivation now practiced; but by a careful selection of seed and storing, so as to prevent early sprouting and decay, that the seed may be planted as nearly in perfection as possible, we can add several years to its vigor and duration. But after potatoes become diseased, it is far better and more profitable to introduce some new variety, free from disease, and by careful selection and cultivation improve it, than to try to restore old varieties.

Last fall, not having enough of the new varieties to plant as much as I desired, I went some miles to secure some of the Bodega Reds, from a field that I had watched and which from all appearances was free from blight, and procured fifty bags. I planted them and every hill blighted, while the new varieties in the same field were free from disease and the quality excellent.

Last season a friend of mine stated he had read my articles in the PRESS upon potatoes and disagreed from me. He said all these theories go to the wall and the potatoes are good. Last spring he planted about 100 acres with the red variety and all blighted. Theory was right and I am sorry to say his potatoes are bad.

The blight is more general this season than ever before and its area is constantly extending. Some fields will not pay to dig; other fields will produce about half a crop, while some fields in sheltered locations are but slightly affected. In all fields I have noticed, a few rows sheltered by a fence from the winds were not blighted so badly, but all were visibly affected. This fact leads many to suppose that the blight is caused by the winds. The winds seem to increase the intensity of the disease but are not the cause of it.

If the experience and observations of the past are a guide for us in the future, we may expect that all varieties sooner or later will be affected in the order of their introduction. The varieties once so popular in the East 20 or 30 years ago are now almost unknown. New varieties have taken their place and some of these are going the way of all the others. The Early Rose, once so justly popular, is losing in quality and flavor. The ease with which new varieties can be propagated from the seed-ball to replace those that have become diseased will prevent a famine in the potato crop.

Among the different varieties tested by me, I have discarded the early kinds as unsuitable to the climate of the Coast range. The late Rose, Jersey Peach Blows, Surprise, Clusters and Burbank Seedlings, do well with me and are of vigorous growth, and will constitute my choice for next season except a few Reds for experiment.

I have received from Commissioner Le Duc this season two kinds of potatoes and one of wheat, and a few packages of vegetable seeds, which I will test and report in due season. In distributing new and rare seeds among the farmers themselves, Commissioner Le Duc is doing good service and is worthy of all commendation.

E. H. CHENEY.  
Smith's Ranch, Sonoma Co., Dec. 14th, 1879.

## The Sorghum Cane Industry.

EDITORS PRESS:—In the last number of the RURAL PRESS occurred a communication, entitled "Farmers' Pap," from Mr. Berwick, in which he says: "It is simply astonishing what very washy pabulum some city papers present to their rural readers, under the heading 'Agriculture.'" Last week, in the editorial columns of a prominent San Francisco daily paper, occurred an example more remarkable than that referred to by Mr. B. It was in an article headed "Sorghum vs. Sugar Beets," which commenced as follows:

"It is to be rated among the curiosities of agricultural development in the United States, that the first successful experiments in the cultivation of sorghum on a considerable scale are credited, not to the intelligent whites, who take and read the agricultural papers, but to the Chippewa Indians of Minnesota. These Indians last year planted twenty-five acres in sorghum cane, from which they realized enough good syrup for table use to have made over 2,000 pounds of sugar per acre."

In the above quotation there seems to be an

intentional fling, derogatory to farmers who read agricultural papers. Let us see how much foundation, in fact, there is to justify it. The Commissioner of Agriculture, Gen. Le Duc, made a tour last fall among the Sorgho growers of the Western States for the purpose of personal observation of the progress of that interest. On his return trip, he was interviewed by the Chicago Tribune, and made the following statement:

"I sent some seed of the sorghum to Mr. Ruffee, the intelligent and active Indian Agent of the Chippewa at White Earth Agency, in northern Minnesota. He obtained a further supply of seed from St. Paul and planted it, and has successfully grown, ripened and made excellent syrup—166 gallons to the acre. He informed me that he had induced the Indians to plant in all twenty-five acres, and from these he had succeeded in obtaining an average of 166 gallons of dense syrup to the acre."

It appears from this that it was all the work of "intelligent whites," for which the Indians deserve no credit.

Again, it is well known to those who read agricultural papers that sugar was successfully made from sorghum a dozen years ago; that sorghum culture has been steadily on the increase since its first introduction into the United States, and that within the last two years, especially, sugar in large quantities has been made from it with much greater success than previously, on account of the introduction of better varieties, and also by improved methods of manufacture.

Gen. Le Duc, in the interview referred to, reported a large number of successful examples of sugar-making from sorghum. Among them it is sufficient for our purpose to mention a couple. Mr. Schwartz, of Illinois, had, at the time of the visit, made 2,000 pounds of sugar, and had cane enough to work on till Christmas. At the Crystal Lake manufactory, in Illinois, there had been made 42,000 pounds of sugar, and they were shipping it to Chicago by the carload.

These facts make the Chippewa experiment dwindle into comparative insignificance, and indicate that the "curiosity of agricultural development" exists in the newspaper office in San Francisco.

The variety of cane cultivated at the White Earth Agency was the Early Amber. It ripens well in northern Minnesota, grows well in Texas; and in the latter State produces two crops a year from one planting. Of course it would produce two crops in this State on land sufficiently moist or irrigated. The syrup from it is reported to granulate about as readily as maple syrup.

With the Early Amber and other choice varieties of sorghum cane, whereby two crops a year could be secured and also a succession in ripening, it is a question whether there would be any advantage in cultivating the tropical cane even if it will thrive well. Sorghum gives a large yield of seed that is valuable for feeding to any kind of stock, and this alone would doubtless pay well for the cultivation. Who is willing to embark in such a sugar enterprise for the coming year? Steps should be taken without delay.

L. D. MORSE.  
San Mateo, Cal.

## THE APIARY.

## The Honey Extractor.

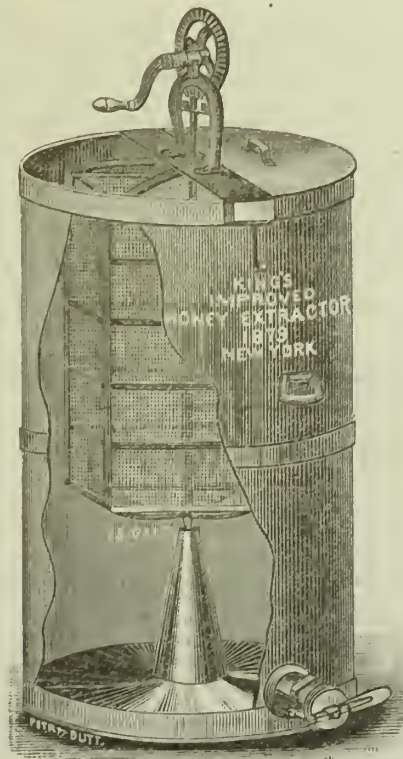
EDITORS PRESS:—To beekeepers we expect this will be "a twice told tale." Still, perhaps, many readers of the RURAL are not aware that there is a machine that will take the honey from the comb without injury to either comb or honey. The common way a few years ago was to brimstone the bees, and take the comb, honey, bee-bread and all, and strain the conglomeration. This antique method gave a mixture that was very unpalatable, as it contained not only honey, but was really a compound of pollen, bee-stings, juice of young bees, wax, and besides all this it was highly colored and scented by old dirty comb. It is easy to judge how unhealthy honey obtained in this manner must be. We are induced to write on this subject for the benefit of those who are unacquainted with the extractor, and also to show what an excellent article of food pure extracted honey is.

The honey extractor, or mel-extractor, as it is sometimes called, was invented some years ago by Herr Von Hruschka, a German resident of Venice, Italy. The first machines were rudely constructed, but Yankee ingenuity has been improving on them for several years past. As each new feature was added it was received with equal favor on both sides of the Atlantic, and to-day American extractors are nearly as common in Great Britain as they are in our own country. We have chosen the latest improved extractor to illustrate this subject with. It is the production of the editor of the Beekeepers' Magazine, Mr. A. G. King, formerly of this State. The can is larger than that of similar machines. By having it made so, a larger basket may be used and a larger receptacle at the bottom is had for the honey. This is convenient for persons having a few stands, as well as for the beekeeper who counts his hives by the hundred. It will not only take the large

est frame in use, but also the smallest, and by a simple device (not shown in the cut) the drippings and all pieces of comb can be freed from honey. The revolving basket that receives the combs rests on a cone-shaped metal stand, and that rises from the center of the bottom high enough to hold over fifteen gallons of honey before it reaches the pivot. The pivot is out of the honey, thereby preventing it from becoming discolored. The basket is light but strongly made, and will stand the severest strain required in extracting thick honey. The over-motion gearing is of the best and strongest construction, and gives great ease in running and facilitates operating. But a few turns of the crank are required to throw out the most obstinate honey. The bottom slants from all sides to the center and a channel conducts it to a faucet. When the honey is allowed to remain in the bottom for any length of time all specks of comb, etc., will come to the top, thereby leaving it clear, and in this state it may be drawn off, saving the troublesome process of straining. Lids that fit tightly prevent dust and insects from entering the can when not in use. This new extractor is highly commended by all that have used it during the past season. It received the first premium at the late Michigan State fair.

To those that are unfamiliar with the operation of extracting, we will describe it as briefly as possible for them. The comb is taken from the hive; the bees are shaken or brushed off, carried to the extractor, uncapped with a knife especially made for the purpose; from two to four frames according to the size of the extractor, are placed in it at a time; a few turns of the crank throws the honey out of the comb by centrifugal force without injuring it; the frames are then reversed so that the other side may receive a similar "whirl." The combs are now ready to be returned to the bees to be refilled.

Thus it is seen that the comb is saved and the bees waste no time or honey in making new comb. It is generally conceded that twenty pounds of honey are required to produce one pound of wax, thus it is plain that by the use of the extractor twenty pounds of honey is



saved for every pound of wax that would have to be otherwise made, not saying anything about the time that would have to be consumed in making it. Again, honey obtained in this way is perfectly pure and is not tainted with any foreign substance, consequently it is more healthy than strained or even comb honey—wax is said, on good authority, to be indigestible. The many uses to which it can be put, and the many good results it will accomplish in the apiary, are too numerous to be named in a single article. Its use is becoming world-wide, and no where are they more required than in this State.

A good honey extractor should be owned by all possessors of bees, from a half dozen of hives up. It will pay for itself in a single season.

U. K. L.  
North Temescal, Cal.

ARTIFICIAL COLORING OF FLOWERS.—Professor Sachardo, of Padua, continues his interesting experiments of artificially coloring the corolla of flowers. There is nothing new in the plan, but the matters employed are original. He simply causes to drink certain colored solutions—aniline chiefly, which penetrating the tissues, modify color—in fact dye the nervelets and veins of the corolla. Gardeners are aware, that, by mixing iron filings with the soil around hortensias, the latter receive a blue tint. The roots of pansies and stocks, dipped in a solution of green aniline, become colored in their flowers in fifteen minutes. But the plant dies in the course of a week. Watering the soil with a colored solution does no good, as the earth absorbs the coloring material.

## HORTICULTURE.

## Characteristics of the Japan Persimmon.

Now that the Japanese persimmons are ripening and attracting considerable attention in various parts of the State, we have thought some testimony concerning the character of the fruit by one who has long known it in its native country, would be timely. We have received from Rev. Henry Loomis an account of this kind written by G. F. Verbeck, D. D., who was first President of the Japanese Imperial College, at Yedo, and has been many years in the service of the Japanese government. Dr. Verbeck writes as follows:

Although I know very little of pomology as a science, I shall with pleasure set down in a few lines some of the things that a common experience of 18 years has taught me in regard to the persimmon in Japan. In the first place, I know that when you ask a Japanese what he considers his best and sweetest fruit, in eight cases out of ten the answer will be: *The persimmon*. There is no doubt that to most foreign palates, too, the Japanese persimmon is a delicious fruit; though we find other Japanese fruit, for instance, the Unshiu (seedless) orange and the loquat, perhaps quite as good. The former will generally be found more refreshing and the latter to have more flavor than the persimmon. Aside from the sweetness, and the highly nutritive quality of the fruit, I think that what contributes largely to make the persimmon such a general favorite with the Japanese, is its wholesomeness to young and old. This wholesomeness comes in at a season in the late summer and fall, when a prevalence of looseness of the bowels in various phases demands either an abstinence from fruit generally or the use of a fruit which alleviates and counteracts that state of the bowels.

In my family, not excepting the youngest members, I have always found a free use of the persimmon beneficial in the fall of the year, even at times when other kinds of fruit had to be prohibited. And I think that it is equally as wholesome in its fresh and its sun-dried state.

I ascribe the wholesomeness of the persimmon chiefly to three things. One of these is the gelatinous, or, rather, aluminous nature of its meat. When I first came to Japan I thought a good jam, jelly, or other preserve, might be prepared from the persimmon; but when my wife attempted to cook some of the fruit for these purposes, it came out of the boiler in a state somewhat like that of an overdone egg, having its naturally soft and pulpy meat coagulated into a hard, leathery consistency. This aluminous nature of the meat, too, I think, will not allow of the persimmon being dried by any other than the mild drying agencies of sunshine and air. Higher degrees of heat would certainly spoil the natural texture of the meat, so as to make it indigestible and consequently unwholesome. [My brother-in-law dried some persimmons in the flue of his furnace used for heating the house, and they were superior to the sun-dried. I do not think Dr. Verbeck is correct about the drying process.—H. L.] Another circumstance which largely contributes to the remarkable wholesomeness of the persimmon is the considerable amount of iron which is found among its ingredients. The color of the fruit, its inky taste in the unripe state, and the fine black specks in some of the smaller kinds of the hard variety in their ripe state clearly show that iron is a not inconsiderable ingredient of the persimmon. I think a chemical analysis will fully bear me out in this. And the third element of wholesomeness will be found in its astringent virtues. This astringency does not affect the sweetness of the ripe fruit, except in and immediately under the rind. It is this virtue which makes the persimmon so valuable as an autumn fruit, when, in some climates at least, other fruit can only be used with great caution.

As to the tree, I can attest to its hardiness. Both in the north and south of Japan I have frequently seen it grow on rocky hillsides where no other fruit could prosper. But even in the heat of soils it is a tree of rather slow growth, the wood of the full-grown tree being of a very hard fiber.

There has been much doubt and discussion among pomologists of this State, I understand, about there being a variety of seedless persimmon. I have no clear recollection of eating this variety in the northern capital, Tokio, though my sons say they have. But at Nagasaki, in the southern island of the Empire, Kiusiu, the seedless persimmon always was one of our delicacies of the season, a fruit not at all rare in the market.

As far as I know, the seedless persimmons are all of the soft, pointed, ovoid kind. As, according to Darwinism, in some now tailless and wingless creatures, we can clearly trace, not only the place where tail or wing had formerly been, or was intended to be at one time or another, but a more or less developed nucleus of those organic appendages, so in the seedless persimmon the spots where the seeds ought to be found are occupied by nearly perfect capsules or cells, formed of a double film. This film or membrane is of a soft, slightly elastic consistency, easily severed by the teeth, and indeed rather pleasant to bite on. Of course, now and then you may meet with a stray seed even in this seedless persimmon, but in these cases the presence of the seed must be considered as a fault.



## CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

### Observations in Kansas.

EDITORS PRESS:—After a sojourn of two months in Kansas, I essay to give the readers of the RURAL PRESS the result of my gleanings. I came here from California on account of ill health and other reasons needless to mention, but with the idea that California was the banner State of the Union; but the more I learn of Kansas, the stronger is my conviction that this State is very desirable for poor men to emigrate to. There are no monopolies of land, transportation, nor of labor. Land titles are secure. The negro exodus from the South into this State has not been burdensome; of the large number that have come, not a half dozen, except young children, but are self-supporting. Only yesterday, I heard a lady tell of stopping in Kansas City, opposite Wyandotte, where there are at least 2,000 of these refugees, and trying to get a little colored girl to adopt. She had the colored pastors of both African churches and a member of the Immigration Bureau to help her, but could not find a colored child in need of a good home; at least the parents will not let them go while they can support them.

The climate here in the summer is very much like the interior of California—very hot through the day, but with a pretty constant breeze that tempers the heat very decidedly. The winters are more severe and winds more constant and sharp than in California. Last winter the snow was six inches deep in December, but that was unusual for this State. In February, it began to be warm enough to do without fire (except for cooking) most days; in March they made gardens, but there was a late frost that cut off the fruit, and a scarcity of rain during the warm weather. This year the first snow came (one inch) on Thanksgiving day; till then we had fine weather, with occasional showers and not enough frost to kill the grass.

#### The Land in Eastern Kansas

Is a rolling prairie, with plenty of running streams and timber, mostly black walnut and cottonwood. The soil along the streams and in the valleys is a black, rich loam, and very productive. In very hot weather, in the absence of rain, it seems to bake on the surface and retain the moisture underneath, but the crops keep on growing bravely. This last summer there was no rain for 10 weeks, yet wheat did not yield but little less than an average crop. Potatoes suffered most of any crop.

Nice cold springs are abundant, and where it is necessary to dig or drive wells, they get good hard water at less than 30 feet on the low land. There seems also to be subterranean streams of good water in the earth. This fall, a man boring a well on high land, where he expected to have to dig from 60 to 90 feet to get a good well, at 30 feet the tools dropped six inches, and they could hear running water, and it proved to be a subterranean stream of good cold water.

There is a substratum of limestone all over this part of Kansas; it sometimes crops out on the surface. It quarries easily, and is much used for corals, fences, underpinning for barns and for houses. It is so soft when first taken out that it can be planed with a jack plane, but grows hard by exposure to the air. It does not crumble, and can be used with safety in buildings four stories high.

#### There are Large Coal Beds

In the eastern part of the State. In the Flint hills the coal formation has been traced over 75 miles. The coal we burn here is dug along the line of the Atchison, Topeka & Santa Fe railroad. It is bituminous, but contains so much sulphur that it is not suitable for open grates and for broiling meat. It slacks after a few months' exposure to the air. It retails here from \$5 to \$6 per ton, and makes good fuel; but black walnut wood, at \$3 to \$4 per cord for stove wood, is plenty, and many prefer that to coal. The coal mines I saw along the railroad are worked on a very small scale, in comparison with the great coal works I saw in Pennsylvania at the anthracite coal mines. Here they raise the coal with a horse whim, and the whole works cannot cost any great amount. What was in sight could not cost any more than the machinery of a brick yard, and none of the mines are of any great depth. One man told me he thought none were much over a hundred feet deep.

#### Corn, Cattle, Wheat, Etc.

Corn is easily raised here, but does not yield so largely as at Loa Nietoa and El Monte, in Los Angeles county, neither does the land cost only a quarter as much. This is a very fine country for stock and raising hogs. It pays here to raise hogs at \$1.80 per hundred. This year they have sold at this place from \$2.75 to \$3, at Kansas City \$3.40 to \$3.60. Wheat is mostly sown in the fall. Fultz, Clawson, Gold Drop, Big May, Little May, White Winter, Mediterranean, Red Sea, Walker and Lancaster, are among the varieties sown. The Odessa (the Black Sea wheat) is sown both as fall and spring wheat. The seed came originally from Russia. This is

#### A Natural Fruit Country.

Grapes grow readily, and I am told there is a good variety, but have not heard of any of the

foreign varieties so common in California. Poultry is very cheap and raised with very little trouble and expense compared with any other State I have lived in.

The western part of the State is not as good soil as the eastern, and is more subject to drouth; but the face of the country throughout the State is much more pleasing than a large share of California. As yet I have not seen anything that looks so desolate as the alkali or hog-wallow lands of California, and from the abundance of running streams and timber there is a greater diversity of landscape.

There is scarcely any land subject to entry in this part of the State. Lands vary so much in price according to locality, that I can hardly say what is an average price per acre. The Atchison, Topeka & Santa Fe railroad is now built into New Mexico, and the intention is to continue it to the Pacific coast. It is mostly owned by Boston capitalists. Jay Gould owns four out of the seven railroads in Kansas, and will try to head off the A. T. & Santa Fe, but it is to be hoped there will be a competing road to the Pacific coast ere long. [The latest reports are that Jay Gould has been headed off himself.—Eds. PRESS.]

Some time during the winter I will endeavor to give an account of the Mennonites, a religious community of Russians, who own and till a large body of land in Kansas.

I hope the time will come when immigration of a different kind of people from the Chinese will be pouring into California, as is now into Kansas, that will be a blessing instead of a curse. Hoping for all good things for the future of California and my friends there, I bring to a close this long letter.

MRS. M. A. SHELTON.

El Dorado, Butler Co., Kansas.

## THE DAIRY.

### Limburger.

EDITORS PRESS:—It is said and sung that a rose by any other name smells as sweet. That rule also applies to Limburger cheese. The Spaniard esteems his national diet of tortillas and red pepper; the Italian clings to garlic, and both yearn for them on this distant coast. So with the German, who cherishes fragrant memories of *schweitzer kaese*. We bring it from the father-land, and travel and age only ripen and flavor it. But Limburger kaese! Ah! shall we who have partaken of lager beer and Limburger on the joyous occasion of a Schuetzen-fest ever forget it? *Nein!*

We make sauer kraut and cheese in California; but they lack a something missed by the cultivated palate—that odor which is truly nameless. My friend M— imports Limburger kaese in tin boxes all the way from his native hamlet in the Tyrol. It arrives with every sign of mature age, redolent of antediluvian smells and dense as cannon balls, or like specimens of unstratified rocks. He keeps it, for prudential reasons, in the little warehouse back of the store. There is no lock on the door, and the writer said:

"But, my friend, are you not afraid some one will carry off your goods?"

"Oh, nobody will steal my Limburger!"

Then he tenderly lifted the lid of a box. Ah! There was more than enough aniff to go around, while we both inhaled it and exclaimed, with one breath, "Oh, mine country!"

F. Korbel & Bros. are making Limburger cheese at their dairy in the redwoods on Russian river. The enterprise deserves a chronicler; and it was the pleasant reminder above related that caused the writer to look after this undertaking in the interest of the PACIFIC RURAL PRESS. So we drove out there, 18 miles, to investigate the matter. Towards evening we descended the hills from Pocket canyon to the river, in view of Korbel's ranch. Forging the stream where it was knee-deep, the horses took a long drink, while we looked down through the clear water at the sand and pebbles for undiscovered nuggets of gold, or shining agates, or atray gems, which might have been neglected. There was a large field of alfalfa on one hand, and a corn field full of huge stumps on the other. In front, on rising ground, are situated the farm buildings overlooking the valley. An amphitheater of hills, nearly surrounding the place, rises terrace above terrace to the Mount Jackson range, whose summit shows bare and brown with a faint bluish of tender green since the rains. Lower down there are clusters of woods and lines of fences, indicating the encroaching settlement. The other side of the river is a dense forest, clothing the hills from base to summit. Many millions of lumber were taken off the ground hereabout, leaving the rich bottom littered with a vast accumulation of debris. The brothers, appreciating the value of the land, expended \$600 an acre in clearing it up and fencing.

It was evening when we arrived, and a purple haze of Indian summer shut in the wooded canyons. The sun's acting rays shone through rifts in the tree tops, like the apokos of a great wheel, radiating in yellow bars across the smoke

of the valley, and flamed on the opposite peaks, where they toyed a minute at gilding the rocks and projecting long shadows. Then, turning scenic artist, as it were, with a pot of aniline dyes, changed the summits to red and purple, which faded out into the gray of approaching night. Since the beginning, we suppose, never two sunsets were alike. The mottled flecks of clouds at varying heights, and the ocean mists showing seaward, all were there, with an opalescent back ground, for the admiration of a poor scribbler. But nature seemed to divine the sordid occasion of our visit, and, as if careless of the ignoble worship of the Limburger poet, dashed her pot of colors, brush and all, at the declining orb, splashing the red and the purple, the amber and azure, against the drop-curtain of a mountain night.

The next morning we viewed the place, beginning with the alfalfa, of which there is 40 acres. It is thickly set and bears cutting three times a year. One of the fields is five years old. Goats do not seem to war on it, because the soil is deep and moist. Some cows were pasturing in another field; but this, we were informed, was to be discontinued. There are several acres of beets and mangels looking in good plight, and yet growing. Some of the upland is seeded to grain and pasture; and another hundred acres will be sown to wheat and alfalfa before spring. The great redwood stumps are a novel feature. At first glance they seem to take up about one-third of the ground; but, as the roots lie deep, the plow can be run quite close to them.

As much water is used about the dairy, there are two large tanks supplied by windmills. The buildings comprise a barn (60x140 feet, with an L 40x140 feet), fitted up for cattle, with stalls and proper appliances for soiling, drainage and saving manure. The barn is well stored with hay, fodder, pumpkins and corn. We saw no arrangement for steaming the feed, but learned that a straw-cutter is used for the hay and fodder. There are two large dwellings for the proprietors, a boarding-house, a store-house, blacksmith shop and other necessary buildings, besides a small depot building on the railway, which runs through the place.

At this time there are on the premises forty common cows, an imported Jersey bull, and a few Jersey heifers. Most of the half-breed calves show enough marks of their Jersey parentage to justify the owners in this plan of stocking their ranch. In a few years the majority of their cows may be three-quarters Jersey, or even more. But the writer's experience proves that great care must be exercised to prevent close breeding, and in-breeding can only be avoided by a change of sire every year or so.

A professional cheese-maker has charge of the dairy, where we found the tables and shelves as white as soap and sand could make them, and long rows of bright tin pans, setting in the sun, attested the scrupulous cleanliness of the place. If there is any difference, in the manipulation of the milk, between the making of Limburger and other cheese, we did not find it out. A thirty-five gallon kettle is used for heating the milk (that of the previous evening being mixed with the morning's milk), and the curd is poured into perforated wooden boxes, holding a gallon each, to drain. After standing one day, the contents are turned into square molds, the size of a small brick, where it remains two days, turned over daily, but without the least pressure. These then go to the cellar, where they are removed from the molds, rubbed twice a day with salt, and turned, for eight weeks, when they are ready for market. If there are any secrets in the making of this cheese, they are guarded with such jealous care that the interviewer failed to find them, though he does not say but there may be. The cellar did not smell at all like an ancient kitchen cupboard. The peculiar flavor of the cheese even was lacking. So far, your reporter acknowledges he was beaten. No Western reserve dairy could be kept in better condition.

This brings us to the objective point of our journey. It is plain that red clover will not grow in this dry climate, and farmers must rely upon other methods of restoring the fertility of the soil. Many years ago, when lucerne (alfalfa) was introduced, the event was hailed as a solution of the problem. Without regarding it in exactly that light, alfalfa will doubtless prove the most important factor in rendering our moist, rich lands immediately valuable. The examination of the Korbel ranch shows its adaptability, with profit, to the newly cleared redwood lands along our rivers, where the soil is rich and deep and moist, with a liability to overflow once or twice during the season. Last winter most of the fields along Russian river were flooded, with but slight injury to the alfalfa, though some of it was for a few days 10 or 15 feet under water.

Californians, whether justly or not, are accused of being too impraisable. But the resources of soil and climate make some wild agricultural dreams realities, when they come to be worked out with intelligence, so that the wide and profitable cultivation of alfalfa is no longer an experiment.

Santa Rosa, Cal.

J. B. ARMSTRONG.

IN RUSSIA, at the present time, there are 205 distinct establishments engaged in the manufacture of agricultural machinery. Eighty are driven by steam power, seven by water power, ninety by horse power, and the remainder by hand power. From the description of the power employed, it is reasonable to suppose that most of these establishments are on a small scale.

## THE SWINE YARD.

### Origin of the Poland-China Breed.

As the Magie or Poland-China breed of swine is now bred by quite a number of our readers and is exciting inquiry among many more, it will be interesting to present the facts of the origin of the breed, as set forth by D. M. Magie, the originator. Mr. Magie is a resident of Oxford, Butler county, Ohio, and since 1840 has bred the hogs which now bear his name, "Magie," as a synonym of "Poland-China." At the meeting of the Ohio Poland-China Swine Breeders' Association, at Dayton, Ohio, February 12th, 1879, Mr. Magie made a statement setting forth the following facts:

When quite a young man I commenced operations in founding this breed of swine, while living with my father, who was a farmer and breeder of fine stock generally. He lived on his farm near Monroe, in Butler county, Ohio, but being more interested in hogs than any other stock, and not having seen any that came up to my idea of what they should be, I conceived the thought of how I might possibly improve them, and at once began operations as follows:

I determined to purchase a few of the best swine then bred in our community, and I obtained the best specimens which I could find of the following four species, of which I will soon give a description, namely, the Poland, Irish Grazer, Big China and Byfield. Though these were the best swine of which I then had any knowledge, yet none of them exactly filled my ideal.

I commenced the crossing in 1837, and in 1840 had so far realized my ideal as to get an altogether new species of swine, which was called for a long time by my own name, which name was also adopted by the Illinois Swine Breeders' Convention. Some of these swine I purchased of the following gentlemen: Of the Irish Grazers, I obtained some of Mr. A. Keever, of Warren county, Ohio; the Byfields I purchased of Mr. Vandyke, of Butler county, Ohio; and the Polands I got of my father, Benjamin Magie, of Butler county, Ohio, and Mr. Michael Brown, of Warren county, Ohio; and the China hogs I purchased of the Shakers, of Union Village, Warren county, Ohio. The following is a description of the four breeds used in the formation of this swine:

The Poland was a spotted swine, with more black than white. His hair was pretty heavy, often curly, and of medium quality. He had a tolerably fine head, a long round body, fine drooping ears, dished face, good bowie, fine, tapering limbs, pretty square hams and shoulders, but was not so deep a swine as the China. He had good early fattening qualities, and was a fine grass hog, had a good, hardy constitution, and was a quiet, docile swine, and was the best of any of the four crosses which I used, and yet it was my desire to improve on him.

The Byfield was a coarse, lop-eared, deep-sided hog, heavy limbed, and a slow fattener while young; flat in the hams and shoulders, short on the back, grew very tall, and had rather ill-shaped limbs; he was a spotted swine, the color being what is commonly termed a muddy sandy, not a clear and distinct white or black; he was not a very good grass hog; he would grow in time to be the largest hog of any of the four crosses.

The Irish Grazer was a white, thin-haired swine, with a few dark colored spots on the skin; had rather small and erect ears; had a small head and dished face; his neck was not very heavy, and his body was rather long and round, and his legs were not very short; his bone was light, his shoulders and hams were good; his temperament was rather nervous; his constitution not the strongest when young, but he fattened well when one year old and over; was a good grass hog, and one of the best breeders we had.

The Big China was mostly a white swine, with a blue skin and a few black and sandy spots; he had a good constitution, was a large hog, and of the coarse order; had a coarse head and ears; good neck and jaw; was broad in the face and heavy in the muzzle; had short legs; not very deep sides; he did not fatten very readily when young; in comparison to the Irish Grazers, he was more docile, but not so good a grass hog.

Now these are the foundations of the present popular and profitable swine in question. From these I undertook to get a hog which would fill my thought. I bred the Poland to the Irish Grazer, and the Byfield to the Big China, and consequently, as the result of the crosses, I had two new and distinct species of swine. But I was not done; so then I bred the best specimen of the offspring of the two, and then I found what I had long been looking for—a fine hog, and much better than any which had yet come to my knowledge.

I wish to state that my father assisted me both with money and good advice, when I was engaged in originating this swine. The Berkshire hog is claimed by a few to be one of the crosses that constitute the Magie or Poland-China swine. All that I have to say on this point is that I never used any swine of the Berkshire breed when I was producing this swine or since then, and I never purchased a pig or a hog of a man that claimed his stock was part Berkshire; I do not consider it a desirable cross, and I think its use should never be encouraged.



## THE FIELD.

### The Potato Disease.

EDITORS PRESS:—You recently requested me and others to give to the readers of the PRESS the results of our experience and observations upon the potato and its diseases this season. I cheerfully comply with your request and hope others, if they have any new points, will give them through your columns for the general good. Further experience and observations has confirmed and strengthened my convictions that the potato blight is caused by long continued planting of the same variety without change. All farmers know that any long continued planting of grain on the same soil tends to deteriorate it. The quality of the grain becomes inferior and the crop unprofitable, while careful selection and cultivation and frequent changes keep up the standard of excellence and improves it.

It is questionable whether the longevity of any variety of potato can be indefinitely extended and its standard of excellence kept unimpaired by any system of rotation, change or mode of cultivation now practiced; but by a careful selection of seed and storing, so as to prevent early sprouting and decay, that the seed may be planted as nearly in perfection as possible, we can add several years to its vigor and duration. But after potatoes become diseased, it is far better and more profitable to introduce some new variety, free from disease, and by careful selection and cultivation improve it, than to try to restore old varieties.

Last fall, not having enough of the new varieties to plant as much as I desired, I went some miles to secure some of the Bodega Reds, from a field that I had watched and which from all appearances was free from blight, and procured fifty bags. I planted them and every hill blighted, while the new varieties in the same field were free from disease and the quality excellent.

Last season a friend of mine stated he had read my articles in the PRESS upon potatoes and disagreed from me. He said all these theories go to the wall and the potatoes are good. Last spring he planted about 100 acres with the red variety and all blighted. Theory was right and I am sorry to say his potatoes are bad.

The blight is more general this season than ever before and its area is constantly extending. Some fields will not pay to dig; other fields will produce about half a crop, while some fields in sheltered locations are but slightly affected. In all fields I have noticed, a few rows sheltered by a fence from the winds were not blighted so badly, but all were visibly affected. This fact leads many to suppose that the blight is caused by the winds. The winds seem to increase the intensity of the disease but are not the cause of it.

If the experience and observations of the past are a guide for us in the future, we may expect that all varieties sooner or later will be affected in the order of their introduction. The varieties once so popular in the East 20 or 30 years ago are now almost unknown. New varieties have taken their place and some of these are going the way of all the others. The Early Rose, once so justly popular, is losing in quality and flavor. The ease with which new varieties can be propagated from the seed-ball to replace those that have become diseased will prevent a famine in the potato crop.

Among the different varieties tested by me, I have discarded the early kinds as unsuitable to the climate of the Coast range. The Late Rose, Jersey Peach Blows, Surprise, Clusters and Burbank Seedlings, do well with me and are of vigorous growth, and will constitute my choice for next season except a few Reds for experiment.

I have received from Commissioner Le Duc this season two kinds of potatoes and one of wheat, and a few packages of vegetable seeds, which I will test and report in due season. In distributing new and rare seeds among the farmers themselves, Commissioner Le Duc is doing good service and is worthy of all commendation.

E. H. CHENEY.  
Smith's Ranch, Sonoma Co., Dec. 14th, 1879.

### The Sorghum Cane Industry.

EDITORS PRESS:—In the last number of the RURAL PRESS occurred a communication, entitled "Farmers' Pap," from Mr. Berwick, in which he says: "It is simply astonishing what very washy pabulum some city papers present to their rural readers, under the heading 'Agriculture.'" Last week, in the editorial columns of a prominent San Francisco daily paper, occurred an example more remarkable than that referred to by Mr. B. It was in an article headed "Sorghum vs. Sugar Beets," which commenced as follows:

"It is to be rated among the curiosities of agricultural development in the United States, that the first successful experiments in the cultivation of sorghum on a considerable scale are credited, not to the intelligent whites, who take and read the agricultural papers, but to the Chippewa Indians of Minnesota. These Indians last year planted twenty-five acres in sorghum cane, from which they realized enough good syrup for table use to have made over 2,000 pounds of sugar per acre."

In the above quotation there seems to be an

intentional fling, derogatory to farmers who read agricultural papers. Let us see how much foundation, in fact, there is to justify it. The Commissioner of Agriculture, Gen. Le Duc, made a tour last fall among the Sorgo growers of the Western States for the purpose of personal observation of the progress of that interest. On his return trip, he was interviewed by the Chicago Tribune, and made the following statement:

"I sent some seed of the sorghum to Mr. Ruffee, the intelligent and active Indian Agent of the Chippewas at White Earth Agency, in northern Minnesota. He obtained a further supply of seed from St. Paul and planted it, and has successfully grown, ripened and made excellent syrup—166 gallons to the acre. He informed me that he had induced the Indians to plant in all twenty-five acres, and from these he had succeeded in obtaining an average of 166 gallons of dense syrup to the acre."

It appears from this that it was all the work of "intelligent whites," for which the Indians deserve no credit.

Again, it is well known to those who read agricultural papers that sugar was successfully made from sorghum a dozen years ago; that sorghum culture has been steadily on the increase since its first introduction into the United States, and that within the last two years, especially, sugar in large quantities has been made from it with much greater success than previously, on account of the introduction of better varieties, and also by improved methods of manufacture.

Gen. Le Duc, in the interview referred to, reported a large number of successful examples of sugar-making from sorghum. Among them it is sufficient for our purpose to mention a couple. Mr. Schwartz, of Illinois, had, at the time of the visit, made 2,000 pounds of sugar, and had cane enough to work on till Christmas. At the Crystal Lake manufactory, in Illinois, there had been made 42,000 pounds of sugar, and they were shipping it to Chicago by the carload.

These facts make the Chippewa experiment dwindle into comparative insignificance, and indicate that the "curiosity of agricultural development" exists in the newspaper office in San Francisco.

The variety of cane cultivated at the White Earth Agency was the Early Amber. It ripens well in northern Minnesota, grows well in Texas; and in the latter State produces two crops a year from one planting. Of course it would produce two crops in this State on land sufficiently moist or irrigated. The syrup from it is reported to granulate about as readily as maple syrup.

With the Early Amber and other choice varieties of sorghum cane, whereby two crops a year could be secured and also a succession in ripening, it is a question whether there would be any advantage in cultivating the tropical cane even if it will thrive well. Sorghum gives a large yield of seed that is valuable for feeding to any kind of stock, and this alone would doubtless pay well for the cultivation. Who is willing to embark in such a sugar enterprise for the coming year? Steps should be taken without delay.

L. D. MORSE.  
San Mateo, Cal.

## THE APIARY.

### The Honey Extractor.

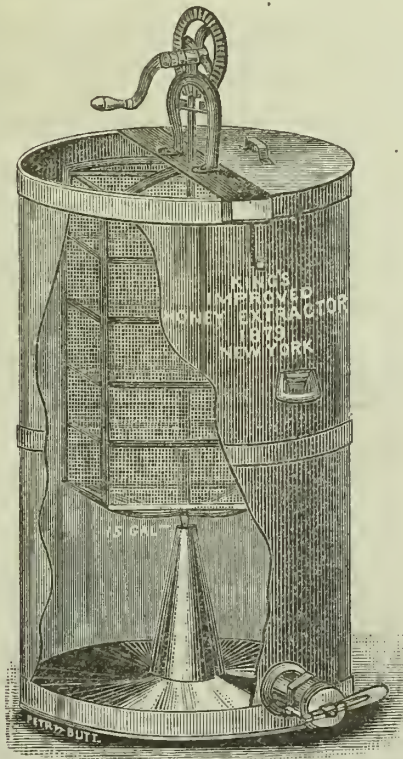
EDITORS PRESS:—To beekeepers we expect this will be "a twice told tale." Still, perhaps, many readers of the RURAL are not aware that there is a machine that will take the honey from the comb without injury to either comb or honey. The common way a few years ago was to brimstone the bees, and take the comb, honey, bee-bread and all, and strain the conglomeration. This antique method gave a mixture that was very unpalatable, as it contained not only honey, but was really a compound of pollen, bee-stings, juice of young bees, wax, and besides all this it was highly colored and scented by old dirty comb. It is easy to judge how unhealthy honey obtained in this manner must be. We are induced to write on this subject for the benefit of those who are unacquainted with the extractor, and also to show what an excellent article of food pure extracted honey is.

The honey extractor, or mel-extractor, as it is sometimes called, was invented some years ago by Herr Von Hruschka, a German resident of Venice, Italy. The first machines were rudely constructed, but Yankee ingenuity has been improving on them for several years past. As each new feature was added it was received with equal favor on both sides of the Atlantic, and to-day American extractors are nearly as common in Great Britain as they are in our own country. We have chosen the latest improved extractor to illustrate this subject with. It is the production of the editor of the Beekeepers' Magazine, Mr. A. G. King, formerly of this State. The can is larger than that of similar machines. By having it made so, a larger basket may be used and a larger receptacle at the bottom is had for the honey. This is convenient for persons having a few stands, as well as for the beekeeper who counts his hives by the hundred. It will not only take the larg-

est frame in use, but also the smallest, and by a simple device (not shown in the cut) the drippings and all pieces of comb can be freed from honey. The revolving basket that receives the combs rests on a cone-shaped metal stand, and that rises from the center of the bottom high enough to hold over fifteen gallons of honey before it reaches the pivot. The pivot is out of the honey, thereby preventing it from becoming discolored. The basket is light but strongly made, and will stand the severest strain required in extracting thick honey. The over-motion gearing is of the best and strongest construction, and gives great ease in running and facilitates operating. But a few turns of the crank are required to throw out the most obstinate honey. The bottom slants from all sides to the center and a channel conducts it to a faucet. When the honey is allowed to remain in the bottom for any length of time all specks of comb, etc., will come to the top, thereby leaving it clear, and in this state it may be drawn off, saving the troublesome process of straining. Lids that fit tightly prevent dust and insects from entering the can when not in use. This new extractor is highly commended by all that have used it during the past season. It received the first premium at the late Michigan State fair.

To those that are unfamiliar with the operation of extracting, we will describe it as briefly as possible for them. The comb is taken from the hive; the bees are shaken or brushed off, carried to the extractor, uncapped with a knife especially made for the purpose; from two to four frames according to the size of the extractor, are placed in it at a time; a few turns of the crank throws the honey out of the comb by centrifugal force without injuring it; the frames are then reversed so that the other side may receive a similar "whirl." The combs are now ready to be returned to the bees to be refilled.

Thus it is seen that the comb is saved and the bees waste no time or honey in making new comb. It is generally conceded that twenty pounds of honey are required to produce one pound of wax, thus it is plain that by the use of the extractor twenty pounds of honey is



saved for every pound of wax that would have to be otherwise made, not saying anything about the time that would have to be consumed in making it. Again, honey obtained in this way is perfectly pure and is not tainted with any foreign substance, consequently it is more healthy than strained or even comb honey—wax is said, on good authority, to be indigestible. The many uses to which it can be put, and the many good results it will accomplish in the apiary, are too numerous to be named in a single article. Its use is becoming world-wide, and no where are they more required than in this State.

A good honey extractor should be owned by all possessors of bees, from a half dozen of hives up. It will pay for itself in a single season.

U. K. L.  
North Temescal, Cal.

ARTIFICIAL COLORING OF FLOWERS.—Professor Sachardo, of Padua, continues his interesting experiments of artificially coloring the corolla of flowers. There is nothing new in the plan, but the matters employed are original. He simply causes to drink certain colored solutions—aniline chiefly, which penetrating the tissues, modify color—in fact dye the nervelets and veins of the corolla. Gardeners are aware, that, by mixing iron filings with the soil around hortensias, the latter receive a blue tint. The roots of pansies and stocks, dipped in a solution of green aniline, become colored in their flowers in fifteen minutes. But the plant dies in the course of a week. Watering the soil with a colored solution does no good, as the earth absorbs the coloring material.

## HORTICULTURE.

### Characteristics of the Japan Persimmon.

Now that the Japanese persimmons are ripening and attracting considerable attention in various parts of the State, we have thought some testimony concerning the character of the fruit by one who has long known it in its native country, would be timely. We have received from Rev. Henry Loomis an account of this kind written by G. F. Verbeck, D. D., who was first President of the Japanese Imperial College, at Yedo, and has been many years in the service of the Japanese government. Dr. Verbeck writes as follows:

Although I know very little of pomology as a science, I shall with pleasure set down in a few lines some of the things that a common experience of 18 years has taught me in regard to the persimmon in Japan. In the first place, I know that when you ask a Japanese what he considers his best and sweetest fruit, in eight cases out of ten the answer will be: *The persimmon*. There is no doubt that to most foreign palates, too, the Japanese persimmon is a delicious fruit; though we find other Japanese fruit, for instance, the Unshiu (seedless) orange and the loquat, perhaps quite as good. The former will generally be found more refreshing and the latter to have more flavor than the persimmon. Aside from the sweetness, and the highly nutritive quality of the fruit, I think that what contributes largely to make the persimmon such a general favorite with the Japanese, is its wholesomeness to young and old. This wholesomeness comes in at a season in the late summer and fall, when a prevalence of looseness of the bowels in various phases demands either an abstinence from fruit generally or the use of a fruit which alleviates and counteracts that state of the bowels.

In my family, not excepting the youngest members, I have always found a free use of the persimmon beneficial in the fall of the year, even at times when other kinds of fruit had to be prohibited. And I think that it is equally as wholesome in its fresh and its sun-dried state.

I ascribe the wholesomeness of the persimmon chiefly to three things. One of these is the gelatinous, or, rather, albuminous nature of its meat. When I first came to Japan I thought a good jam, jelly, or other preserve, might be prepared from the persimmon; but when my wife attempted to cook some of the fruit for these purposes, it came out of the boiler in a state somewhat like that of an overdone egg, having its naturally soft and pulpy meat coagulated into a hard, leathery consistency. This albuminous nature of the meat, too, I think, will not allow of the persimmon being dried by any other than the mild drying agencies of sunshine and air. Higher degrees of heat would certainly spoil the natural texture of the meat, so as to make it indigestible and consequently unwholesome. [My brother-in-law dried some persimmons in the flue of his furnace used for heating the house, and they were superior to the sun-dried. I do not think Dr. Verbeck is correct about the drying process.—H. L.] Another circumstance which largely contributes to the remarkable wholesomeness of the persimmon is the considerable amount of iron which is found among its ingredients. The color of the fruit, its inky taste in the unripe state, and the fine black specks in some of the smaller kinds of the hard variety in their ripe state clearly show that iron is a not inconsiderable ingredient of the persimmon. I think a chemical analysis will fully bear me out in this. And the third element of wholesomeness will be found in its astringent virtues. This astringency does not affect the sweetness of the ripe fruit, except in and immediately under the rind. It is this virtue which makes the persimmon so valuable as an autumn fruit, when, in some climates at least, other fruit can only be used with great caution.

As to the tree, I can attest to its hardness. Both in the north and south of Japan I have frequently seen it grow on rocky hillsides where no other fruit could prosper. But even in the best of soils it is a tree of rather slow growth, the wood of the full-grown tree being of a very hard fiber.

There has been much doubt and discussion among pomologists of this State, I understand, about there being a variety of seedless persimmon. I have no clear recollection of eating this variety in the northern capital, Tokio, though my sons say they have. But at Nagasaki, in the southern island of the Empire, Kiusiu, the seedless persimmon always was one of our delicacies of the season, a fruit not at all rare in the market.

As far as I know, the seedless persimmons are all of the soft, pointed, ovoid kind. As, according to Darwinism, in some now tailless and wingless creatures, we can clearly trace, not only the place where tail or wing had formerly been, or was intended to be at one time or another, but a more or less developed nucleus of those organic appendages, so in the seedless persimmon the spots where the seeds ought to be found are occupied by nearly perfect capsules or cells, formed of a double film. This film or membrane is of a soft, slightly elastic consistency, easily severed by the teeth, and indeed rather pleasant to bite on. Of course, now and then you may meet with a stray seed even in this seedless persimmon, but in these cases the presence of the seed must be considered as a fault.



## PATRONS OF HUSBANDRY.

### Decision in the California Farmers' Mutual Insurance Co. Matter.

According to our promise to publish the decision of the Court in the matter of the above company, we print the following:

In the District Court of the 12th Judicial District of the State of California, in and for the city and county of San Francisco.

GEORGE W. T. CARTER  
vs.  
CALIFORNIA FARMERS' MUTUAL  
FIRE INSURANCE ASSOCIATION.

This is an application for injunction to restrain the defendant from collecting the assessment levied by the Board of Directors on the 15th day of January, 1879, upon the holders of policies of insurance issued by the defendant on the mutual plan.

The pleadings show that the defendant was incorporated in May, 1874, under the laws of this State, for the purpose of doing a fire insurance business, and has since been issuing policies on the ordinary plan of a stock company, and also on what is ordinarily known as the mutual plan. They also show that on the 15th day of January, 1879, defendant levied an assessment of one per cent. the amount of insurance against all holders of policies issued upon the mutual plan, and is threatening to bring suits for the collection thereof.

The defendant was not incorporated for the purpose of doing a mutual insurance business, and it does not appear that it ever had power to do business on that plan; it is not a corporation, which, under its charter or the laws under which it was incorporated, has power to levy any assessment whatever, except such as are levied to call in subscriptions to its capital stock. It has some special by-laws on the subject of assessment, upon mutual policy holders, but they can confer no authority upon the Directors which is not by the law conferred upon the corporation itself.

Again even by the by-laws it is provided as a condition precedent to the levying of any assessment that the policy holders shall be notified of the insufficiency of the amount already paid in, and shall have the option to withdraw or pay such sum as the directors shall deem necessary. It is not pretended in this case that such notice or option was given, but on the contrary the assessment was levied without notice, and defendant is proceeding and threatening by suit to proceed to collect the same. I think the assessment was void both under the statute and under the by-laws, and the injunction ought to be granted until the hearing determines all the facts.

WM. P. DAINGERFIELD,  
Judge 12th District Court.  
San Francisco, Dec. 20th, 1879.

### National Ranch Grange Meeting.

The fifth anniversary of the organization of National Ranch Grange, No. 235, was celebrated at their hall at National City, San Diego county, on Thursday evening, Dec. 4th, with an enthusiasm and display of Mother Earth's choicest and best gifts to the husbandman, far exceeding all former occasions. A large number of invitations had been extended to citizens of this city, many of whom were in attendance, and the occasion was one never to be forgotten by any who were so fortunate as to be present. The evening's entertainment consisted of addresses by various members of the Grange, singing by a quartette, and a collation, the equal of which it has never been our pleasure to behold. There were fully 100 people present, and in attempting to give a faithful or even an approximate description and report of the occasion, we frankly confess our inability to do the subject anything like justice.—*San Diego Union*.

The *Union* then proceeds to give a very full account occupying three of its columns, which we regret our space forbids reproducing. Speeches were made by Mrs. Warren Kimball, Prof. Blackmer, Jno. C. Moore, Col. Jno. G. Capron, W. W. Stewart and others. It is said that this meeting was one of the most pleasant ever participated in the county.

**WHEATLAND GRANGE.**—On Thursday afternoon, December 4th, Wheatland Grange gave their annual "Harvest Feast," which was attended by the members, visiting Grangers and invited guests. After the session of the Grange the visitors were admitted, and the assemblage called to order by Master C. K. Dam. An address of welcome was delivered by D. O. Ostrom, which was followed by a song entitled "Beautiful Grange that We Love," by Miss Julia Holland and others. An original anniversary address was next read by Mrs. J. H. Keyes, which was very fine and worthy of more than mere mention. A song, "The Plow, Spade and Hoe," by Miss Anna Climer, next followed. A poem, "An Indian Version of the Origin of Corn," was read by Miss Belle Fagg, after which the song, "Cling to Him Who Clings to You," was sung. The entertainment was ended by a song, "Meet Me by the Running Brook," by two little girls—Miss May Inlow and Rosa Ostrom, who rendered it in a very pleasing manner. The chairs were then drawn up to a table filled with overflowing with good things, and after a prayer by the Chaplain, Mr. Filcher, an attack on them commenced. The tables were cleared and set three times. Everyone present enjoyed

themselves immensely, and we regret that our limited space prevents a more extended notice. A prize had been offered for the best exhibit of oranges, and a committee consisting of Messrs. Inlow, Phillips and Lumbard were appointed to make the award, and it was given to F. Kirshner.—*Recorder*.

**BURIAL.**—Mrs. L. B. Roberts was buried on Thursday at the cemetery in "National Ranch." The beautiful service of the Grangers, of which Order she was a member, was very imposing. Flowers, of which she was very fond, were strewn on her coffin. Her loss to the National Ranch Grange is irreparable. She was a hard worker, and will be sadly missed in the community.—*San Diego News*.

**NATIONAL GRANGE MEETING.**—Next week we will give another chapter of the proceedings of the National Grange.

### Election of Officers.\*

**AMERICAN RIVER GRANGE, No. 172.**—Election Dec. 13th: D. W. Taylor, M.; S. D. Callglasser, O.; C. M. Boyle, L.; C. Halverson, S.; W. H. Criswell, A. S.; A. H. Thomasson, C.; E. G. Morton, Jr., Sec'y; J. W. Kilgore, T.; W. F. Bryan, G. K.; Martha Criswell, L. A. S.; Miss Bird Morton, Ceres; Mrs. Alice Bryan, Pomona; Mrs. M. J. Taylor, Flora; J. F. Wight, Trustee.

**FLORIN GRANGE, No. 130.**—Election, Dec. 13th: W. A. Smith, M.; D. Reese, O.; J. K. Chandler, L.; C. Towle, S.; J. Reese, A. S.; P. P. Brown, C.; D. H. Buell, T.; J. T. Amos, Sec'y; L. H. Fassett, G. K.; M. Scholfield, Ceres; Celia Buell, Pomona; E. M. Fassett, Flora; A. Fassett, L. A. S.

**FRANKLIN GRANGE, No. 147, FRANKLIN, CAL.**—Election Dec. 6th: P. R. Beckley, M.; J. B. Bradford, O.; Mrs. E. S. Johnston, L.; L. R. Beckley, S.; W. A. Johnston, A. S.; P. B. Bradford, C.; I. F. Freeman, T.; Mrs. S. G. Bradford, Sec'y; Wm. Beckley, G. K.; Miss Sarahetta Medbury, Ceres; Miss Belle Johnston, Pomona; Miss Cora Uter, Flora; Mrs. Hannah Flexman, L. A. S. Installation, January 3d, 1880.

**POINT OF TIMBER GRANGE, No. 14.**—Election, Dec. 6th: A. Plumley, M.; C. Carlton, O.; Mrs. Mary Mott, L.; Mrs. M. Cary, S.; Mrs. Plumley, A. S.; Thomas McCabe, C.; C. J. Preston, T.; J. E. W. Cary, Sec'y; Mrs. M. Preston, G. K.; L. J. Wills, Ceres; Ellen Carter, Pomona; Sarah McCabe, Flora; Mrs. Jaqualard, L. A. S.; S. M. Wills, Trustee.

**YUBA CITY GRANGE.**—Election, Dec. 13th: H. C. Jones, M.; S. R. Chandler, O.; George Harter, L.; Joseph Hardy, S.; J. T. Smith, A. S.; Anna Ohleyer, C.; B. F. Frisbie, T.; Mrs. J. Frisbie, Sec'y; T. B. Hull, G. K.; Mrs. Maggie Hull, Ceres; Mrs. M. C. Hardy, Pomona; Miss Anna Stewart, Flora; Miss Maggie Fortua, L. A. S.

\*Secretaries of Subordinate Granges are invited to send, for publication, lists of officers as soon as they are elected; also dates of installation.

## AGRICULTURAL NOTES.

### CALIFORNIA.

#### BUTTE.

**ORANGES AND PERSIMMONS.**—*Register*, Dec. 20: Charles Wilcox brought into our office on Thursday afternoon, a specimen of the oranges and Japanese persimmons, raised in his garden. The oranges were a cluster of four, growing upon one stem, very large and handsome. The persimmons consisted of one of the first and two of the second crop of the present year; the former, a magnificent specimen, as large as a good-sized bellflower apple, and those of the second crop about one-third that size. There seems to be a virtue in the red soil of the foothills, assisted by irrigation, for raising fruit, beyond the richer lands of the valley.

#### COLUSA.

**A GOOD POINT.**—*Sun*: The matter of a Bureau of Agriculture for the State is being agitated. Such a thing might be turned to good, but would it be established? The value of it would depend entirely on the man. If some such man as C. F. Reed, of Knight's Landing, could be got to devote his whole time to it, an immense amount of good could be accomplished. If we were in the Legislature we would want to be certain of the man before supporting the measure. As a political machine it would be a curse.

#### CONTRA COSTA.

**ON PLOWING.**—T. M. Whitten, in *Martinez Gazette*, Dec. 20: I have read an article taken from the *PACIFIC RURAL PRESS*, which gives the result of shallow plowing. Not altogether concurring with the conclusions of the article, and it being a debatable subject, I should like to give my opinion. From observation and experience both in California and Oregon, I am convinced that continuous deep or shallow plowing is not the best rule. One of the greatest objects in plowing is to keep the surface soil new and of course productive, this object cannot be attained by plowing the same depth each year, be it either deep or shallow. Neither theory I think would be wise to adopt altogether. To illustrate the theory I think best regarding the depth of plowing, let us presume that a farmer commences cultivating new soil. Each year he plows the same depth, be it deep or shallow, according to the idea he has adopted,

During the first few years he has no reason to complain of the productiveness of his farm; but in the course of 10 or 15 years, his crops being light, he comes to the conclusion that his land is "worn out." The dogmatic idea of "deep plowing" or "shallow plowing," and its prosecution has brought the result. Assume the proposition that the farmer has never plowed deeper than six inches. With extra teams, if necessary, let him plow nine inches deep. Having brought new soil to the surface he would doubtless reap a good harvest. The succeeding year he should plow very shallow—say two inches deep; the next year three inches; the following four inches deep, and so on in that ratio until he had again reached the depth of six inches. Then according to the theory I advance he should again plow nine inches deep, the soil at that depth having "rested," and the following year two inches, and so on. I think this theory carried out (not necessarily with mathematical precision) will not only militate against the accumulation of weeds, but will also produce good yields of grain. In the choice of continuous deep or shallow plowing I should certainly prefer the latter, but thinking that the desideratum is to keep the surface soil new and unworn, I think the theory I have advanced is the orthodox one for that purpose.

#### FRESNO.

**STRIKING SQUIRRELS AT THE RIGHT TIME.**—*"Farmers,"* in *Fresno Republican*: Perhaps the most destructive enemy of the farmer in the San Joaquin valley is the ground squirrel. During the summer and fall months but little attention is paid to them, but as the farmers are sowing their fields in grain, and the plains are covered with vegetation these mouth pocket little scoundrels gather in large numbers and make themselves very conspicuous, clearing up their old dens in the grain fields, and preparing for a united siege on the harvest field in the spring. When they are thus congregated the farmers arrive at the conclusion that the squirrel must be exterminated, and a great many are now securing and putting out poisoned grain to exterminate him. However, they meet with but little success at this season of the year, for the very simple reason that the squirrel is more of a vegetarian than grain epicurean, and when the poisoned grain is given him, he stores it away in his underground larder for future use, when the plains are brown and drear. Stored away in the damp ground the poison evaporates and loses its strength sufficiently to be very palatable and wholesome food. From this we conclude that the only proper time to exterminate the squirrels is when beautiful nature doesn't allow them to be as flush of fresh eatables. Trial shows that one pound of poisoned grain distributed about the squirrels' dens during the summer months will carry with it ten-fold the execution that twenty pounds would distributed at this season of the year. But squirrels are difficult to exterminate unless the farmers throughout the length and breadth of the country work together. If every farmer would take an interest at the proper season of the year in eradicating these pests they might be gotten rid of in a few years.

#### KERN.

**THE WHEAT CROP.**—*Courier*, Dec. 17: Through the kindness of Mr. F. Roper, of the Kern River Mills, we are able to give an approximate statement of the wheat crop of the Kern River valley for 1879. There has been purchased at the mill 1,792,119 pounds of wheat, and he estimates the amount of wheat now in the hands of farmers at 800,000 pounds. The average product per acre is about thirty bushels. Much of this has been raised on new ground, not fully prepared for irrigation, and much of the land has been very imperfectly watered. It was not till this year that any attempt at raising, except in a small way, has been attempted. It has been thought doubtful if it could be done profitably at this distance from market. The purchase of barley reaches 1,018,499 pounds, leaving about 400,000 pounds in the hands of farmers.

#### LOS ANGELES.

**THE BAMBOO.**—*Commercial*: This valuable cane grows in moist land at an astonishing rate. It is propagated from cuttings or roots, and grows so riotously that unless watched over it will spread over a whole ciniega in a few years. Mr. Wm. H. Workman of this city, has an abundance of this cane and will furnish cuttings or roots as may be desired, at a small cost. The canes are joined together in making water pipe by boring a hole through a short block of redwood and inserting the ends of the canes therein. The importance of this new system of water carriage is very great in the dry land of California. By it many a homestead can be supplied with pure mountain spring water uncontaminated with iron rust. The pipe can be produced at a trifling cost and should be used extensively in this State.

#### NAPA.

**CONDITION OF THE CROPS.**—*Register*, Dec. 20: According to reports received from all parts of this county, early sown grain is growing fast and looking splendidly. Thus far the season has been a most favorable one, rain and temperature combining to lighten the prospects for the coming harvest. In fields near town the ground is shaded with young grain. During this week farmers are generally busy seeding, and should the weather hold good many will have finished by the New Year. Several pieces of alfalfa have been sown in this part of the valley, which are looking finely, the seed having escaped the blighting influence of sharp frosts. Pasturage is good and constantly improving. Those Napa farmers

who have farms leased in the large grain-growing counties of Colusa, Tehama and Butte, report grain growing very fast, much of it having attained a height of six or eight inches, and are confident of a large yield.

#### NEVADA.

**FOOTHILL ORANGES.**—*San Juan Independent*: While at French Corral on Saturday last, we saw, on the delightful place of P. W. Williams, two oranges trees of great splendor. The trees, loaded with delicious looking fruit nestling among leaves of a beautiful green, were a magnificent sight. The trees were planted among other fruit, and exposed to all storms and tempests. They appear, however, not to be retarded in their growth, and are as large as their neighbors.

#### SAN DIEGO.

**THE BEES.**—*Union*, Dec. 20: We have taken some pains to inquire into the condition of bees in various parts of the county, and learn that the percentage of loss the past season is somewhat larger than the average. In the northern part of the county the loss is much greater than in the southern portion. Those apiaries suffering the heaviest loss appear to have extracted or "robbed" their bees late in the season—before the poor quality of the entire season was apparent. The loss is due from this cause rather than from disease. In one apiary we hear of a loss of over one hundred hives out of less than two hundred. Here in the southern portion of the county the loss is, in most instances, very small, and the recent rains have brought out early bee-feed sufficient to enable the bees to easily make their living, and there will be no further loss from starvation. In nearly every instance we hear that the bees are "strong," and we may reasonably anticipate a larger crop of honey this year than has ever been gathered in any former season.

#### SANTA CLARA.

**THE STORM.**—*Mercury*: The rain came just when they needed it most. The soil had become too dry to work to advantage, and the growing grain showed more signs of the recent frosts than of the rains that preceded them. Now every condition is favorable and the chances for a good crop could not be better.

**BURNING OF THE FRUIT CANNERIES.**—The fire at the Golden Gate Fruit Packing establishment, Thursday night, reported in the *Mercury* extra, turns out to have destroyed more property than was at first supposed. Besides the great loss sustained by the packing company, Messrs. Sresovich & Co., state that they lost some 15,000 gallons of wine valued at \$8,000; two Walter fruit driers; about 50,000 new fruit boxes; 12,000 boxes of green fruit; a good deal of dried fruit; a wagon; harness for fourteen teams; besides tanks, wine-presses, etc. Mr. J. Sresovich, who slept on the premises, states that he lost \$500 in money and jewelry and all of his clothes. The whole loss of the concern is estimated at \$25,000 to \$30,000, on which there is insurance in San Francisco agencies amounting to \$10,000 or \$12,000. The Golden Gate Packing Company's property was partially insured as follows: South British & National, \$2,000; Royal Insurance Company, \$3,225; Commercial Union, \$2,400; Western Union, \$1,000. The company intends to rebuild at once on a large scale and in a more substantial manner than before. Their business has been constantly increasing lately, and more ample accommodations would soon have been needed in any event. Now, of course, the whole building will be carefully planned for the business and provided with all the latest improvements for fruit drying and packing. The managers desire to return their sincere thanks to all who so nobly volunteered their assistance in removing goods, etc. Nothing appears to be known as to the origin of the fire.

#### SOLANO.

**EGYPTIAN CORN.**—*Dixon Tribune*, Dec. 20: B. J. Gutbrie, of Tremont township, planted a large area of overflowed land with Egyptian corn last June, and had a remarkably good yield. He believes it will yield as high as 80 to 100 bushels to the acre on good land, and that it is a profitable crop, being good hog, cattle and horse feed, besides making, when ground, very fair griddle cakes and bread. He will plant more the coming season. The greatest prospective importance of this crop is in the belief that it can be used with wheat as a rotating crop, avoiding the necessity of summer-fallow. If this is so, California farmers should no longer complain that they cannot compete with the Mississippi valley in raising hogs.

#### SONOMA.

**WOOL.**—*Santa Rosa Democrat*, Dec. 20: We have been informed by several sheep-raisers that the prospects for the spring crop are most encouraging, not only on account of the excellent start that the grass has on pasture lands, but also the price to be paid will be an advance of even the unusually excellent price paid for the fall clip. Parties at Cloverdale and in Ukiah say that San Francisco firms have offered them thirty and thirty-two cents per pound in advance. We hope that their anticipations will be more than realized.

**NEW VINEYARDS.**—Many of our viniculturists are increasing the size of their vineyards materially. In addition to the 120 acres on the ranch of Mr. Bane, mentioned by us a few weeks since, Mr. Harvey, a neighbor of his, is putting out 20 acres; Wells Bros. and Joe Badger, of Rincon valley, are putting out 50 and 20 acres respectively. In Bennett valley, Miss L. T. Fowler is planting 20 acres, Walter Phillips 40 acres, and Alva Parks 20 acres. In the



Guillicos valley, Henry Hudson is setting out 21 acres. It is the opinion of many of our agriculturists that an acre of vineyard pays much better than an acre of wheat; especially is this the case in Santa Rosa and vicinity, where Mr. DeTurk pays a good price for all the grapes that can be raised.

#### SUTTER.

**THE BRIGGS ORCHARD.**—*Appeal*, Dec. 20: This orchard, lying about a mile below Yuba City, on the west bank of the Feather river, and which has a reputation throughout the State for its early fruit and immense yield, is exposed to floods by the Feather river. The private levee erected for its protection two years ago has several gaps in its embankment, and we understand that the proprietors have resolved to expend no more money in efforts to levee off the floods. It is the largest and most extensive orchard in the State, and a few years ago was considered a princely fortune to the proprietor—the late John G. Briggs.

#### TULARE.

**TRAMPS.**—*Delta*, Dec. 13: Tramps have been quite numerous in and around Visalia of late, and the authorities have found it necessary to take some decided steps in dealing with them. A gang of young tramps have been around town during the present week, begging in the daytime, and sleeping in barns at night. Last Wednesday morning, Miss Dillon, who stops at Wiley Watson's, went to the barn to feed the cows, and when she stuck the pitchfork into the hay, run it into a tramp who had burrowed in it for the night. He awoke suddenly from his dreams, and sprang up, and the young lady ran into the house badly scared. Wednesday night, Marshal Williams went there about 10 o'clock, but did not find them. He then searched most of the barns in town, and found one tramp in the hay in Canty's stable. About one o'clock he went with about half a dozen men to Watson's barn again, and found six of them covered up in the hay. All were young men, and most of them were under age. They were taken before Justice Neill yesterday morning, and were all sentenced to pay a fine of \$20, or to 20 days imprisonment in the county jail, and to work on the public roads of the county if required to do so.

#### TUOLUMNE.

**EDITORS PRESS.**—The storm of wind and rain now prevailing gives us a few moments leisure to renew correspondence with the readers of the *RURAL*. Wind and water is served out in abundance. If crops or grass prove a failure it will not be the fault of provident nature. Orchardists have learned a good lesson this fall. It has been proved that good fruits are more than remunerative and the supply will stand a doubling up. There is actually a scarcity at the present time. In the earlier part of the season I prophesied that dried fruits would be scarce and high, owing to the large consumption in Bodie and elsewhere of green fruit. The results are as I predicted. The market in this section is almost bare and prices have gone up accordingly. Peaches may be propagated to almost any extent and pay well for the labor. Apples will not pay at present prices for drying, but good winter apples always command fair prices; plums, peaches, figs and raisins grapes seem to be the most profitable because of the home and foreign market. Figs require science and care to bring them to market in good condition. A peddler a few days ago paid nine cents per lb. for a lot of carefully preserved and pressed figs, which might not have commanded more than three or four cents by want of care or the knowing how. There is as much in the manner of sending fruit to market as in the fruit itself. I am persuaded that large additions to existing orchards will take place this spring and many new ones established. The foothill region is still in its infancy, both in farming and fruit raising, and from recent finds we may also add in mineral. There is a grand future opening up; brighter even than our most sanguine expectations.—**JOHN TAYLOR**, Mt. Pleasant.

**ACTION OF SEWER GAS ON LEAD, ETC.**—The sanitary inspector of Dundee, Mr. T. Kinnear, has watched the effect of the gas on portions of the zinc eaves of buildings where it was striking on the under part, and found, in the course of a couple of years or so, pretty large holes eaten completely through, showing that material could not long withstand the effect of the gas. Lead is, of course, more durable than zinc, but the difference is only a question of degree, as shown by the fact, in not a few of the waterclosets repaired by the officers of the department during the year, small apertures were found in the main vertical lead pipe, and in the cross or horizontal one leading from it to the trap of the closet various perforations were found on the top, indicating clearly the operation of foul air from the drain. Lead traps and soil pipes from water-closets, baths and fixed basins are all subject to wear and tear; but the traps, being burdened with the additional strain of harring the passage of sewer gas, do their work less efficiently, and for a much shorter period than they are generally credited with, hence the necessity for proper ventilation and occasional inspection.

**RUMOR** says that Congressman Cannon, of Utah, who is already under indictment for violation of the anti-polygamy law, has taken a fifth wife. Several bills are likely to be introduced into Congress against polygamy, and there will be much opposition to the admission of Utah as a State.

### The State Government, 1880.

#### Executive Department.

Governor.....George C. Perkins.  
Lieutenant-Governor.....John Mansfield.  
Secretary of State.....D. M. Burns.  
Controller.....D. M. Kenfield.  
State Treasurer.....John Weil.  
Attorney-General.....A. L. Hart.  
Surveyor-General.....J. W. Shanklin.  
Superintendent of Public Instruction.....F. M. Campbell.  
Clerk of Supreme Court.....Frank W. Gross.  
Chief Justice.....R. F. Morrison.  
Associate Justices.—E. W. McKiastury, J. D. Thornton, S. B. McKee, E. M. Ross, J. R. Sharpstein, M. H. Myrick.  
State Board of Equalization.—First District—James L. King; Second District—M. M. Drew; Third District—Warren Dutton; Fourth District—T. D. Heiskell.  
Railroad Commission.—First District—Joseph S. Cone; Second District—C. J. Beerstecher; Third District—Geo. Stoneman.

#### Senate.

First District—San Diego and San Bernardino—J. W. Satterwhite (D.), San Bernardino.  
Second District—Los Angeles—J. P. West (W. and N. C.), Compton, Los Angeles county.  
Third District—Ventura, Santa Barbara and San Luis Obispo—Warren Chase (W.), Santa Barbara, Santa Barbara county.  
Fourth District—Fresno, Tulare, Kern, Mono and Inyo—Chester Rowell (R.), Fresno, Fresno county.  
Fifth District—Mariposa, Merced and Stanislaus—D. M. Pool (D.), Hornitos, Mariposa county.  
Sixth District—Monterey, San Benito and Santa Cruz—W. J. Hill (W., N. C. and R.), Salinas City, Monterey county.  
Seventh District—Santa Clara—George F. Baker (R.), San Jose, Santa Clara county; J. C. Zuck (R.), Gilroy, Santa Clara county.  
Eighth District—San Francisco and San Mateo—Robert Desty (W.), San Francisco.  
Ninth District—San Francisco—C. C. Conger (W.), 1,420 Broadway street; W. W. Taylor (R.), 2,120 Broadway street.  
Tenth District—San Francisco—Paul Neumann (R.), 1,713 Bush street; John H. Dickinson (R.), 2,021 California street.  
Eleventh District—San Francisco—Thomas Kane (W.), 8 Zoe street, between Third and Fourth streets; T. K. Nelson (W.), 5463 Bryant street.  
Twelfth District—San Francisco—Joseph C. Gorman (W.), 5344 Natoma street; Martin Kelly (W.), 872 Mission street.  
Thirteenth District—San Francisco—John S. Enos (W.), Chenery street, between Thirtieth and Thirty-First streets; Theo. H. Hittell (R.), 808 Turk street.  
Fourteenth District—Alameda—S. G. Nye (R.), Oakland, Alameda county; E. H. Pardee (R.), Oakland, Alameda county.  
Fifteenth District—Contra Costa and Marin—W. H. Sears (R.), San Rafael, Marin county.  
Sixteenth District—San Joaquin and Amador—B. F. Langford (N. C. and D.), Lockford, San Joaquin county; A. T. Hudson (R.), Stockton, San Joaquin county.  
Seventeenth District—Calaveras and Tuolumne—R. M. Lamson (R.), Chinese Camp, Tuolumne county.  
Eighteenth District—Sacramento—Grove L. Johnson (R.), Fifth street, between I and J streets, Sacramento; William Johnston (R.), Richland, Sacramento county.  
Nineteenth District—Solano and Yolo—J. H. Harlan (N. C. and D.), Woodland, Yolo county; J. T. Wendell (R.), Suisun, Solano county.  
Twentieth District—Napa, Lake and Sonoma—W. L. Anderson (D.), Lakeport, Lake county.  
Twenty-First District—Sonoma—W. W. Moreland (D.), Healdsburg, Sonoma county.  
Twenty-Second District—Placer—S. B. Burt (R.), Bath, Placer county.  
Twenty-Third District—El Dorado and Alpine—W. H. Brown (R.), Shingle Springs, El Dorado county.  
Twenty-Fourth District—Nevada and Sierra—B. J. Watson (R.), Nevada City, Nevada county; William George (R.), Grass Valley, Nevada county.  
Twenty-Fifth District—Yuba and Sutter—E. A. Davis (R.), Marysville, Yuba county.  
Twenty-Sixth District—Butte, Plumas and Lassen—W. A. Cheney (R.), Quincy, Plumas county.  
Twenty-Seventh District—Del Norte, Humboldt and Mendocino—P. H. Ryan (W., N. C. and D.), Eureka, Humboldt county.  
Twenty-Eighth District—Siskiyou, Modoc, Trinity and Shasta—A. B. Carlock (R.), Fort Jones, Siskiyou county.  
Twenty-Ninth District—Colusa and Tehama—B. E. Glascock (D.), Dunnigan, Yolo county.

#### Assembly.

Alameda County—C. N. Fox (R.), Oakland; W. W. Cameron (R.), Oakland; G. W. Tyler (R.), Alameda.  
Amador County—R. C. Downs (R.), Sutter Creek; L. Bruse (R. and N. C.), Ione City.  
Butte County—Max Brooks (R.), Oroville; W. W. Durham (R.), Durham.  
Contra Costa County—D. N. Sherburn (R.), Danville.  
Calaveras County—H. A. Messenger (D.), Mokelumne Hill.  
Colusa and Tehama Counties—W. P. Mathews (D. and N. C.), Tehama, Tehama county.  
El Dorado County—L. F. Cooper (D.), Crescent City.  
El Dorado County—T. Fraser (R.), Placerville.  
El Dorado and Alpine Counties—Cyrus Coleman (R.), Markleeville, Alpine county.  
Fresno County—C. G. Sayle (D.), Fresno.  
Humboldt County—C. L. Stoddard (L.), Ferndale.  
Inyo and Mono Counties—Joseph Wasson (R.), Bodie, Mono county.  
Los Angeles County—P. M. Green (W. and R.), Pasadena; R. F. Del Valle (D.), Los Angeles.  
Lake County—A. P. McCarty (D.), Lakeport.  
Mariposa and Merced Counties—W. F. Coffman (D.), Mariposa.  
Marin County—C. L. Estee (R.), Nicasio.  
Mendocino County—L. G. Morse (N. C. and R.), Point Arena.  
Monterey County—E. S. Josselyn (R.), Monterey.  
Napa County—W. J. Mackay (R.), Napa City.  
Nevada County—J. Levee (W.), Lowell Hill; A. M. Walker (W.), Truckee; J. O. Sweetland (W.), Sweetland.  
Placer County—T. L. Chamberlain (R.), Lincoln.  
Plumas and Lassen Counties—Charles Mulholland (R.), Janesville, Lassen county.  
San Francisco County—Ninth District—W. J. Simon (W.), 2,015 Hyde street; W. W. Cuthbert (W.), 1,505 Montgomery street; J. G. Garibaldi (W.), 1,516 Powell street; James R. Finlayson (R.), 1,512 Jones street.  
Tenth District—T. H. Merry (R.), 2,610 Sacramento street; W. B. May (R.), 1,114 Clay street; G. B. Ward (R.), 27 Dunn street; H. A. Gorley (R.), corner Sacramento and Devisadero streets. Eleventh District—J. J. McCarthy (W.), 270 Minna street; G. Pickel (W.), 17 Clementina street; J. J. McCallion (W.), 69 Natoma street; S. Braumhart (W.), 220 Third street. Twelfth District—J. J. McDade (W.), 1,148 Folsom street; Michael Lane (W.), 19 Powell street; John Burns (W.), 10 Broadway place; P. T. Goffey (W.), 521 Natoma street. Thirteenth District—L. J. Hardy (R.), 6 Beaver street; J. F. Cowdery (R.), 2,406 Mission street; Stephen Maybell (W.), Thirtieth street, between Church and Dolores streets; A. B. Maguire (W.), 442 Twentieth street.  
Sacramento County—Seymour Carr (R.), Michigan Bar; J. N. Young (R.), corner Fifth and J streets; Elwood Bruner (R.), J street, between Sixth and Seventh streets.  
San Diego County—C. C. Watson (W. and N. C.), Paguay.  
San Bernardino County—H. M. Streeter (R.), Riverside.  
San Luis Obispo County—H. Y. Stanley (U.), Morro.  
Santa Barbara and Ventura Counties—Milton Wason (W. and R.), Santa Paula, Ventura county.  
Santa Clara County—R. McComas (R.), Santa Clara; J. L. York (R.), San Jose; D. Frink (R.), Mountain View.  
Santa Cruz County—Elihu Anthony (W. and N. C.), Santa Cruz.

San Benito County—J. J. Harris (D.), Hollister.  
San Joaquin County—W. R. Leadbetter (W. and R.), Stockton; H. J. Corcoran (N. C.), Stockton; E. J. McIntosh (W. and N. C.), Woodbridge.  
San Mateo County—C. N. Felton (R.), Menlo Park.  
Sierra County—James Nelson (R.), Forest City.  
Siskiyou and Modoc Counties—J. R. Cook (D.), Lake City, Modoc county.  
Stanislaus County—J. D. Spencer (D.), Modesto.  
Solano County—F. A. Leach (R.), Vallejo; A. Bennett (R.), Maine Prairie.  
Sonoma County—James Hynes (D.), Petaluma; H. R. Brown (D.), Healdsburg; James Adams (R.), Santa Rosa.  
Sutter County—A. L. Chandler (R.), Nicolaus.  
Trinity and Shasta Counties—J. S. P. Bass (D.), Buckeye, Shasta county.  
Tulare and Kern Counties—A. B. DuBrutz (D.), Plano, Tulare county.  
Tuolumne County—D. Dimond (R.), Columbia.  
Yolo County—D. N. Hershby (D.), Black's Station.  
Yuba County—J. P. Brown (R.), Camptonville; T. H. Carr (D. and N. C.), Smartsville.

#### Recapitulation.

SENATE.	
Republicans.....	22
Democrats.....	5
Workingmen.....	8
Workingmen and New Constitution.....	1
Workingmen, New Constitution and Republican.....	1
New Constitution and Democrats.....	1
Workingmen, New Constitution and Democrat.....	2
Total.....	40
ASSEMBLY.	
Republicans.....	37
Democrats.....	14
New Constitution and Republicans.....	2
Workingmen.....	17
Workingmen and New Constitution.....	3
New Constitution and Democrats.....	2
Workingmen and Republicans.....	3
Union ticket.....	1
New Constitution.....	1
Total.....	80
BOTH HOUSES.	
Republicans.....	59
Democrats.....	19
New Constitution.....	1
Workingmen.....	26
Workingmen and New Constitution.....	4
New Constitution and Democrats.....	4
Workingmen, New Constitution and Republican.....	1
Workingmen and Republicans.....	3
Workingmen, New Constitution and Democrat.....	1
Union ticket.....	1
New Constitution and Republicans.....	2
Total.....	120

†Deceased.

#### Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

**APPARATUS FOR GUIDING HEADERS.**—Joshua Steves, Stockton, Cal. Patented Dec. 2d, 1879. No. 220,210. In ordinary headers, at the rear end of the beam or pole, is placed a vertical post, to which is attached, by means of pins or staples, the upright, on the lower end of which is the caster wheel, supporting the rear end of said pole. At the upper end of this upright is a horizontal tiller or guiding bar, for turning the wheel so as to direct the machine in a straight line or turn it around. The driver usually stands on a board on the pole, so that the tiller comes between his legs, and then he can operate the tiller by the movements of his body, and use his hands in moving the levers controlling the cutters. It happens frequently that in turning sharp corners or curves the driver will have to push the tiller way off to one side, and at the same time have to stop to operate the lever, both operations being difficult to do at once. The tiller is then so far off to one side, and has to be held there, that the man must lean over to that side to manage it, and at the same time operate the lever. Moreover, with the tiller made and worked in this way, the driver cannot sit, but must at all times stand up. The inventor has devised a means of guiding the header by which the driver may sit and operate the lever and tiller at once without any inconvenience. This invention will be found a great improvement in guiding headers, since it overcomes one of the most serious difficulties in this class of agricultural implements.

**REVERSIBLE PLOW.**—Ozro Haskin, Cambria, Cal. Patented Nov. 11th, 1879. No. 221,457. This invention relates to certain improvements in reversible plows in which the land-side and mold-board are alternately changed with reference to the beam, so as to turn the furrow in the same direction, as the plow is drawn back and forth across the field, being especially applicable to hillside plowing. It consists in a right and left mold-board attached to the double reversible land-side hinged to the vertical swiveling axis of the plow beam, and also in a method of holding and locking the plow in position.

**HYDRAULIC WASTE PIPE CLEANER.**—E. J. Verrue, S. F. Patented Nov. 11th, 1879. No. 221,483. This invention relates to a novel hydraulic waste pipe cleaner, and it consists in the employment of the pressure which is present in the water mains and pipes, and in a means for making a direct communication between the service-cocks and the waste pipe, whereby the pressure of the water pipe is transmitted to the waste pipe, and this pressure is enhanced to any desired extent.

The *Reno Gazette* says: The State University of Nevada is doing very well indeed this winter. There is an attendance of fourteen scholars, and the expenses are only \$2,500 a month.

#### News in Brief.

**SAMUEL PERKINS**, Chief Justice of the Supreme Court of Indiana, is dead.

By an explosion in Wurtemberg twelve miners were killed and eight injured.

A FALLING tree killed a man named Boovenhauser on the Coquille river in Oregon.

An immense meeting of the free-traders was held last Thursday at Rochdale, England.

BUT small hopes of the recovery of the Czarina are entertained at St. Petersburg.

The President has nominated Col. John C. Williams to be Consul at Swatow, China.

GENERAL MARRIAT, President of the European railroad administration in Egypt, is dead.

PARNELL and Dillon, the Irish agitators, sailed from Queenstown for New York, Sunday.

A SCHOONER arrived at Halifax reports having been chased by a pirate in West Indian waters.

A NUMBER of persons have been imprisoned in Mazatlan, accused of conspiring against the State.

TIMOTHY SULLIVAN was killed on the 17th instant, at Virginia, Nev., by falling down a shaft.

FRIGHTFUL mortality prevails among the Mussulman refugees at Rustchuck and Philipopolis.

ONE Chicago firm recently discharged 2,000 pork packers for refusing to work with non-Union men.

THE printers of Denver struck for an advance in the price of composition, and their demand was acceded to.

SENATOR CAMERON, of Pennsylvania, has been chosen chairman of the National Republican Committee.

THE evicted tenant who cudgelled a nobleman at Limerick lately has been sentenced to five years' servitude.

A DISPATCH from Quebec announces the death of three persons in a burning court-house and the injury of two others.

GEORGE M. PINNEY has sworn out a warrant for the arrest of C. F. McGlashan, of the *Truckee Republican*, for libel.

ILLICIT distillers recently attacked a party of Revenue Collectors in Georgia, wounding all of them, but were finally repulsed.

THE net earnings of the Lake Shore and Michigan Southern railroad during the past year aggregated \$6,280,000.

A STAGE coach was precipitated down an embankment seventy feet high, recently, in Bowlder canyon, Col., killing the driver.

CHICAGO has been chosen as the place for holding the next Republican National Convention, and June 3d fixed upon as the time.

A PETITION asking for the expulsion of the Mormon, Cannon, from his seat as delegate from Utah, has been received at Washington.

THE vein of platinum reported to have been discovered in South Grantville, Washington county, New York, causes great excitement.

JUDGE MORRISON has rightly decided that women are entitled to enter Hastings' Law College on the same footing and with the same privileges as men.

TWO miners were smothered by foul air in the Quandray mine, Utah, Monday afternoon. Their names were Harry Laley and James Andre; the last-named went to the rescue of Laley, and lost his life in the attempt.

I. S. KALLOCH, Mayor of San Francisco, has had the second and last bullet successfully extracted from his body. It was in the fleshy part of his arm just below the armpit, and had lain there since last August.

THE San Francisco Board of Education has made a reduction in city teachers' salaries, which operates very severely on the primary teachers, whose salaries are reduced to \$46.50 per month. The action of the Board is universally condemned.

**NITRATE OF SODA.**—An interesting pamphlet, describing the beneficial results attained by the use of nitrate of soda as a fertilizer for grain and forage crops, has been written by Mr. John Gange, and published by Thomas' Printing House, 505 Clay street, San Francisco. Tables are given showing the results in English experiments with the use of the nitrate of soda on wheat, barley and oats. For example, with barley the following among many tests is given:

No dressing.—Weight of sheaves, 1,360 pounds; straw, 23 tons; grain, 6 bushels; value of produce, £22s. 4d.  
With 3 cents nitrate of soda.—Weight of sheaves, 3,800 pounds; weight of straw, 96 tons; grain, 18 bushels; value of produce, £33s.; cost of fertilizer, £22s. 9s.; gain in value, £311s. 8d.

These results are worth the attention of grain growers and trials should be made of the material in this State. The pamphlet will be sent by Mr. Thomas, the publisher, for 10c, the charge being made merely to cover the expense of publication.

**RED-FLESHED APPLES IN CALIFORNIA AND MISSOURI.**—Some readers will remember notices in October of the red-fleshed apple thought to be from Nevada Co., Cal., and then claimed by Missouri. It seems that there were two boxes sent us, one from Missouri and one from Nevada county. The latter being sent personally to one of our publishers, was not opened until his return from the southern counties. Being opened then, the apples were found to have rotted badly, but were recognizable. Thus it appears that both Nevada county and Missouri are entitled to credit for the fruit described in our issue of October 25th, as both apples were of the same variety, evidently.





### The Falling Years.

The years have blown backward like leaves  
Grown faded and old;  
They drift into gloom as life weaves  
New buds to unfold;  
They lie in the track of the past,  
They are caught by the whirling blast  
Into gyres which vanish fast  
While the heart grows cold.

Oh, there's never a sweet spring-tide  
Can blossom again;  
And the prayer which is most denied  
To the sons of men  
Is a cry for the years that are fled,  
A prayer for the hopes that are dead,  
For spring flowers when the leaves are red,  
And the prayer is vain.

There are fruits of another year,  
But the blight is there;  
And the season has lost its cheer  
And is no more fair;  
The sons of men have prayed in vain,  
Through the winter's dreary, fitful rain,  
For the spring which will not come again,  
And the world is bare.

All things with the years pass on  
And are swept aside;  
There'll be flowers when we are gone,  
And hopes when ours have died.  
But who shall say in eternity  
There shall not an endless season be  
Of spring, that has merged for you and me  
Into autumn-tide.

—May N. Hawley, in Argonaut.

### Conducting Both Sides.

#### A Matrimonial Scrap.

A pretty good thing—that is, an impudent thing—happened away down in Eastport—the extreme upper corner of Yankee Down-East—during the summer last past, as related to me by one who was intimate in the office of the lawyer concerned. The story was thus (we must conceal the real names of the parties):

A woman whom we will call Nancy Peabody—Mrs. Nancy—came to Lawyer Grabem and stated her case plainly. She was already a married woman, and her husband had followed the sea for a livelihood ever since their marriage. On the present voyage he had been absent in the Indian ocean and Chinese sea, between two and three years, and she had every reason to believe that he was dead. In fact, she felt morally sure that he was no more. Further, she would say—and she wished to whisper it into the lawyer's ear—that the late Tarry Peabody had been very coarse and vulgar in deportment, and very illiterate; though, when questioned upon the point, she was obliged to confess that he had been as good and kind as he could be. But—she had received a very tempting offer. A man had asked her to become his wife who had a goodly property, and who could give her a good home.

The lawyer thought he understood her case perfectly; but he would prefer to discuss the matter with the enraptured swain. If he should find the other party all right, he had no doubt that he could make an arrangement that would be satisfactory.

On the following day Mr. Grabem was waited upon by Mr. George Washington Mellowpate, who said he had been sent by the Widow Peabody.

Ah! yes! Did Mr. Mellowpate wish to retain the lawyer to defend his case, in the event of future trouble through the unexpected appearance of Tarry Peabody?

Yes! Mr. Mellowpate would like to do that very thing.

And thereupon Mr. Grabem advised the loving couple to get married at their earliest convenience; and he hinted that he could perform the ceremony as well as anybody.

G. W. and Nancy, in due time, appeared in Mr. Grabem's office with a certificate and a five-dollar gold piece, and were made man and wife.

That was in early June. Just as the chill air of autumn came to make fires a luxury, who should make his appearance in Eastport but the veritable Tarry Peabody! He was not dead at all. He never thought of dying. He had been spending his time in Australia, and had come from Melbourne to Liverpool in an English brig, and from Liverpool to New York in a Yankee ship, and from New York he had come home in a coaster, traveling very cheaply all the way.

Alas! poor Tarry P! He found his wife married to another! Really and truly, he did not care so much for the woman—for he was heard afterwards to acknowledge that his first thought in landing upon the shores of Australia had been of longer freedom from the snapping and snarling of his Nancy—but he did not quite relish the idea of having his wife stolen away from him. There was human nature in that. We are all of us apt to fight over an object,

utterly worthless in itself, for what we feel to be a principle.

The returned sailor was recommended to Lawyer Grabem, and to that man's office he made his way, where he sat down, and, in his homely way stated his case. The lawyer was deeply interested. Certainly, it was an outrageous piece of imposition—the whole thing.

"I declare, my good man, you shall have your wife back, if the thing can be done. Your wife was married to Mr. Mellowpate last June. Were you alive at that time?"

"Why—in course I was! Sakcs alive! look at me now? Ain't I alive?"

"Ah,—yes, certainly; but,"—with a wondrous smile—"we must prove it to the court. We must have witnesses to swear to it, you know. Our old English law is very rigid on this point. A man cannot swear to himself,—because, don't you see?—he's an interested party,—a party of the very first and deepest interest. You can see for yourself, my dear sir, that all law would be at once made null and void—would be swept away in one fell swoop—if an interested party could swear against the interest of the State. No, no,—we must have witnesses,—two will be enough."

"But,—everlastin' Jerusha! haow'm I ter git witnesses of what I was when I wcr' away down t'other side o' Good Hope! It can't be did, sir!"

"Really, Mr. Peabody, I am sorry, but cannot help you. I don't see but that you'll have to let your wife go. If you could only prove, by good and sufficient witnesses, that you were alive on the fourth day of June last, you might do something!"

"O,—well,—dang it all! let'r go! I'm kind o' sorry, though, ter let 'em fool me so. Jerusha! ef I could only git the witnesses, wouldn't I snake that ere George Washington out o' that nice berth!—But, 'Squire,—on the whole, I don't know's I keer much, any way. Let 'em go. He's welcome to her."

Tarry Peabody paid Mr. Grabem \$10 for kindly instructing him in the law of *bodily recognition* (!), while of G. Washington and Nancy the attorney collected the snug little sum of \$50, which they had promised to pay him if he should succeed in so disposing of the original husband that he would not trouble them.

Before closing, I can hardly resist the temptation of telling of a wondrous flea-bite which Nancy received on the ear within a month of her first husband's return; and she could not hide that it hurt her. She discovered that poor Tarry Peabody had come home from Australia worth more money than her G. W. ever saw or dreamed of.—*Selected.*

### Keep a Cool Head in Business.

You know how it is. Others don't see the chances of a good speculation as you do. They don't value your securities at your figure. They will help you, but you must "come down with more mud." Then you must pay on the hour. No "three days grace." Grace has gone out of fashion. This is a day of law. You want more time? Nay, the hour has struck. A promise is a promise. More time to you means disappointment to somebody else. It is a bad way in business. It creates friction everywhere. It sours the honest, and it gives an excuse to rogues. Pay, or deliver the assets! You think this is hard. It looks as if others wanted to take advantage of your bad luck. You say hard things of them. You hurry off to the banker to see what he will do for you. Meeting a rebuff, you run to the broker, and from the broker to the private capitalist. Your head grows hot as you go. The interior pressure quickens your step. You almost strike a double-quick. The weather seems to be getting sultry. The perspiration pours from your forehead. No one sees the case just as you do. You are growing desperate.

Now right here stop and cool off. The case is probably not at all desperate, and if it were this fever would not mend it. Survey the whole situation. Take the measure of your resources. Look about, and of the score or two of ways which a cool head will always see to handle the matter before you, decide which you will try next. Take hold with a firm hand. Don't spoil the job by haste or flurry. Understand that there are nineteen other resorts if this don't carry. Do your best, and so come out of the ordeal a true man, whatever else the result.

You have been taxing body, brain and soul at a fearful rate, and needlessly. The tax returns no real service to you. A hot brain and loss of appetite will never pay a debt, or carry an enterprise through to success. They lead you into mistakes. The worst of these is hard, uncharitable thoughts of others. You adopt the creed of total depravity in business, though you have rejected it in religion. You say that human nature is an infernal scoundrel. This is the judgment of passion, not of reason. It is wrong. Human nature is a pretty good fellow if you only come up to him on the right side. Kick him and he will kick back. He will deal with you in money matters in a way that he would have confessed unfair if you had not provoked him. He justifies himself, and says it is better than you deserve. Self-possession is business wisdom. It saves friction. It sees the way round many a rock that will wreck you if you strike it; and it oils the axles that bear the heavy loads. Never work in a flurry.—*Work and Play.*

### Saved by his Wife's Letters.

A story was told not long since in a Denver court of how a wife's letters and a child's picture saved a man's life. The narrator said:

On a hot day in July, 1860, a herdsman was moving his cattle to a new ranch further north, near Helena, Texas, and passing down the banks of a stream other cattle that were grazing in the valley became mixed with his herd, and some of them failed to be separated.

The next day about noon a band of about a dozen mounted Texan rangers overtook the herdsman and demanded their cattle, which they said were stolen.

It was before the day of law and court-houses in Texas, and one had better kill five men than steal a mule worth five dollars, and the herdsman knew it.

He tried to explain, but they told him to cut it short.

He offered to turn over all the cattle not his own, but they laughed at the proposition, and hinted, that they usually confiscated the whole herd, and left the thief hanging on a tree as a warning to others in like cases.

The poor fellow was completely overcome. They consulted apart for a few moments and then told him if he had any explanations to make, or business to do, they would allow him 10 minutes to do so and defend himself.

He returned to the rough faces and commenced—

"How many of you have wives?"

Two or three nodded.

"How many of you have children?"

They nodded again.

"Then I know who I am talking to, and you'll hear me," and he continued—

"I never stole any cattle. I have lived in these parts over three years. I came from New Hampshire. I failed in the fall of 1857, during the panic.

"I have been saving. I have no home here; my family remain East, for I go from place to place. These clothes I wear are rough, and I am a hard-looking customer, but this is a hard country. Days seem like months to me, and months like years.

"Married men, you know that. But for the letters from home (here he pulled out a handful of well-worn envelopes and letters from his wife) I should get discouraged.

"I have paid part of my debts. Here are the receipts," and he unfolded the letters of acknowledgment. "I expected to sell out and go home in November.

"Here is the Testament my good mother gave me; here is my little girl's picture;" and he kissed it tenderly, and continued—

"Now, men, if you have decided to kill me for what I am innocent of, send these home, and send as much as you can from the cattle when I'm dead. Can't you send half the value? My family will need it."

"Hold on now; stop right there," said a rough ranger. "Now, I say, boys," he continued, "I say, let him go. Give us your hand, old boy; that picture and them letters did the business. You can go free, but you're lucky, mind ye."

"We'll do more than that," said a man with a big heart, in Texan garb and carrying the customary brace of pistols in his belt, "let's buy his cattle here and let him go."

They did, and when the money was paid over, and the man about to start, he was too weak to stand. The long strain of hopes and fears, being away from home under such trying circumstances, the sudden deliverance from death, had combined to render him helpless as a child. He sank to the ground completely overcome.

An hour later, however, he left on horseback for the nearest staging route, and as they shook hands and bade him good-by, they looked the happiest band of men I ever saw.

HOME.—Love and virtue are the same the world round, and justice is the same in every star. The languages of the earth are not sufficient to express the filth of polygamy. It makes of a man, a beast; of a woman, a trembling slave. It destroys the fireside, makes virtue an outcast, takes from human speech its sweetest words, and leaves the heart a den where crawl and hiss the slimy serpents of most loathsome lust. Civilization rests upon the family. The good family is the unit of good government. The virtues grow about the holy hearth of home—they cluster, bloom, and shed their perfumes round the fireside, where the one man loves the one woman. Lover—husband—wife—mother—father—child—home!—without these sacred words, the world is but a lair, and men and women merely beasts.—*Col. Robt. G. Ingersoll.*

MAKING THE BEST OF IT.—The story of "the fox and the grapes" has good philosophy in it, after all, as we see when it is put in such a form as this: A little child was chasing a butterfly with golden wings. Whenever it alighted near her, she tried to seize it with her tiny hand, but it always arose triumphantly and fluttered over her head, as if to mock her futile effort. Wearied at last, she threw herself upon the ground, and with a look of sweet resignation, exclaimed, "Well, no matter, it might have stung me." While smiling at the little one's philosophy, we could but breathe the prayer that in after years, when golden insects should flutter around her and elude her eager grasp, the same kind spirit might come to her aid, and whisper, "It might have stung me."

### Fatal Results of Monomania.

The death of Miss Hattie Lucas, of Oakland, by her own hand, at the age of 20, is a sad event for which it is difficult to account. Amiable in disposition, singularly self-devoted to the happiness of her friends, habitually cheerful, with no occasion, as far as others could see, of depression or gloom, why should she fly from life? Her letter left for her parents did not express her purpose to do the fatal deed, only the fear that she might. It said that from early childhood she had longed to die. A young friend remembers that she said to him a few months ago she wished to die by a pistol shot. The purchase of the weapon seems to show that she deliberately prepared to take her own life. Yet it is doubtful whether she had ever seriously contemplated such an act before. It was probably a thought that was allowed to return again and again till it gained that strange fascination from which the will is powerless to withdraw the mind. It became monomania. A warning not to brood over a dangerous suggestion! The best remedy for such thoughts is diversion of the mind to other subjects. The best diversion is a consecration of the life to the highest interests of humanity—an estimate of its value from the service which it may be made to render to the world. We can speak no words of censure in this case. We can only commend to the afflicted family the comfort of the thought that their great sorrow came not from any evil in the life of the one they so greatly loved.

The following pathetic letter, written to her father, mother and brother, shows the singular state of mind in which she has been from childhood:

My Dear Papa, Mamma and Fred:—Ever since I can remember, the strange wish to die has been the one strong desire of my life. I knew that it was unnatural and wicked, and I tried to fight against it, and to really live and take an interest in the things of life. For two or three years I had some hope I was growing away from the longing, though I never knew a moment that I would not gladly have died if I might. Oh, papa, you understand me—you know what I mean, don't you? I haven't watched you the last year or two, without knowing that you, too, were enduring as I endure. What is it? What has caused it? This terrible restlessness, and a feeling that you can't think—only one thought. When other girls were planning and telling of their hopes for the near future, and when they believed me happy and as interested as they, this thought, "Why was I ever born to be so unlike other people?" was continually in my mind. Every one I have ever known has tried to do for me and to make my life full of happiness. This is such a beautiful world, it seems as if every one ought to enjoy it, and be happy. Sometimes I have glimpses of what life might be, without this terrible mania; but I can't—I can't get away from it for long. My late physical disorder seems to have made me more morbid, and when my head aches worst, gives me a desperate sort of a feeling, that makes me afraid of myself sometimes. That is why I am writing this, so if anything should happen to me, you will know what I never could tell you. Mamma, do you think I don't know what a loving, self-denying life yours has been? When I think what you have done for me, it seems as if I can, I must live, if only for your sake. Then the maddening thought comes back, I could never do anything, or be anything, with only one thought. It almost makes me frantic. But I have to leave them or they would take me to Stockton. I have seen myself there night after night of late. I can remember two or three times, mamma, when I was quite a little girl, that I told you I wished that I might die. You told me I must not say so. Once I told Nora about it, a long time ago; but I think she remembers, for she has spoken of it since as so strange. If you should ever read this when I am not here, strange as it may all sound to you, you can believe it, for it is truth, and whatever else I did, or did not do, I always told you the truth, you know. Oh, I hope, I pray, that Fred is free from that! Insanity, is it? This being controlled by one thought—he must make a good man. Papa, keep up as you have done. I realize, better than anyone else can, what you have to suffer. And now, good-by, with all the love that I can give. Tell grandma good-by for me. Such a dear, dear old lady, she is! Somebody must always take very good care of her and make her happy. Give my love, besides, to the dear girls, and to all who have ever cared for me. Good-by, good-by. Yours now, as always, HATTIE.

SABBATH THOUGHTS.—EDITORS PRESS:—How beautiful the sunshine appears this Sunday morning after our spring-like rains. Blessed are the Californians for they see plenty, prosperity and pleasant days. Would that we had your privileges of the city churches, when Sabbath morn comes weekly around; but we cannot have all the good things of life. We have the grandeur of nature spread before us in the varied mountain scenery. The Sierras are grand in the extreme. The voices of the pine and cedar bespeak life, motion and the power of God. Rivers mingle a song in harmony with the lark as it soars aloft to voice its musical offering. Man seems to be the only creature capable of reflection upon topics above and beyond the natural vision. But does not instinctive life teach us many lessons to be true to nature in all her laws divine? By becoming en rapport with our surroundings we may worship nature's God acceptably, though not in cathedrals built by man. God's cathedral spans the heaven, and his loving care is just as great to the lowly of life as to the gilded worshiper at golden shrine.—JOHN TAYLOR.

MAN goes out upon the storm-lashed billowy tides of old ocean, down into her darkened caves, and there, where the light is dim and the weight of water seems about to press the life out of his body, he gathers the pearl whose brilliancy and purity are to be the wonder of half a world. We go out upon the ever shifting tide of life, down into the gloomy caverns of sorrow, and there, when Reason's light is dim and wavering, and our hearts all but crushed beneath the "weary weight of woe," we find the gem Experience—the pearl above all price.



## Horticulture and the Home.

Men build houses enough, says the *American Cultivator*, but houses are of little worth unless they make homes; and less is the consequence about the size and furnishings of the house, provided it is a spot sacred from intrusion, and a home in the truest meaning of the word. Such a home it is the duty of every man to provide; it is his duty to make it bright, and pleasant, and attractive without, and to assist in diffusing within a refined and cultivated taste. So far as the exterior beauties of home are concerned, horticulture, pomology, and landscape adornment offer the widest scope for its embellishment. There are no forms so graceful and symmetrical as are presented to us in the numberless shrubs, trees and plants; and no colors so brilliant and harmonious as those which the almost endless varieties of flowers present, as these may all be so controlled and planted as to add beauty and loveliness to the most humble home. The points connected with the embellishment of home grounds are so well stated in a paper on "Aesthetics in Horticulture," furnished to the last report of the Michigan Pomological Society, by Hon. W. K. Gibson, that we present from it the following extract:

Every door-yard and lawn may be made to furnish perpetual lessons of beauty. Trees and flowers may be so grouped as to suggest nature in her most natural and attractive forms. We can surround the home with the choicest works of nature, far more perfect as models of taste than any painting or statuary with which we ornament our dwellings. Has such ornamentation no power over the life? Does it merely please the eye, and stop there? Not so. Day by day these forms of beauty, these graceful groupings and harmonious blendings of colors, are stealing in upon the soul through the senses, refining the heart and cultivating the intellect. We can never improve upon nature; and every tree we grow, and every flower which blossoms in our gardens, attains a perfection which no art can equal.

By means of horticulture we can add a grace and beauty and refinement to home life which art could not bestow except at the expenditure of larger means than most of us possess.

The power of a home surrounded and made beautiful and attractive by the exercise of a cultivated taste can hardly be measured. Under its influence children grow up happy and contented, all purer and better emotions are awakened. The soul is drawn into close relationship with nature. Vice and everything unlovely and inharmonious becomes hateful to a mind thus cultured, and character formed under such influences has a symmetry and grace which, while it detracts nothing from its strength, adds much to its influence and potency.

But I realize that words of caution are necessary, lest, as is too often the case in our efforts to imitate nature, we go too far and do too much. Next to having no love for horticultural adornment is the evil of having too florid a taste, which caricatures rather than imitates nature.

## Chaff.

It must have been slippery weather when the prodigal son returned, as it is recorded that the old man "fell on his neck."

"WHAT dogs are these?" inquired a gentleman of a lad who was drawing a couple of terriers along. "I dinna ken, sir," replied the boy; "they cam' wi' the railway, and they ate the direction, and dinna ken where to gang."

A YOUNG lady who had been married a little over a year wrote to her mother-of-fact old father, saying: "We have the dearest little cottage in the world; ornamented with the most charming little creepers you ever saw." The old man read the letter and exclaimed: "Twins, by thunder!"

A GOOD parson complained to an elderly lady of his congregation that her daughter appeared to be wholly taken up with trifles or worldly finery, instead of fixing her mind on things above. "You are certainly mistaken, sir," said she. "I know that the girl appears to an observer to be taken up with worldly things; but you cannot judge correctly of the direction her mind really takes, as she is a little cross-eyed."

"DAT cullud pussun on de jury, him's de man I objec' to," said a negro when put on trial in the Marion, S. C., court the other day. The black good man and true was unseated, and the prisoner given acquittal. After his release the darkey was asked what he had against a jurymen of his own color. "Nuffin at all, boss," said he, "but, ye see, I knowed if I flattered de prejudus ob de odder jurymen dat I get off, an' golly I did."

TREATMENT OF GOLD-FISH.—Seth Green says this as to the proper care and treatment of gold-fish: "Never take the fish in your hand. If the aquarium needs cleaning, make a net of mosquito-netting and take the fish out in it. There are many gold-fish killed by handling. Keep your aquarium clean, so that the water looks as clear as crystal. Watch the fish a little, and you will find out when they are all right. Feed them all they will eat and anything they will eat—worms, meat, fish-wafer or fish-spawn. Take great care that you take all that they do not eat out of the aquarium; any decayed meat or vegetable in water has the same smell to fish that it has to you in air. If your gold-fish die, it is attributable, as a rule, to one of three causes—handling, starvation or bad water."

## Young Folks' Column.

## Our Puzzle Box.

## Numerical Enigma.

I am composed of thirteen letters.  
My 3, 5, 1 is a nickname.  
My 2, 4, 6 is to be ill.  
My 9, 10, 12 is a measure of surface.  
My 7, 8, 11 is the lair of certain wild beasts.  
My 13 is in formidable.  
My whole is the name of a popular English novel.

UNCLE CLAUDE.

## Blanks.

[Annex a letter to the first word to form the second.]  
1. By his exposure the — count was covered with confusion and —.  
2. We — of sad afflictions of the —.  
3. A few hours after being — the child was — by the nurse to the river.  
4. I — the man — his time.  
5. How — is it to Hampton, and what is the —?

UNCLE CLAUDE.

## Dropped Letters.

S-e-n-n-s-a-o-i-t-r-i-g-e,  
A-d-h-h-u-s-o-w-e-a-d-a-r,  
C-a-g-f-l-o-t-o-w-a-y-g-s,  
T-r-u-h-h-w-i-h-o-w-e-h-y-e-r.  
Y-t-h-c-p-f-r-e-b-l-e,  
M-y-c-o-s-o-h-a-i-g-i-e,  
A-d-u-f-n-r-l-a-p-b-w-i-h-i-e,  
O-t-e-u-e-w-l-s-f-e-r-n.

H-p-y-o-r-l-o-w-r-s-a-n-v-r  
H-l-t-e-r-e-t-o-m-a-i-g-i-e;  
H-w-h-i-b-n-d-i-n-r-g-t-u-  
A-l-h-w-r-d-n-h-e-w-l-v-l  
G-l-e-h-u-s-i-e-h-n-n-h-a-l-n-s,  
J-i-g-'e-t-c-i-e-f-i-e;  
R-s-n-o-r-h-w-e-k-o-s-r-o-  
C-o-n-d-i-h-a-e-t-s-b-i-e.

MELANCHTON.

## Problem.

If this and that and half of this and that equal eleven, what is this and that?

A. B. C.

## Transpositions.

I am 'ardy; transpose, and I am a narrative of incidents; transpose again, and I am a piece of foreign money.

GEORGE.

## Answers to Last Puzzles.

NUMERICAL ENIGMA—Boston tea-party.  
TRANSPPOSITIONS—1. Superior. 2. Hudson. 3. New Orleans. 4. Haddock.  
PROBLEM—Five and one-fourth cents.  
LETTER CHANGES—1. Bight: fight, might, light, night, right, sight, tight. 2. Cast: fast, last, mast, vast. 3. Bun: fun, gun, nun, pun, run.

## Sammy's Morning Walk.

It was the same Sammy who was nearly choked by a caterpillar when he was trying to steal sugar out of the sugar-bowl.

One cool morning in the fall, when he was about four years old, he slept very late, and when he awoke he seemed to be all alone in the house. To tell the truth, it was so late that the older children had all gone to school, and his mother was out behind the shed hanging out clothes. Sammy found his little jacket and trousers, and taking them on his arm went all over the house for some one to dress him, but nobody could he find.

"I know what I'll do!" he said to himself; "I'll go over to Mrs. Packer's. She's a good woman, and she'll dress me."

He had never been over there more than two or three times, for his family had lately moved there, and the house was quite out of sight over the hill, "across lots," but he remembered the way, and trudged along.

It was a frosty morning, and the weeds and bushes he had to go through were as high as his head, and so wet that when he got there his little shirt and the clothes he carried were as wet as if they had been dipped in the brook.

Mrs. Packer was very busy working over butter, when she heard a very gentle tap at the door. "Come in," she said, both hands being in the butter.

In came Sammy, dripping like a drowied rat, and his legs so covered with the blossoms from the golden-rod through which he had come that they were as yellow as a Brahma chicken's.

"Why, Sammy Brown!" exclaimed Mrs. Packer.

"Our folks were all gone, but I knew you would dress me," said Sammy, sitting calmly down by the stove.

Luckily for Sammy, Mrs. Packer had a house full of boys, so she could send him home in some dry clothes. And one of her big boys carried him home on his back through all the high weeds and grass, and put him over the fence into his father's yard.

"How late Sammy does sleep this morning!" his mother was just thinking when the front door opened and he came in.

"I'm dressed, mother," said Sammy. "But these are Billy Packer's clothes, for mine was awful wet. And oh! my legs was just as yellow as they could be when I got there. It's a pretty cold, damp morning."

"Sammy Brown!" his mother began. But then she had to stop and laugh.—*Youth's Companion*.

SMALL BOY to his maternal relative:—"Mamma, I should think that if I was made of dust I would get muddy inside when I drink." Quite right, S. B.; quite right. And if you drink too much, you may fall down and get muddy outside too.

A RATHER gayly-dressed young lady asked her Sunday School class what was "meant by the pomp and vanities of the world." The answer was honest, but rather unexpected: "Them flowers on your hat."

## GOOD HEALTH.

## Brain Growth.

The question is often asked: "How long does the brain of an individual continue to grow?" Some have an idea that it attains its full growth at the age of 20 years; and we have seen assertions, professing to be from medical authority, that the brain attains its growth at about 14 years; but no close observer, no phrenologist who has had opportunity to measure thousands of heads, and to measure not a few of them, say once in five years for twenty-five years, will believe a word of it.

In many cases the brain will increase in size till a man is 60 years of age, provided he have a healthy, vigorous body, and live correctly, so far as diet and labor are concerned, and the mind be kept in an active, but not over-excited state.

Any sharp observer may enter 50 churches in succession, when the congregations are full, and he will readily see that the gray-headed father, sitting at the head of his family with his son 25 years of age by his side, will have a considerably larger head than his son. In numerous cases this can be remarked in looking up and down the aisles. The old gentlemen's heads are the largest. If we revisit the same church 30 years afterward, we will find the energetic son with gray hair sitting at the top of the pew, and his son at his side; and the older man will have a head larger than the hopeful son—showing that it had been growing up to 50 years of age or beyond. We have just received a letter from Mr. L. N. Fowler, of London, which contains one remarkable passage. Mr. Fowler says: "I shall send you soon the phrenological character of Sir Josiah Mason, of Birmingham, England. In 1864 I measured his head, which was 23½ inches; in 1869 it measured 24 inches; and now, in 1879, it measures 24½ inches, plump; and he is now in his 55th year."

The law of growth, in respect to the brain, is the same as that relating to growth of body. If a muscle, or set of muscles, be called into frequent and efficient exercise, they become thereby hungry for nutrition; and when the blood is passing those parts, the nutriment carried in the blood is absorbed by the parts needing it, and they become enlarged. A broken bone needs at the point of fracture bone-making material, and the blood which carries nutrition for every part, as it passes the region of the fracture, loses by affinity the material which the bone wants to repair the fracture. As the blood passes a flesh-wound, that part of the blood adapted to heal the wound is taken up and used where it is required. Let a person exercise the brain in the intellectual or thinking region and the forehead will grow, while other parts remain stationary. Persons engaged in rough, laborious business need the exercise of the base of the brain, and that part of the head will grow; but if the labor require also the active exercise of the intellectual organs, the two regions will become enlarged accordingly. Those who devote themselves mainly to moral and esthetical subjects will be found with a larger top-head; and those who have body enough to give adequate support to the whole system, including the brain, will be able to increase the size of the brain year by year by the general exercise of all the faculties until old age. The body increases in size in old age, why not the brain? Generally there is not vigor enough in the vital system to sustain the body and push the development of brain beyond the age of 50; but there are cases which we happen to know, proving brain growth until after 60 years of age.

Some persons think it impossible for the brain to increase in size after the bones of the skull have become hard and strong. When the brain requires more room in any part, the bone material of the skull is gradually absorbed or dissolved, and, like lime-water, is taken up by the circulation to be reorganized into new adjustments of the skull, large enough for the brain. The clam shell is as thick as a human skull and much harder, yet a clam will double his size in two or three years, during which time the entire shell will have been reconstructed on a larger pattern in every direction. The clam is never imprisoned or cramped by his shell; he is, like the brain, simply protected and shielded as by a friend. The shell is alive, and so is the human skull, like the finger nails, or the hoofs of animals, and capable of rapid growth, though the process be to us imperceptible.—*Phrenological Journal*.

CONGESTIVE HEADACHE.—The use of the old domestic remedy, a tight bandage, during the attack is useful. I make use of a rubber bandage, applied thoroughly from the eyes up, with a thin pad over each temporal artery, if the temporal ridge be sharp enough to keep the bandage from compressing the arteries. Instead of rubber, a well applied muslin bandage may be put on and then wetted, using compresses over the temporal arteries. The comfort thus given is sometimes surprising.—*Sanitarian*.

A NEW DANGER FROM RABBITS.—Referring to a recent death at Kerang from hydatids of the liver, a correspondent of the *Bendigo Advertiser* states that the rabbit nuisance is likely to soon come to the front in another form, it being an expressed medical opinion that this disease, which is another name for fluke, is spread by the use of rabbit's flesh for human food.

## DOMESTIC ECONOMY.

COOKING RABBIT.—A correspondent of the *Country Gentleman* gives the following: Let the rabbit be skinned and disemboweled cleanly. Care must be taken to remove the lower bowel with the rest, clear to the tail, without breaking it. Wash the carcass in salt water, if discolored by shot. Cut it into eight pieces without the head; put these, with the head, into a stewpan, with as little water as will cover them, and with a few slices of the best thin salt pork. Make a paste of flour as for biscuit; cut in strips and add a dozen strips to the stew; add sufficient salt, pepper, a very little onion, and whatever spice may be desired, such as three or four cloves, and stew the whole gently for two hours. It is then done. This is the grand *piece de resistance*, which may be served on toast, soda biscuit, or with any other garnishment or addition that any lady reader may think proper. A more refined manner of cooking a rabbit is to stew it with mild onions, in milk, and serve on toast. A method common in Europe is to cut up the rabbit, and put the pieces into an earthen jar, with a little burnt onion to color the stew; as little water as possible—some rich gravy is used frequently in place of water—a quarter of a pint of port or Burgundy wine, spice (as a piece of mace, nutmeg, etc.), salt, pepper, and whatever other seasoning may be desired; cover the jar closely, and set it in a moderately hot oven until the rabbit is cooked tender. A roasted rabbit is very good, if it is well larded with strips of pork and stuffed with a few slices; especially if spitted on a hickory stick and roasted before clear wood coals, upon two forked branches stuck in the ground. It might be equally good if roasted in a house; but without larding, it is as dry and tasteless as a piece of cork.

CHICKEN SALAD.—Boil fowls tender, and pick clean, using no skin; do not cut the chicken in too small pieces—must not be hashed; to one chicken put twice and a half the weight of celery, cut in pieces of about one quarter of an inch, mix thoroughly, and put the chicken and celery on the ice. Dressing: The yolks of four eggs, with the yolks of two hard-boiled eggs. Rub these as smooth as possible before introducing the oil; a good measure of oil is a tablespoonful to each yolk of fresh egg. All the art consists in introducing the oil by degrees; you can never make a good salad against time. When the oil is well mixed put in salt, two good, heaping tablespoonfuls; good, dry table salt is a necessity, and one teaspoonful of white ground pepper. Never put in salt or pepper before this stage of the process, because the salt and pepper would coagulate the albumen of the eggs, and you cannot get the dressing smooth. One tablespoonful of vinegar, added gradually, with a teaspoonful of tarragon vinegar. Make the dressing in a vegetable dish, large enough to hold the whole salad; then, when you have mixed the chicken and celery in it, turn it into your salad bowl. Mix very thoroughly; clean the sides of your salad bowl with a cloth or a bit of bread—a smeary salad bowl is an abomination. Stand the whole in a cool place until ready to serve. Too much dressing is really a greater mistake than too little. The crispness of celery in a salad is very evanescent, and a chicken salad should be eaten shortly after dressing. If a great deal of salad, as for a supper, has to be made, work up your dressing a half hour beforehand, and mix when wanted. If a chicken salad stands too long, it loses all its excellence. There ought to be no red pepper in a chicken salad; its characteristics should be blandness.

TO CATCH RATS.—Cover a common barrel with a stiff paper, tying the edge around the barrel. Place a board so that the rats can have easy access to the top. Sprinkle cheese or other bait on the paper, and allow the rats to eat there unmolested for several days. Then place in the bottom of the barrel a stone six or seven inches high and pour in water until all the stone is covered, except for a space about big enough for one rat to crawl upon. Now replace the paper, first cutting a cross in the middle. The first rat that climbs on the barrel-top goes through into the water, and climbs on the stone. The paper comes back to its original position, and the second rat follows the first. Then begins a fight for the possession of the dry place on the stone, the noise of which attracts the others, who share the same fate.

TO PRESERVE SMOKED MEAT.—The keeping qualities of smoked meat do not depend upon the amount of smoking, but upon the uniform and proper drying of the meat. It is of considerable advantage also to roll the meat on its removal from the salt, before smoking, in sawdust or bran. By this means the crust formed in smoking will not be so thick; and if moisture condenses upon the meat it remains in the bran, the brown coloring matter of the smoke not penetrating. The best place to keep the meat is in a smoke-house, in which it remains dry without drying out entirely, as it does when hung in a chimney.

ENGLISH PLUM PUDDING.—One pound of raisins after they are stoned, one pound of currants, one pound of suet finely chopped, one half ounce each of cloves and cinnamon, two nutmegs, a little grated orange and lemon peel, also a little mace, eight eggs, one pound of flour (a little more), one pound of sugar, one pint of milk; boil four hours, and when served stick top and sides full of blanched almonds and slices of citron cut very thin.





DEWEY &amp; CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 202 Sansome St., N. E. Corner Pine St.

ANNUAL SUBSCRIPTIONS, \$4; six months, \$2; three months, \$1.25. When paid fully one year in advance, FIFTY CENTS will be deducted. No new names will be taken without cash in advance. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.  
Per line..... 25 .80 \$2.00 \$ 6.00  
Half inch (1 square)..... \$1.00 \$3.00 7.50 24.00  
One inch..... 2.00 5.00 14.00 40.00

The Scientific Press Patent Agency.

DEWEY &amp; CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

Quack Advertising positively declined.

Our latest forms go to press Wednesday evening.

SAN FRANCISCO:

Saturday, December 27, 1879.

## TABLE OF CONTENTS.

EDITORIALS.—The Flight of Time; The Zante Current Industry, 401. The Week; The Close of the Volume; Gas Lime as Manure; The Legislature of 1880, 403. Letters from Southern California.—No. 9; A New Fruit Gathering Apparatus; Spring Tooth Harrow, 409.

ILLUSTRATIONS.—New Year's Reflections, 401. Honey Extractor, 403. Titus' Portable Ladder; Batchelor's Spring Harrow, 409.

QUERIES AND REPLIES.—Peanut Growing; Flax Growing; A New Hybrid Tomato; Sugar Beet Seed, 408.

CORRESPONDENCE.—Observations in Kansas, 403.

THE DAIRY.—Limburger, 402.

THE SWINE YARD.—Origin of the Poland-China Breed, 402.

THE FIELD.—The Potato Disease; The Sorghum Cane Industry, 403.

THE APIARY.—The Honey Extractor, 403.

HORTICULTURE.—Characteristics of the Japan Persimmon, 403.

PATRONS OF HUSBANDRY.—Decision in the California Farmers' Mutual Insurance Co. Matter; National Ranch Grange Meeting; Wheatland Grange; Burial; Election of Officers, 404.

AGRICULTURAL NOTES from the various counties of California, 404 5.

MISCELLANEOUS.—The State Government, 1880, 405.

NEWS IN BRIEF on page 405 and other pages.

HOME CIRCLE.—The Falling Years (poetry); Conducting Both Sides; Keep a Cool Head in Business; Saved by His Wife's Letters; Home; Making the Best of It; Fatal Results of Monomania; Sabbath Thoughts; Horticulture and the Home; Chaff; Treatment of Gold-Fish, 407.

YOUNG FOLKS' COLUMN.—Our Puzzle Box; Sammy's Morning Walk, 407.

GOOD HEALTH.—Brain Growth; Congestive Head-ache; A New Danger from Rabbits, 407.

DOMESTIC ECONOMY.—Cooking Rabbit; Chicken Salad; To Catch Rats; To Preserve Smoked Meat; English Plum Pudding, 707.

## Business Announcements.

New Althouse Windmill, L. H. Woodin, S. F.  
Felix Gillet's Nursery, Nevada City, Cal.  
Japanese Persimmon, Henry Loomis, S. F.  
Berkshires For Sale, Alfred Parker, Bellota, Cal.  
River Bank Nursery, L. F. Sanderson, Prop'r, San Jose.  
Seeds, D. M. Ferry & Co., Detroit, Mich.  
Peruvian Guano, John Parrot, S. F.  
Agents Wanted, Sherman & Co., Marshall, Mich.

## The Week.

We are enjoying this week what may be called a semi-tropical chill. The north wind brings sharp sniffs of polar atmospheres, and sitting near our open fires we are reminded of the New Yorker's description of his experience with open grates—roasted in front and frozen in rear. For the once we would almost be tempted to welcome the blazing, lime-kiln-like stacks of incandescence with which our Eastern friends warm their dwellings. Out of doors on Tuesday morning we found evidence that on the eastern bay shore the mercury had slipped from an eighth to a quarter of an inch below the freezing point, and had glazed the puddles to that thickness, while the hardened mud reminded us of a condition which Easterners would hail as a "good bottom for sleighing." And yet as we shiver and rush to shelter we blush for our endurance, for the thermometer marked but 27° as the lowest point—certainly a mild style of cold; for our orange trees were unharmed by a much lower temperature last January. On Wednesday morning a lower point was reached, the effects of which are yet to be seen. By the way, the year 1879 was both capped and shod with ice. Twelve months ago the cold was attributed by some to a lack of rain, now, our locks are frosted while they are still dripping with recent and unwonted drenching. The weather is an accommodating dame, with a smile of approval for everyone who claims acquaintance with her. She is everything to everybody, and yet, just now, paradoxical as it may appear, she turns a very cold shoulder to all.

THE Bank of Virginia has suspended, and a creditor has attached the concern.

## The Close of the Volume.

Again the compilation of an index forces upon us a review of the many topics which have been presented to our readers during the half year now closed. As we remarked last week, we are sure the PRESS is steadily improving in the amount of varied and useful knowledge, especially relating to the practice of agriculture in this State, which is brought forward. This is partly owing to the fact that our contributors are constantly becoming richer in experience and in understanding of the conditions under which they work. By far the greater part of the articles which appear in the PRESS are written in the farm houses of the State and by those who are themselves doing the acts which they commend to others. We believe in this style of agricultural journalism, and we shall extend it in our columns just as far as we are able. The city agricultural writer, although his intention may be the best in the world, is necessarily restricted in his views, and apt to be rather ancient in his facts and stale in his deductions. He is destined to revolve time and again within the circle of his set subjects, and, though he may rearrange his statements, he will contribute but little to the general fund of ascertained facts. It is our desire to keep as far from this conventional style of agricultural journalism as possible. The country air must circulate through the establishment; the odor of freshly-turned soil must be discernible, else the farmer will find his paper lagging far behind him in the progress of his industry. Therefore, it is with satisfaction that we discover in the present volume so many important topics presented by those who themselves lead in thought and deed in the lines they describe. With this co-operation from our readers, we are confident of serving them well and of maintaining the proud position which they accord the PRESS in the journalism of this coast.

Let the past be but the promise of the future. We ask every friend we have, throughout the length and breadth of the State, to aid us in extending the circulation of our paper, for this must be the measure of its improvement and of its good services. Speak in our behalf a word in good season to any friend or neighbor who is interested in the subjects we present, and we will do our best to justify the confidence you place in us.

GAS LIME AS MANURE.—We lately had an item to the effect that the Napa viniculturists were securing refuse lime from the gas works for use on their vineyards, both as a fertilizer and as an insecticide. In this city there are considerable quantities used for filling in cellars before cementing the floor, for the purpose of preventing rats from undermining or boring into the cellar. As the material is beginning to be recognized here as of horticultural value, we consider it timely to give a note concerning its composition and uses as set forth in French experiments. It is shown to be a manure of considerable fertilizing power. Submitted to qualitative analysis the presence of a certain proportion of cyanides is revealed, and quantitatively its average composition is found to be as follows:

Carbonate of lime.....	54.34
Caustic lime.....	15.00
Organic matter and carbon.....	17.50
Sand and clay.....	12.00
Undetermined matters.....	1.16

Total..... 100.00

An estimate of the nitrogen gives its proportion as 0.909%. From the quantity of nitrogen and assimilable lime salts which it contains, the material should, therefore, form a good manure, more especially for artificial pastures. Employed in large quantities it colors the vegetation blue, in consequence of the action of the iron and hydrocyanic acid it contains, and under this influence the plants die. On the other hand, its employment in moderate proportions is attended with very good results, more especially upon clayey soils. This is a suggestion for those who have adobe soils to improve, and upon which lime is known to be very beneficial. The caution is against excessive use of the material for the reason stated above.

HONORS TO AN AGRICULTURIST.—It is entertaining to read of a statue being erected to a man because of his services to agriculture. Such a thing has just been done in France to the memory of Claude Bourgelat, the founder and originator of veterinary schools in France. The ceremony of inauguration was presided over by M. Eugene Tisserand, Director of Agriculture, and others who took occasion in their speeches to dwell upon the valuable services to France in general, and to agriculture in particular, rendered by Bourgelat during his life of active usefulness. We have need in this country of just such services to agriculture as those performed by this honored veterinarian. The whole popular idea of the veterinary surgery must be modified. "What," does the reader say, "a statue to a cow doctor?" No; not that. Proper recognition of an enlightened worker in the interest of our noble domestic animals and their owners. This is the work to be done: that the reward.

GEN. GRANT says he has not yet accepted the Presidency of the Nicaraguan Canal Company.

## The Legislature of 1880.

On page 405 of this issue we present the names of those entrusted with the executive, judiciary and legislative functions of our State Government in the immediate future. It is too soon to praise, too soon to blame them. They come before the public for trial, and we can but enjoy the confidence, born of hope, that they will prove conservators and promoters of the great interests entrusted to their care. If such prove the general character of their work, the praise of good citizens will be their reward.

The events of the coming winter at Sacramento will be of immeasurable importance in the progress of our State. Never in our history has a more critical juncture occurred in our affairs. The new Constitution is to be reduced to practice, and to be directly applied to the interests of the people. It will be no small task to thus attain the successful application of principles. We have no doubt that those named as members of the two houses will go to Sacramento determined to do the best they can for the welfare of the State, and if the provision of the new Constitution against lobbying keeps them free from the evil influences which beset all legislative bodies, we can look forward to the coming weeks with much confidence. Thus we trust the events will prove.

The agricultural interest of the State deserves far better treatment at the hands of the law-making power than it has hitherto received, but in dispensing merited attention there will be opportunity for the exercise of much wisdom. Doubtless there will be measures proposed ostensibly in the interest of the industrial advancement of the State which will partake rather of the nature of individual or class emolument. It will be our prerogative, as the accredited representative of the agricultural interest, to guard against the enforcement of such policies upon the public, and our columns will be open for the expression of such truths as will be of value for the guidance of the Legislature in this direction. We shall take occasion, when it seems timely, to urge a number of measures which we believe will prove of the utmost importance in fostering and promoting our leading industry, measures which have been hitherto overlooked.

To the new State officers and legislators we extend the sincerest consideration and desires for the straightforward and successful prosecution of their arduous tasks. Their life and effort now belong to the State: let them see to it that the State shall be profited by its inheritance.

## QUERIES AND REPLIES.

## Peanut Growing.

EDITORS PRESS.—Will you give some information concerning the growing of peanuts in this State, the regions commonly producing them, and some points on the general culture of the crop.—READER, San Francisco.

Peanuts in this State are chiefly produced in eleven counties, which, with the acreage and product of each in 1878, as reported by the Surveyor-General, we give in the following:

	Acrea.	Lbs.
Amador.....	4	1,600
Los Angeles.....	80	80,000
Merced.....	5	2,300
Sacramento.....	142	150,000
San Bernardino.....	30	15,000
San Joaquin.....	10	2,000
Stanislaus.....	5	7,500
Sutter.....	20	2,175
Tehama.....	100	175,000
Tulare.....	4	1,350
Yolo.....	36	39,600
Totals.....	436	476,628

This would give an average yield per acre of about 1,090 lbs. These counties do not comprise all which produce the crop, but the Surveyor-General's figures are defective in not securing full county reports.

This showing indicates that the peanut thrives over quite a wide area of our State. The question is a local one and depends more upon fitness of soil than upon general considerations of seasons. A few years ago we printed a full report of methods employed by a California grower, to which our correspondent is referred. We should be glad to receive a fresh review of the subject from any of our readers. The latest account of general practice in Virginia, one of the largest peanut growing States, is condensed as follows: One bushel to a bushel and a half of seed for each acre should be obtained, taking care to procure them of a reliable man who dug his seed peas before the frost killed the vines, and who is sure they did not go through a heat in the shock when curing. Good seed peanuts should be free from mildew, the kernels should be well filled and plump, and the germ (on splitting the pea) should look fresh and vigorous and show no signs of darkness and decay. Rows three and a half feet apart, plants 18 to 20 inches apart in the rows (some plant nearer), will require about a bushel of seed in the shell to plant an acre of land, if but one pea is planted in each hill; but more will doubtless be needed for replanting. A bushel will shell out about a peck of kernels, and the shelling must be carefully done by hand so as not to bruise or split the pea; and the shelling we think had better be deferred until the time of planting, which is from the 20th of April to the last of May.

Having obtained or engaged your seed select

a suitable piece of land for the future crop. A dry, sandy soil of a gray or light color, and not at all adhesive, suits them best, and it should be free from any matter of a vegetable or argillaceous character that will give a dark or unfavorable color to the hull of the young peas. The color of the peanuts has much to do with the price they will command in the market. A dry sandy loam makes the brightest peas. The land must be clear of weeds and grass, such as was in corn or some neatly cultivated crop the previous year. Land of good fertility should be selected; and it is essential that it contain a good percentage of lime, or the peas will be "pops," that is, minus the kernel. A third of a ton of lime to the acre, placed in the drill over which the peas are grown, generally insures a good crop without other fertilizers. Omit plowing the land until near the time to plant the crop, unless it is about to get too great a growth of weeds upon it before then. Avoid the use of stable, farmyard or compost manure on the land this year, as these will generally stimulate the growth of weeds and grass and cause a great deal of needless trouble. Such manures should have been applied to the corn or other crop last year, or better, several years before. Use only the concentrated fertilizers, which must be applied in the drill.

## Flax Growing.

EDITORS PRESS.—I have recently noticed something in your paper about flax. I wish to know how much seed is required to sow an acre, also how much the seed costs per cental? I wish to try it here on some of our valley land near Little Lake. I think it may pay better than wheat.—C. L. WHITNEY, Willitsville, Cal.

There is just now quite an impression prevailing in favor of flax growing. In San Mateo county and in other counties where considerable has been grown hitherto, there is a disposition to increase the acreage and in districts where it was tried for the first time this year, there was, so far as we have heard, satisfactory results attained. There is a home market for the seed, the chief users being the Pacific Oil and Lead Works of this city, and as they still have to import a good part of their supply, there is a chance to grow more at home. At present there is no market for the fiber, but growers and others are continually thinking of developing an industry for using it and we trust it may ere long be accomplished.

To start in growing flax for seed, correspondence may be opened with Kittle & Co., agents of the Pacific Oil and Lead Works, San Francisco. They announce that they "are prepared to enter into contracts with farmers to take the flax crop of 1880 at the rate of three cents per pound for good standard seed, delivered at the works in San Francisco, seed for planting being furnished by them at 3½ cents per pound; terms, cash, or notes drawing interest at 1½% per month, with approved security." They write also: "That 40 pounds of seed to the acre is ordinarily enough for planting and in some cases less will answer; that the average yield of flax on good land, with ordinary rains, is 1,000 pounds per acre, and from that up to a ton on the best land."

## A New Hybrid Tomato.

EDITORS PRESS.—I send you a can of my new hybrid tomato, that you may test its quality.—S. MILLER, Davenport, Iowa.

The fruit came in good order, and is certainly a notable article, the preserved specimen carrying the natural flavor as truly as any we ever tasted. It is a beautiful golden color, the can, on being opened, showing more the appearance of peaches or apricots than tomatoes as they are usually grown for this market. We trust Mr. Miller's new varieties will be tried by our growers.

## Sugar Beet Seed.

EDITORS PRESS.—Can the genuine sugar beet seed, the same as cultivated this year around Alvarado, Alameda county, be had in this State, if so, at what place? Please answer in the next issue of the PRESS.—F. LEININGER, Lone Valley, Amador Co., Cal.

Anyone who can supply this demand is invited to inform the applicant by mail.

BATS AND INSECTS.—It is not long since a southern California orange grower extended his hand to pluck what he thought a brilliant orange hanging amid the leaves, and closed his palm upon a group of orange-colored bats clinging together, suspended from a twig above. This leads to a remark on bats as farmers' friends. Bad as is the history of the vampire, and shudder as we may as one flutters too closely to ears tugging with fear born of nursery fables, this class of creatures are most vigorous insect eaters. A writer in a German agricultural paper takes up the pen in defense of bats after due study of their habits. The bat is a carnivorous animal, feeding only upon night insects. As soon as twilight sets in bats emerge in swarms from their hiding places and keep up a vigorous chase of beetles and nocturnal butterflies the whole night through, till the approach of dawn drives them back to their retreats. Night butterflies, whose larvae are so terribly destructive, and various kinds of flies and beetles, especially the cockchafer, are their favorite food, and often a bat will kill many hundreds of them in a night. The soft parts alone are eaten, the dry wings, wing cases, legs, and head being rejected. Much of that consumed has but a very low nutritive value, and hence the enormous voracity of not only bats, but all other animals feeding upon insects. To kill bats, therefore, the writer contends, is to afford increased immunity to tens of thousands of the most destructive pests that agriculture is plagued with.



## Letters from Southern California.—No. 9.

We might fill columns with descriptions of the scenery about Riverside—its grand old mountains, its picturesque hills and valleys, its broad expanse of plain and mesa; but our present purpose is more of a practical nature. Having already made reference to the orange, we will now endeavor to give some account of

## The Grape Culture There.

Riverside promises to become quite famous for its raisins; but the past has been the first season in which any considerable quantity of this product has been placed upon the market. During the two years previous a few boxes were offered for sale and met with considerable favor. They stood the test of comparison well, even with the best imported; but during the past season the successful manufacture of fine raisins has become an established fact, and quite a number of those who first embarked in the enterprise have already received large returns from this source. Nothing can be more encouraging to the fruit growers of every part of southern California than the multiplied evidences of success in this interesting and profitable industry. The Riverside colonists have taken hold of this business in a manner which cannot fail of success. Individual efforts, however skillfully they may be carried out, very commonly fail from one cause or another. Combination and co-operation—the united wisdom and experience of the many—is much more likely to succeed. With this fact in view, the principal grape growers of Riverside have united together under the name of the

## Riverside Fruit Growers' Association.

Which has appointed a skillful expert as inspector, whose business it is to direct when and how the work of picking, curing and packing shall be carried on, and to finally and carefully inspect every lot of raisins before the brand of the Association is allowed to be placed upon the boxes. This secures uniformity and excellence, and will eventually make the brand of the Association a passport for its products in every market where it is known. The Muscat is the grape almost universally grown at Riverside, of which there are now in bearing some 230,000 vines, which have this year produced about 15,000 boxes of raisins that met with a prompt market, and at the highest prices paid for any raisins, in quantity, on this coast. A statement made by a large dealer in fruits in this city, goes to show the value of an organization of this kind. He said—"I can well afford to give twenty-five cents more per box for raisins with the inspector's brand upon them than for an equally good article without it."

## Profits of Raisin Making.

In order to arrive at something definite, in regard to the profits of raisin-making, we visited several parties who are engaged in the business. W. B. Russell kept an accurate account of the yield and profits from a small lot of 880 vines grown upon one and one-third acres. The total yield of raisins was 230 boxes, which were sold at various prices, as follows:

100 boxes sold at \$1.85.....	\$185.00
152 " " 1.00.....	243.20
28 " " 1.00.....	28.00
	\$456.20

100 boxes cost for picking, curing and packing, 50c. each.....	\$50.00
150 boxes cost 40c. each.....	72.00
	\$122.00

Profit on 1½ acres of vines.....\$334.20

The raisins were delivered at the railroad station at Colton, six miles distant.

Another party, A. P. Combs, bought twelve tons of raisins taken from 890 vines, growing upon one and one-third acres, from which 350 boxes of raisins were made. These grapes cost \$20 per ton delivered at the packing-house. They were sold in lots at a fraction over \$2 per box, and ought to have netted at least \$100 more than the first lot mentioned. The prices obtained for raisins this year have been somewhat exceptional; but it is safe to say that \$200 per acre, over and above expenses of picking, packing and curing, would be a fair average yield for an acre of full-bearing vines, where a good article was turned out.

## Riverside Limes.

T. W. Cover, one of the early Riverside settlers, having become fully satisfied that the cultivation of the lime might be made a profitable business there, set out ten acres in lime trees, at the commencement of the settlement, all of which, 1,100 in number, are now in full bearing, some of the larger ones, showing, at the time of our visit, from three to four thousand each. His crop this year will reach nearly one million. The yield of these trees will continue to increase very rapidly during the next five years—with favorable seasons, the annual increase should exceed one million a year. He is now putting out ten acres more. He has a standing offer of \$5 per thousand for his next year's crop.

## Preparing Limes for the Market.

The limes now sold in this city are mostly shipped from Mexico—from Acapulco we believe—and one of the great inconveniences of the trade arises from the fact that the whole season's crop is usually poured into this market, within a very short time. As a consequence this useful fruit varies more in price here, than any other which enters into California consumption. Mr. Cover, however, proposes to introduce a

new system into the business, which will add greatly to the profit and convenience of both the grower and consumer. The fruit, after being picked, will undergo a system of "sweating," which will greatly add to its keeping qualities, and enable the grower to hold his crop, and ship only according to the demands of the market.

To carry out this plan he has built a large adobe structure in his orchard, which, by a peculiar system of build and ventilation, retains a uniform temperature within, much below the average of the surrounding atmosphere, in which his process of curing and keeping will be carried on, and where the fruit will also be stored. At the time of our visit, in October, there was a difference between the inside and outside atmosphere of from 10° to 12°, or more, although, in consequence of the work going on at the time, the building was not in a condition to show anything like the full effect of its refrigerating qualities. Mr. Cover's enterprise is no experiment, but is now in the full tide of practical success. His limes are pronounced fully equal to the best imported. The value of limes now consumed on this coast exceeds half a million dollars annually, which amount will soon be struck off from our list of imports. In addition to his limes, Mr. Cover has also 600 orange—mostly Navel—and 200 lemon trees in bearing, also 400 deciduous trees.

## Thanks.

We are under many obligations to Mr. P. S. Russell, Mr. A. S. White, Judge E. Conway and Mr. Murphy, through whose kind and

into it some of its "solid men," from among his business acquaintances in New York.

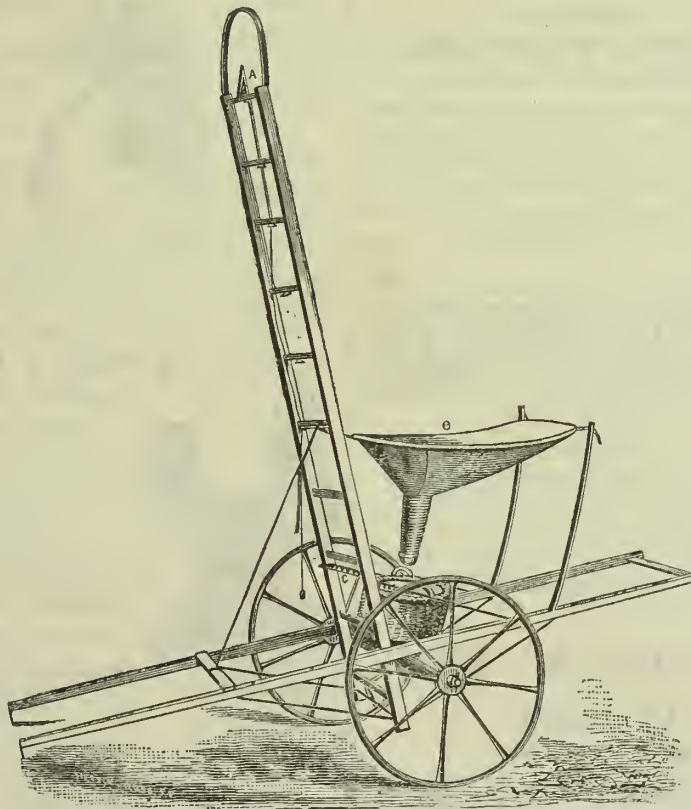
## A Riverside Adobe House.

One of the finest residences in Riverside is that of Mr. James Benedict, a gentleman of means recently from New York, who has selected this locality as a sanitarium, to which he has been driven by impaired health. He assured us that he has found it all and more than he had expected, in every respect. He has put up an elegant residence, with thick adobe walls, to secure an even temperature. The house is coated on the outside with a cement impervious to water, furnished with wings so as to secure the greatest amount of sunlight and ornamented with tasteful stucco-work. Its inside arrangement and finishings are both elegant and elaborate, with special regard to convenience and health. A look from the top of this building furnishes one of the most delightful views which can be had of Riverside.

W. B. E.

## Spring Tooth Harrow.

The accompanying cut represents an entirely new departure in the line of harrows. Its sale in the East has been unprecedented, and after three years of trial it is now in general use in the Eastern States and Canada. It is being introduced on this coast by Van Gelder, Batchelor & Co., 902 K street, Sacramento. They keep them in stock by the car-load, and of all



TITUS' PORTABLE LADDER.

generous attentions we were enabled to visit many important localities and make the acquaintance of many of the old residents of the colony; and our only regret is that time would not admit of a still longer stay in this interesting neighborhood. In the course of our rides and rambles we saw much and made many notes of minor things, all of which we should like to write out in full, but lack of space forbids and we can only make brief mention of a few.

## A New and Remarkable Lime.

In passing through the orchard of Dr. Emory, our attention was called to a remarkable lime—a seedling, raised by the Doctor—which bids fair ere long to make quite as much of a stir in lime culture as the Navel orange has in orange culture. This lemon is pear-shaped, about the size of an ordinary Bartlett pear, with a small knob or protuberance at the stem end. Out of a large number of seedlings which were allowed to come to maturity, this was the only one which presented any special characteristics. The fruit is remarkably fine, with a thin rind, and but few seeds. The present is the second year of its bearing. It will be formally introduced to the public with an appropriate name, and take its proper place in the citrus family at the next annual citrus exhibition in Riverside.

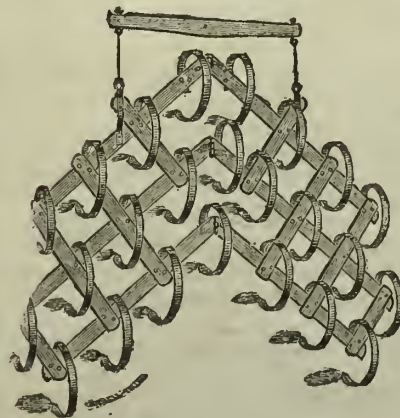
## Experimental Fruit Culture.

Our friend, Mr. A. S. White, who is one of the leading and most energetic of the Riverside fruit growers, is experimenting with a large number of choice grapes, to determine what effects the soil and climate of that locality may have upon such established varieties. He has already 53 different varieties, nearly all of which are commencing to bear. He has also ten acres of Havana and Jamaica seedling oranges, six years old, and was the first person, we believe, to introduce these varieties into California. In addition to those already mentioned, he has 2,000 Navel oranges ready for budding and some 1,800 deciduous trees. He has 40 acres in all devoted to fruit culture.

Mr. White is one of the enthusiastic ones of the settlement, and has done much in bringing

sizes needed, from the one-horse to the eight-horse. Testimonials from leading Eastern farmers agree in the opinion that it is the very acme of implements for preparing a seed bed, and will do twice the work of an ordinary harrow or cultivator and do it better.

An examination of the cut and a few moments' thought will show why this extraordinary result is reached. The teeth are nearly four feet long by two inches wide, and shaped like a rake tooth. They cut the soil instead of packing it,



Batchelor's Spring Harrow.

yield to anything solid instead of jerking the team, and lift the clods and grass to the surface, leaving mellow dirt about the seed. The depth of its work is controlled by moving the teeth. It is as thoroughly under control as a plow, and can be set to run from one to eight inches in depth. By turning it upside down, it can be moved about as well as a sled. The teeth stand so far from the frame that it seldom clogs. Their oscillating motion breaks more of the clods than other harrows, and shakes the dirt from the weeds, leaving them upon the surface with roots exposed. It cuts weeds instead of sliding around them. It cultivates the earth as

thoroughly at the edge as at the center of its work; hence, there is no more necessity of lapping than with a plow. It cuts down elevations and fills depressions better than any other implement, thus saving the wear of mowers and other machines that follow.

The teeth are made of best oil-tempered spring steel, and can be filed or ground as easily as the sections of a mower.

In short, it is claimed that it does twice the work of a harrow or cultivator with the same team, destroys more weeds, leaves a more mellow seed bed, and covers the grain more thoroughly.

They are being introduced by agents who are instructed to solicit a field trial in all kinds of work. Rigid tooth harrows are reported to be going out of fashion where these have been introduced, and many are laying aside their drills, preferring this tool for covering seed.

## A New Fruit Gathering Apparatus.

We give on this page an engraving of a device for gathering fruit, invented by L. H. Titus, of San Gabriel, Los Angeles county. A hook A hangs at the top round attached to a cord with a weight at the bottom, a knot being made on the cord near the hook. The branches may be pulled in with the hook, and the cord passed around the button or the bottom-side of the round. The branch is then held in a convenient position, and both hands may be used to pick with.

B is a hopper, and is made of canvass or cloth, with a spout running into the basket, having a rubber band across the bottom to break the fall and let the fruit in gently. The inventor says that eggs may be dropped from the top of the ladder into the hopper and run through the spout without breaking.

C is a bale or brace which holds the ladder at a right angle; it passes over a rod that runs through the ladder and is notched on each under side, the notches fitting on the rod, making it an easy matter to control the angle of the ladder, it being hung at the bottom on two stumps with a rod passing through the ladder, making it hang on a hinge.

A ladder 30 feet high can thus be easily handled, and the fruit gathered without being bruised. A representative of the PRESS recently saw this device in use at San Gabriel, where it appeared to give good results. It does not need any support, so that the limbs of the trees are not apt to be broken. Spikes are placed in the points of bearing which enter the ground and keep the device in position. It may be moved by simply hearing down on the handles and wheeling off in the same manner as with a wheelbarrow or hand-cart, carrying baskets, hook and hopper with it. Manufacturers or other parties wishing to buy county or State rights should address the patentee as above.

THE SPRING OF THE GREYHOUND.—Readers will remember the allusions made in the PRESS to the discoveries concerning the action of the horse at a high rate of speed, made by Mr. Muybridge with his method of instantaneous photography. It was plainly shown that the horse assumed attitudes which no artist ever sketched and which no observer would have thought possible. The electric camera, however, fastened the image, and there was nothing left but to accept the testimony on the negative. According to an account in the *Call* Mr. Muybridge has applied the same agency to the motion of the dog, and with similarly astonishing results. The cramped and improbable positions of the dog, as shown in the negatives, would scarcely be believed by anyone who had not seen the fact recorded by the "unerring finger of light." It is usual to delineate a greyhound extended, but these negatives, among other positions, give the animal with his limbs gathered under him, storing his strength for the spring. These pictures, which will shortly be published, will be of intense interest to all dog fanciers, inasmuch as they will supply points of observation and comparison, which may lead to a better selection in breeding, fostering those who show the best points, and eliminating the feeble, thus enabling science to come to the aid of nature, and provide for the "survival of the fittest." The dog is got at speed by holding him on one side, while an attendant takes a rabbit across a line drawn in front of the camera, the ground being covered with a sheet of India-rubber to prevent any dust or pebbles flying up to impair the clear-cut outlines of the picture; the moment the dog passes the front of the camera the fine wire is broken, the electric circuit is complete, and the trustworthy collodian has put the fleeting vision on permanent record. These dog-pictures will create surprise in the minds of those who have only associated the ideal greyhound with undulating and serpentine grace.

THE town of Red Rock, Pa., in the oil regions, was recently almost consumed by fire. Three hundred families were hurt out and are rendered destitute. The loss of property will amount to \$200,000. During the burning the fire communicated with a 25,000 barrel oil tank. Rivers of oil flowed down Valley and through Main streets of Red Rock, burning all the business and private houses in the town.

THE appraisers of the estate of the late W. S. O'Brien place its value at \$9,653,459.37.



## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS.  
OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

### CATTLE.

PETERSAXE & SON, 520 Bush St. S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

### SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

### POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Doves, etc. Eggs for hatching. Send for price list.

### SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Poland-China Swine and Black Cochlin Chickens for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

### BEEES.

JOS. C. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## PACIFIC DEPARTMENT LONDON AND LANCASHIRE

### Fire Insurance Company, OF LIVERPOOL.

CAPITAL.....\$7,500,000  
CASH ASSETS.....1,709,978  
U. S. BONDS, deposited in America 400,000

BALFOUR, GUTHRIE & CO.,  
General Agents,  
316 California Street, - - - San Francisco

# PIANOS

LARGEST MUSIC HOUSE:  
On the Pacific Coast.

WHOLESALE AND RETAIL.

Lowest Prices and Best Goods.

Write for information concerning any Musical Instrument, and terms of sale. It will be given with pleasure.

ESTABLISHED IN 1850.

KOHLER & CHASE,  
137 and 139 Post Street, San Francisco.

### MONEY!!

\$5,000 to \$50,000 Ready to Loan

On Mortgages of first-class Farms in Monterey, Santa Cruz, Santa Clara and San Mateo counties. Address the Real Estate

EXCHANGE & MART,

Santa Cruz, Cal.

Meyrick & Co., Insurance and Money Brokers and Agents

# RED CROSS OIL!

The Safest and Most Reliable Illuminating Oil. Water White and High Test. Brilliant, Pure and Economical.

C. T. RAYNOLDS & CO., Sole Agents, No 9 Front Street, San Francisco.

## Lands for Sale and to Let.

### Rare Opportunity

— FOR A —

### COLONY

— OR —

### Farming Enterprise!

A tract of land, comprising 20,000 acres, lying in Township 10, south, range 19 and 20 east, in

### FRESNO COUNTY,

Is offered in whole or in part, as a very desirable location for a Colony or extensive farming enterprise.

This land is in the immediate vicinity of several Colonies, which are already in successful progress.

Work for bringing water upon the land has already been commenced, and the land is so situated that it can be irrigated at very little outlay. It is also convenient for Railroad transportation.

### Terms Reasonable.

For further particulars inquire of FRANKLIN D. COTTLE, No. 932 Howard Street, San Francisco, or of COTTLE & LUCE on the premises, or at Fresno City, Cal.

### TO LET.

THE CELEBRATED

### BARTON VINEYARD,

Situated at Old San Bernardino, in San Bernardino Co., Cal., consisting of eighty (80) acres of Mission Grapes, together with two (2) cellars, one brick and one adobe, a small lot of tubs, vats and pipes, distillery and brick dwelling house. Location good and crop sure. Would prefer to let for a number of years on easy terms. For particulars address H. M. BARTON, P. O. Box 88, San Bernardino, Cal.

## FARMING LAND

For Sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

## LAND

Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

## GRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000,

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$400,000.

### OFFICERS:

G. W. COLBY.....President  
JOHN LEWELLING.....Vice-President  
ALBERT MONTPELLIER.....Cashier and Manager  
FRANK McMULLEN.....Secretary

### DIRECTORS

G. W. COLBY.....Butte Co  
JOHN LEWELLING.....Napa Co  
J. V. WEBSTER.....Alameda Co  
URAH WOOD.....San Benito Co  
J. C. MERYFIELD.....Solano Co  
THOMAS MCCONNELL.....Sacramento Co  
I. C. STEELE.....San Mateo Co  
SOLOMON JEWETT.....Kern Co  
C. J. CRESSEY.....Stanislaus Co  
SENECA EWEL.....Napa Co  
A. D. LOGAN.....Colusa Co

The Bank was opened on the first of August, 1874, for the transaction of general banking business.

CURRENT ACCOUNTS are opened and conducted in the usual way.

GOLD and SILVER deposits received.

CERTIFICATES of DEPOSIT issued for Gold and Silver

TERM DEPOSITS are received and interest allowed as follows: 6% per annum if left for 3 months; 7% per annum if left for 6 months; 8% per annum if left for 12 months.

EXCHANGE on the Atlantic States bought and sold.

ALBERT MONTPELLIER,

Cashier and Manager.

San Francisco, Oct. 15th, 1879.

### Comb Foundation.

Any size sheets and any quantity, 40 cents per pound. Feeders, 50 cents each.

Sample Simplicity Hive, \$3.00. Address

RUFUS MORGAN,

Bernardo, San Diego Co., Cal.

## Patents

OBTAINED IN U. S. AND FOREIGN COUNTRIES; copyrights registered through DEWEY & CO.'S MINING AND SCIENTIFIC PRESS Patent Agency, San Francisco. Send for free circular.

## Poultry.

### OAKLAND POULTRY YARDS.

Cor. Sixteenth and Castro Streets, Oakland.



Constantly on hand and for sale, choice specimens of the following varieties of Fowls:

Dark and Light Brahmas, Buff, White and Partridge Cochins, White and Brown Leghorns, Dorkings, Polish, Hamburgs, Plymouth Rocks, Game and Sebright Bantams, Bronze Turkeys, Pekin, Aylesbury and Rouen Ducks.

Safe arrival of Fowls and Eggs Guaranteed.

### Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,

P. O. Box 1771, San Francisco, Cal.

### THOROUGHbred POULTRY.

SAFE ARRIVAL OF FOWLS AND EGGS GUARANTEED. Healthy Stock. 116 ACRES. Devoted to the Business.

LANGSHANS. I now breed this justly celebrated Fowl. Send 3c. stamp for price list and circular describing the different breeds I keep. Incubators.

M. EYRE, Napa, Cal.

Pamphlet on Breeding, Hatching, Diseases, etc., adapted especially to Pacific Coast, sent for 15c.

### Napa Valley Poultry Farm.

Headquarters for all the leading varieties of PURE BRED POULTRY, WHITE and BROWN LEGHORNS, PLYMOUTH ROCKS, AYLESBURY DUCKS, BRONZE TURKEYS, TOULOUSE GEESE, ETC., ETC., ETC. Price of Fowls and Eggs as low as the high standing of the Stock will permit. Send stamp for Illustrated Catalogue and Price List.

R. G. HEAD,

Napa, Cal.

### Putah Creek Poultry Yard.

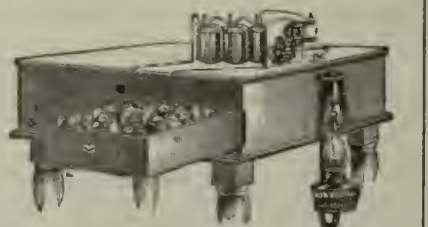
Plymouth Rocks and Brown Leghorns, bred from the best imported strains, offered cheap for the next six weeks to reduce stock.

MAMMOTH BRONZE TURKEYS, the best in the State, all last spring's hatch, bred from the finest imported stock, offered for sale cheap. For price list address

MRS. L. E. McMAHON,

Dixon, Solano Co., Cal.

## MONEY in CHICKENS



### If You Want to Make Money

By raising any number of Chickens at any season of the year without setting hens, procure an

### ECLIPSE INCUBATOR

(E. A. SAMUEL'S Patent)

In both public and private trials on this coast as elsewhere, the "ECLIPSE" has proved itself a perfect and successful Egg Hatcher. It may be examined and its merits proven to customers before they make purchases. Write for particulars and circulars to

G. G. WICKSON, 319 Market Street, S. F. Agent for the Pacific Coast.

### ROOMS TO RENT.

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.

THE \$3 Printing Press. Prints cards, labels, etc. (Self-Inker \$5) 18 larger sizes. For business or pleasure, young or old. Do your own advertising and printing. Catalogue of presses, type, cards, etc., for 3 stamps. Kelley & Co., Meriden, Conn.



My Annual Catalogue of Vegetable and Flower Seeds for 1880, rich in engravings from photographs of the originals, will be sent FREE to all who apply. My old customers need not write for it. I offer one of the largest collections of Vegetable Seed ever sent out by any Seed House in America, a large portion of which were grown on my six Seed Farms. Full directions for Cultivation on each package. All seed warranted to be both fresh and true to name; so far, that should it prove otherwise, I will refund the order gratis. The original introducer of the Hubbard Squash, Phinney's Melon, Marblehead Cabbages, Mexican Corn, and scores of other Vegetables. I invite the patronage of all who are anxious to have their Seed directly from the grower, fresh, true, and of the very best strain.

### New Vegetables a Specialty.

JAMES J. H. GREGORY, Marblehead, Mass.

## Baling Fencing Telegraph Telephone Galvanized WIRE

### Barbed Fence Wire.

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the Trademark.

### A. S. HALLIDIE

Wire Mills.

Office, No. 6 California St. SAN FRANCISCO.

### WIRE ROPE and CORDAGE

Of every kind on hand or Made to Order.

## HEALD'S BUSINESS COLLEGE,

24 Post Street,

Near Kearny,

San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

### CHEAPER YET!

## Tension Sewing Machines!

A large number of nearly new genuine SINGER, WHEELER & WILSON, HOWE, WOOD, GROVER & BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

### NO TENSION MACHINE.

Wilcox & Gibbs' S. M. Co.,

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.

## KEATING'S COUGH LOZENGES!

The Great British Remedy. There is unquestionably no other remedy so certain in its effects. ASTHMA, WINTER COUGH, BRONCHITIS and DISORDERS of the THROAT alike yield to its influence. The highest medical testimony states no better cure for these complaints exist (now proved by over a half a century's experience). They contain no opium, morphia, or any violent drug. KEATING'S COUGH LOZENGES prepared by THOMAS KEATING, London, Britain, are sold by all Druggists.

### WANTED!

Agents to sell the most interesting illustrated book in the market. All about the North Pole. Large discount and quick sales. Address

CHAS. A. REED,

Santa Barbara, Cal.

WELL AUGER. Ours is guaranteed to be the world's cheapest and best in the world. Also nothing can beat our SAWING MACHINE. It saws off a 2-foot log in 2 minutes. Pictorial books free. W. GILES, Chicago, Ill.



## Nurserymen.

## Berries and Small Fruits.

The most certain and best paying Market Berries and well tried sorts.

Monarch of the West  
STRAWBERRIES,

Most Productive, Largest Berries and Healthiest Grower.

English Red Antwerp, Naomi & Hersteine  
RASPBERRIES,

Best paying for market, and are perpetual bearers when irrigated.

## KITTATINNY BLACKBERRY,

The most prolific, largest and most popular sort.

I offer also a large assortment of new and old varieties of

STRAWBERRY, RASPBERRY,  
Blackberry, Gooseberry and Currants.

For full Price List send for a Catalogue.

To secure a crop of Berries the first season it is important to plant very early.

## JOHN ROCK,

San Jose, Cal.

## LOS ANGELES NURSERY.

The undersigned will furnish Fruit Trees of all kinds at low rates. We offer an unusually large stock of

## Apple, Peach and Apricot Trees,

— ALSO —

## Orange and Other Fruit Trees.

Our Trees are free from Disease or Blight of any kind. We have

## WOOD'S EARLY APRICOT,

That bears four weeks earlier than any known variety. We also have new Apples and Peaches of much promise.

Send for catalogue at once.

## MILTON THOMAS,

Los Angeles, Cal.

## THOS. MEHERIN,

516 Battery St., San Francisco.

## Seeds, Trees and Plants.

We offer for sale the present season the largest and best collection of Fruit and Ornamental Trees ever offered on the Pacific Coast, at REDUCED PRICES. Also,

## Vegetable and Flower Seeds,

KENTUCKY, AUSTRALIAN and ITALIAN RYE GRASS, RED and WHITE CLOVER, Etc.

Agent for the

## Nurseries of B. S. Fox.

Send for Price List. 516 Battery Street, San Francisco

1,000,000!

Strawberry, Raspberry, Blackberry and Cranberry Plants.

STRAWBERRY PLANTS.—The Essex Beauty, Crescent, Cinderella, Forest Rose, Glendale, Jucunda, Monarch of West, Langforth Prolific, Triomphe d' Gand, Wilson Albany.

RASPBERRY PLANTS.—Cuthbert Early, Early Prolific, Reliance, Pride of the Hudson, Brandywine, Herstine, Philadelphia Red, Clark, Henrietta, Hornet, Belle de Fontenay, Delaware Bristol.

BLACKBERRY PLANTS.—Deering Seedling. Early and the most productive of all. I will give satisfactory proof that these Berries have realized \$750 per acre. It paid more than twice as much as the old varieties; also the Early Cluster, the Vina Seedling, Kittatiny, the Mammoth Cluster, Missouri Mammoth, Dorchester and Lawton.

CRANBERRY PLANTS.—The Cherry Cranberry Vines at \$10 per 1,000, by mail 64 cents more. I will sell to responsible parties on time, part cash, 10-acre field of Cranberry vines under cultivation. Can be seen at the place. Send for Catalogue.

H. NYLAND,

Boulden Island, San Joaquin River.

## Phylloxera-Resisting Vines.

Vineyard proprietors desiring to plant American Grape Vines, which resist the attacks of the Phylloxera, either as Grafting Stock, or for direct production, which proves to be the only salvation and means of reconstructing the destroyed Vineyards of France, will do well to address

BUSH & SON & MEISSNER,

Bushberg, Jefferson Co., Mo.

## PEPPER'S NURSERIES.

(Established 1863.)

For sale at reduced prices, a general assortment of Fruit Trees and Small Fruits; also choice Ornamental Shrubs, Roses, etc. A limited supply of Cook's Seedling Apple, one and two years old. Catalogue and list of prices furnished on application. Address

W. H. PEPPER,

Petaluma, Sonoma Co., Cal.

## Geo. F. Silvester,

IMPORTER, WHOLESALE AND RETAIL DEALER IN

## SEEDS,

## Fruit and Evergreen Trees, Plants, Etc

## ALFALFA, GRASS AND CLOVER SEEDS

In large Quantities and offered in Lots to suit Purchasers.

GREAT REDUCTION IN PRICES.

Seed Warehouse, 317 Washington Street, San Francisco.

## Santa Clara Valley Nursery,

B. S. FOX, Proprietor.

I offer for sale this season a large general assortment of Nursery stock,

## FRUIT TREES, SMALL FRUITS,

## Shade and Ornamental Trees

— AND —

## PLANTS, ROSES, ETC.

## Apple and Pear Seedlings

AT REDUCED PRICES.

Also the MYROBOLAN PLUM STOCK, which does not sucker.

To parties buying largely I offer Special Inducements.

Address B. S. FOX, San Jose, Cal.

THOS. MEHERIN, Agent,  
516 Battery St., San Francisco.

1879-80.

## W. R. STRONG &amp; CO.,

Field, Garden, Lawn and Tree SEEDS.

Our stock is FULL, FRESH and RELIABLE. In these essential particulars we claim to be unsurpassed. We have largely increased our list of varieties by importations from the best growers in the East and Europe. We make specialties of

## ALFALFA, RED CLOVER,

Timothy, Red Top, Kentucky Blue Grass, HUNGARIAN GRASS, MILLET,

Mesquit Grass, Lawn Grasses, Etc.

Also, DUTCH FLOWERING BULBS of every description. Catalogue mailed free on application. We also do a

## Wholesale Commission Business,

Handling all kinds of California and Tropical, Green and Dried Fruits, Nuts, Honey and General Merchandise. All orders promptly attended to. Address

W. R. STRONG & CO.,

6, 8 and 10 J Street, Sacramento, Cal.

## HANNAY'S NURSERY.

San Jose, Cal.

I offer for sale this season, a large and well assorted stock of

## Fruit, Shade and Ornamental Trees.

My trees are WELL GROWN and HEALTHY, and of the Best Known Varieties.

JOHN HANNAY,

Successor to Hannay Bros.,

San Jose, Cal.

100,000

## AUSTRALIAN GUM TREES.

## First-Class Plants.

Six to 12 inches high, transplanted into boxes, in good condition for transportation. Price, \$6 to \$12 per 1,000.

JAS. T. STRATTON, Agent,

Corner 12th Street and 9th Avenue,

Brooklyn, Alameda Co., Cal.

## TAKE NOTICE!

To those contemplating planting ORANGE and LEMON Trees, I would recommend only the Best Varieties of

## THORNLESS TREES.

Catalogue containing full particulars furnished free on application. Address THOS. A. GAREY,  
P. O. Box 133, Los Angeles, Cal.

JAMES HANNAY'S NURSERY,  
SAN JOSE, CAL.

I offer for sale at low prices a well assorted stock of one-year-old

## Apple, Pear and Cherry Trees.

Also, a large stock of Apricot, Peach, Pear, Cherry and Plum, in the dormant bud, for \$60 per 1,000. Address

JAMES HANNAY, San Jose, Cal.

B. KOHLER,

## Florist and Nurseryman,

St. Helena, Napa Co., Cal.,

Will send Grape Cuttings of the principal varieties grown in St. Helena District, Napa Valley, to any part of the United States at Moderate Charges.

Correspondence on Viniculture invited.

## Seedsman.

## J. Hutchison's Nurseries,



OAKLAND, CAL.

Established in 1852.

An immense stock of NEW and RARE PLANTS, Evergreen Trees and Ornamental Shrubbery.

## CYPRESS FOR HEDGES,

One to three years old.

Roses. Fuchias, Pinks, Magnolias, Camellias, Daphnes, Etc., Etc.,

In endless variety, at

## BEDROCK PRICES!!

SEEDS and BULBS of all kinds. Send for Catalogue.

## SEVIN VINCENT &amp; CO.,

Importers, growers of, wholesale and retail dealers in



Field, Grass, Flower and Tree Seeds.

CLOVER, ALFALFA,

BULBS, FRUIT, ORNAMENTAL TREES, ETC.

We call the attention of farmers and country merchants to our unusually low prices. Trade price list on application.

We issue the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is handsomely illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

SEVIN VINCENT & CO.,

607 Sansome Street, S. F.

## SEEDS!

## Thomas A. Cox &amp; Co.,

Importers and Dealers in

Vegetable, Flower, Field, Grass and Tree Seeds.

We wish to announce to country merchants and the trade generally that we are ready to supply all descriptions of Seeds of the New Crop of 1879.

Special prices on application. Vegetable and Flower Seeds put up in small packets for the retail trade.

## FRESH AND TRUE TO NAME.

We will send the following Seeds, postpaid, on receipt of price. Remit by P. O. Order or postage stamps:

Beets, per oz.....10c	Parasnis, per oz.....10c
Carrots, per oz.....10c	Radish, per oz.....10c
Cabbage, per oz.....25c	Spinach, per oz.....10c
Lettuce, per oz.....15c	Turnip, per oz.....10c
Onion, per oz.....15c	Tomato, per oz.....25c

We will mail to any address a collection of 20 packets of choice Flower or Garden Seeds for \$1.

Fruit and Ornamental Trees at Nursery Prices.

THOMAS A. COX & CO.,

409 Sansome Street, San Francisco.

## R. J. TRUMBULL &amp; CO.,

SUCCESSORS TO

R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGS, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

\*"Guide to the Vegetable and Flower Garden" will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL & CO.,

419 and 421 Sansome Street, S. F.

## J. P. SWEENEY &amp; CO.'S

## SEED WAREHOUSE,

409 & 411 Davis St., San Francisco.

ESTABLISHED IN 1853.

Keep constantly on hand the largest stock of FIELD, GARDEN, CONIFER, or

## CALIFORNIA TREE SEEDS,

On the Pacific Coast. Seeds all FRESH and GENUINE. Our Stock is large, especially of the following varieties:

## ALFALFA, BLUE GRASS,

Red and White Clover, Red Top, Timothy, Australian Rye Grass, Mesquit Grass, Lawn Grass and Millet Seeds

Of different varieties. Field Seeds, Mangel Wurzel and Sugar Beets, Rutabagas, Carrot Seeds of all varieties, Peas, Beans, etc. Our assortment of GARDEN and FLOWER SEEDS are full and complete. Also, FRUIT and ORNAMENTAL TREES at Nursery Prices.

Trees For Sale at Lowest Market Rates.

For Catalogue, Price Lists, etc., apply as above.

## A NEW VARIETY!

Examined and endorsed by Agricultural Department at Washington.

A Large and Luscious

## HYBRID TOMATO.

Superior to all other Species, taste and flavor assimilating orchard fruit.

This species of Tomato, the Yellow Large and Red Medium, each equally delicious in flavor, may be procured in packages of about 50 seeds, and will be sent to any address on receipt of 25 cents.

Address SEVERIN MILLER,

P. O. Box 394, Davenport, Iowa.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.

## PRINGLE'S

## New Hybrid Wheats,

## Champlain and Defiance.

Heads 6 in. long—128 bushels to the acre.

Illustrated circulars showing different methods of cultivation by which this and other wonderful yields were produced, mailed to all applicants. Price of each variety, \$2.00 per peck, \$7.00 per bushel. Bags containing two bushels, \$13.00. Prices for larger quantities on application. Trial packages by mail, 1 lb., 40 cts.; 3 lbs., \$1.00.

B. K. BLISS & SONS,

P. O. Box 4129.

34 Barclay St., N. Y.

EXOTIC GARDENS. F. A. MILLER & CO., Mission St., opposite Woodward's Gardens. Send for Catalogue and Price List.

## ASSESSMENT NOTICE.

## The California Fruit Growing Association.

Location of principal place of business, San Francisco. Location of works, El Dorado county, California. Notice is hereby given, that at a meeting of the Directors, held on the 24th day of November, 1879, an assessment (No. 10), of \$4.00 per share was levied upon the capital stock of the Corporation, payable immediately in United States gold coin, to the Secretary, at the office of the Company, 641 Sacramento street, San Francisco.

Any stock upon which this assessment shall remain unpaid on the 8th day of January, 1880, will be delinquent, and advertised for sale at public auction; and unless payment is made before, will be sold on Monday, the 21 day of February, 1880, to pay the delinquent assessment, together with costs of advertising and expenses of sale.

D. A. BROWN, Secretary,

Office—641 Sacramento Street.



## BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS.  
OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

## CATTLE.

PETER SAXE & SON, 520 Bush St., S. F. Importers and breeders of all varieties of Thoroughbred Cattle, Sheep, Horses, and Berkshire Swine. All animals fully pedigreed.

PAGE BROTHERS, 213 Clay street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

## SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

## POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importer and Breeder of Thoroughbred Poultry. Berkshire and Magie Poland-China Swine.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

ALBERT BURBANK, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Dorks, etc. Eggs for hatching. Send for price list.

## SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine. Agent for Dana's Cattle, Hog and Sheep Labels.

T. C. STARR, San Bernardino, Cal. Poland-China Swine and Black Cochins for sale.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

## BEES.

JOS. C. ENAS, Sunnyside, Napa, Cal. Breeds pure Italian Queen Bees. Imported Queens furnished.

## PACIFIC DEPARTMENT

## LONDON AND LANCASHIRE

Fire Insurance Company,  
OF LIVERPOOL.

CAPITAL.....\$7,500,000  
CASH ASSETS.....1,709,976  
U. S. BONDS, deposited in America 400,000

## BALFOUR, GUTHRIE &amp; CO.,

General Agents,  
316 California Street, - - - San Francisco

## PIANOS

## LARGEST MUSIC HOUSE:

On the Pacific Coast.

WHOLESALE AND RETAIL.

Lowest Prices and Best Goods.

Write for information concerning any Musical Instrument, and terms of sale. It will be given with pleasure.

ESTABLISHED IN 1850.

## KOHLER &amp; CHASE,

137 and 139 Post Street, San Francisco.

## MONEY!!

\$5,000 to \$50,000 Ready to Loan

On Mortgages of first-class Farms in Monterey, Santa Cruz, Santa Clara and San Mateo counties. Address the Real Estate

EXCHANGE & MART,

Santa Cruz, Cal.

MRYRICK & Co., Insurance and Money Brokers and Agents

## Lands for Sale and to Let.

## Rare Opportunity

— FOR A —

## COLONY

— OR —

## Farming Enterprise!

A tract of land, comprising 20,000 acres, lying in Township 16, south, range 19 and 20 east, in

## FRESNO COUNTY,

Is offered in whole or in part, as a very desirable location for a Colony or extensive farming enterprise. This land is in the immediate vicinity of several Colonies, which are already in successful progress. Work for bringing water upon the land has already been commenced, and the land is so situated that it can be irrigated at very little outlay. It is also convenient for Railroad transportation.

## Terms Reasonable.

For further particulars inquire of FRANKLIN D. COTTELL, No. 932 Howard Street, San Francisco, or of COTTELL & LUCE on the premises, or at Fresno City, Cal.

## TO LET.

THE CELEBRATED

## BARTON VINEYARD,

Situated at Old San Bernardino, in San Bernardino Co., Cal., consisting of eighty (80) acres of Mission Grapes, together with two (2) cellars, one brick and one adobe, a small lot of tubs, vats and pipes, distillery and brick dwelling house. Location good and crop sure. Would prefer to let for a number of years on easy terms. For particulars address H. M. BARTON, P. O. Box 53, San Bernardino, Cal.

## FARMING LAND

For Sale in large or small tracts, on easy terms, in the best parts of the State.

## McAFEE BROTHERS,

202 Sansome Street, San Francisco, Cal.

## LAND

Good land that will raise a crop every year. Over 14,000 acres for sale in lots to suit. Climate healthy. No droughts, bad floods, nor malaria. Wood and water convenient. U. S. Title perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

## GRANGERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000,

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$400,000.

## OFFICERS:

G. W. COLBY.....President  
JOHN LEWELLING.....Vice-President  
ALBERT MONTPELLIER.....Cashier and Manager  
FRANK McMULLEN.....Secretary

## DIRECTORS

G. W. COLBY.....Butte Co  
JOHN LEWELLING, Vice-President.....Napa Co  
J. V. WEBSTER.....Alameda Co  
URIAH WOOD.....San Benito Co  
J. C. MEYER.....Sacramento Co  
THOMAS MCCONNELL.....Solano Co  
I. C. STEELE.....San Mateo Co  
SOLOMON JEWETT.....Kern Co  
C. J. CRESSEY.....Stanislaus Co  
SENECA KWER.....Napa Co  
A. D. LOGAN.....Colusa Co

The Bank was opened on the first of August, 1874, for the transaction of general banking business.

CURRENT ACCOUNTS are opened and conducted in the usual way.

GOLD AND SILVER deposits received.

CERTIFICATES OF DEPOSIT issued for Gold and Silver.

TERM DEPOSITS are received and interest allowed as follows: 6% per annum if left for 3 months; 7% per annum if left for 6 months; 8% per annum if left for 12 months.

EXCHANGE on the Atlantic States bought and sold.

ALBERT MONTPELLIER,

Cashier and Manager.

San Francisco, Oct. 15th, 1879.

## Comb Foundation.

Any size sheets and any quantity, 40 cents per pound. Feeders, 50 cents each.

Sample Simplicity Hive, \$3.00. Address

RUFUS MORGAN,

Bernardo, San Diego Co., Cal.

## Patents

OBTAINED IN U. S. AND FOREIGN COUNTRIES; copyrights registered through DEWEY & CO.'S MINING AND SCIENTIFIC PRESS Patent Agency, San Francisco. Send for free circular.

## Poultry.

## OAKLAND POULTRY YARDS.

Cor. Sixteenth and Castro Streets, Oakland.



Constantly on hand and for sale, choice specimens of the following varieties of Fowls:

Dark and Light Brahmas, Buff, White and Partridge Cochins, White and Brown Leghorns, Dorkings, Polish, Hamburgs, Plymouth Rocks, Game and Sebright Bantams, Bronze Turkeys, Pekin, Aylesbury and Rouen Ducks.

Safe arrival of Fowls and Eggs Guaranteed.

## Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,

P. O. Box 1771, San Francisco, Cal.

## THOROUGHbred POULTRY.

SAFE ARRIVAL OF FOWLS AND EGGS GUARANTEED. UNLIMITED RANGE. Healthy Stock. 116 ACRES. Devoted to the Business.

LANGSHANS. I now breed this justly celebrated Fowl. Send 3c stamp for price list and circular describing the different breeds I keep. Incubators.

M. EYRE, Napa, Cal.

Pamphlet on Breeding, Hatching, Diseases, etc., adapted especially to Pacific Coast, sent for 15c.

## Napa Valley Poultry Farm.



Headquarters for all the leading varieties of

PURE BRED POULTRY,

WHITE AND BROWN

LEGHORNs,

PLYMOUTH

ROCKs,

AYLESBURY

DUCKs, BRONZE

TURKEYs, TOULOUSE

GEESE, ETC., ETC., ETC.

Price of Fowls and Eggs as low as the high standing of

the stock will permit. Send stamp for Illustrated Catalogue and Price List.

R. G. HEAD,

Napa, Cal.

## Putah Creek Poultry Yard.

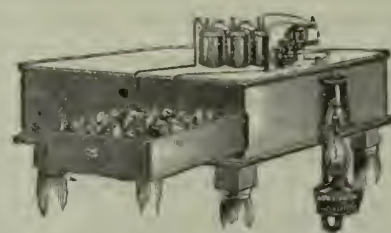
Plymouth Rocks and Brown Leghorns, bred from the best imported strains, offered cheap for the next six weeks to reduce stock.

MAJORITY BRONZE TURKEYS, the best in the State, all last spring's hatch, bred from the finest imported stock, offered for sale cheap. For price list address

MRS. L. E. McMAHON,

Dixon, Solano Co., Cal.

## MONEY in CHICKENS



## If You Want to Make Money

By raising any number of Chickens at any season of the year without setting hens, procure an

## ECLIPSE INCUBATOR

(E. A. SAMUEL'S Patent).

In both public and private trials on this coast as elsewhere, the "ECLIPSE" has proved itself a perfect and successful Egg Hatcher. It may be examined and its merits proven to customers before they make purchases. Write for particulars and circulars to

G. G. WICKSON, 319 Market Street, S. F.

Agent for the Pacific Coast.

## ROOMS TO RENT.

Elegantly Furnished, and with Gas and Hot and Cold Water in Every Room.

A PLEASANT LOCALITY and REASONABLE TERMS

At 1031 Market St., San Francisco.



## \$3 Printing Press

Prints cards, labels, etc. (Self-Inker \$4) 18 larger sizes. For business or pleasure, young or old. Do your own advertising and printing. Catalogue of present, type, cards, etc., for 3 stamps. Kelcey & Co. Meriden, Conn.



My Annual Catalogue of Vegetable and Flower Seeds for 1880, rich in engravings from photographs of the originals, will be sent FREE to all who apply. My old customers need not write for it. I offer one of the largest collections of Vegetable Seed ever sent out by any Seed House in America, a large portion of which were grown on my six Seed Farms. Full directions for Cultivation on each package. All seed warranted to be both fresh and true to name; so far, that should it prove otherwise, I will replace the order gratis. The original introducer of the Hubbard Squash, Phinney's Melon, Marblehead Cabbages, Mexican Corn, and scores of other Vegetables, I invite the patronage of all who are anxious to have their Seed directly from the grower, fresh, true, and of the very best strains.

## New Vegetables a Specialty.

JAMES J. H. GREGORY, Marblehead, Mass.

Baling  
Fencing  
Telegraph  
Telephone  
Galvanized

## WIRE

## Barbed Fence Wire.

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the Trademark.

## A. S. HALLIDIE

Wire Mills.

Office, No. 6 California St.

SAN FRANCISCO.

## WIRE ROPE and CORDAGE

Of every kind on hand or Made to Order.

## HEALD'S

BUSINESS COLLEGE,  
24 Post Street,  
Near Kearny,  
San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post Street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

## CHEAPER YET!

## Tension Sewing Machines!

A large number of nearly new genuine SINGER, WHEELER & WILSON, HOWE, WOOD, WILSON, GROVER & BAKER, DOMESTIC, etc., will be sold very cheap, many as low as \$10. These Machines were taken in exchange from families for the "AUTOMATIC" or

## NO TENSION MACHINE.

## Wilcox &amp; Gibbs' S. M. Co.,

124 POST ST., SAN FRANCISCO.

No. 361 Twelfth Street, Oakland, Cal.

## KEATING'S COUGH LOZENGES!

The Great British Remedy. There is unquestionably no other remedy so certain in its effects. ASTHMA, WINTER COUGH, BRONCHITIS and DISORDERS of the THROAT alike yield to its influence. The highest medical testimony states no better cure for these complaints exist (now proved by over a half a century's experience.) They contain no opium, morphia, or any violent drug. KEATING'S COUGH LOZENGES prepared by THOMAS KEATING, London, Britain, are sold by all Druggists.

## WANTED!

Agents to sell the most interesting illustrated book in the market. All about the North Pole. Large discount and quick sales. Address

CHAS. A. REED,

Santa Barbara, Cal.

WELL AUGER. Ours is guaranteed to be the world's cheapest and best in the world. Also nothing can beat our SAWING MACHINE. It saws off a 2-foot log in 2 minutes. Pictorial books free. W. GILES, Chicago, Ill.

## RED CROSS OIL!

The Safest and Most Reliable Illuminating Oil. Water White and High Test. Brilliant, Pure and Economical.

C. T. RAYNOLDS & CO., Sole Agents, No 9 Front Street, San Francisco.



## Nurserymen.

## Berries and Small Fruits.

The most certain and best paying Market Berries and well tried sorts.

## Monarch of the West

STRAWBERRIES,

Most Productive, Largest Berries and Healthiest Grower.

English Red Antwerp, Naomi & Hersteine

RASPBERRIES,

Best paying for market, and are perpetual bearers when irrigated.

## KITTATINNY BLACKBERRY,

This most prolific, largest and most popular sort.

I offer also a large assortment of new and old varieties of

STRAWBERRY, RASPBERRY,

Blackberry, Gooseberry and Currants.

For full Price List send for a Catalogue.

To secure a crop of Berries the first season it is important to plant very early.

**JOHN ROCK,**

San Jose, Cal.

## LOS ANGELES NURSERY.

The undersigned will furnish Fruit Trees of all kinds at low rates. We offer an unusually large stock of

Apple, Peach and Apricot Trees,

— ALSO —

Orange and Other Fruit Trees.

Our Trees are free from Disease or Blight of any kind. We have

WOOD'S EARLY APRICOT,

That bears four weeks earlier than any known variety. We also have new Apples and Peaches of much promise.

Send for catalogue at once.

**MILTON THOMAS,**

Los Angeles, Cal.

## THOS. MEHERIN,

516 Battery St., San Francisco.

## Seeds, Trees and Plants.

We offer for sale the present season the largest and best collection of Fruit and Ornamental Trees ever offered on the Pacific Coast, at REDUCED PRICES. Also,

Vegetable and Flower Seeds,

KENTUCKY, AUSTRALIAN and ITALIAN RYE GRASS, RED and WHITE CLOVER, Etc.

Agent for the

**Nurseries of B. S. Fox.**

Send for Price List. 516 Battery Street, San Francisco

1,000,000!

Strawberry, Raspberry, Blackberry and Cranberry Plants.

STRAWBERRY PLANTS.—The Essex Beauty, Crescent, Cinderella, Forest Rose, Glendale, Jucunda, Monarch of West, Langforth Prolific, Triomphe d' Gand, Wilson Albany.

RASPBERRY PLANTS.—Cuthbert Early, Early Prolific, Reliance, Pride of the Hudson, Brandywine, Herstine, Philadelphia Red, Clark, Henrietta, Hornet, Belle de Fontenay, Delaware Bristol.

BLACKBERRY PLANTS.—Deering Seedling. Early and the most productive of all. I will give satisfactory proof that these Berries have realized \$750 per acre. It paid more than twice as much as the old varieties; also the Early Cluster, the Vina Seedling, Kittatiny, the Mammoth Cluster, Missouri Mammoth, Dorchester and Lawton.

CRANBERRY PLANTS.—The Cherry Cranberry Vines at \$10 per 1,000, by mail 64 cents more. I will sell to responsible parties on time, part cash, 10-acre field of Cranberry vines under cultivation. Can be seen at the place. Send for Catalogue.

H. NYLAND,

Boulder Island, San Joaquin River.

## Phylloxera-Resisting Vines.

Vineyard proprietors desiring to plant American Grape Vines, which resist the attacks of the Phylloxera, either as Grafting Stock, or for direct production, which proves to be the only salvation and means of reconstructing the destroyed Vineyards of France, will do well to address

**BUSH & SON & MEISSNER,**  
Bushberg, Jefferson Co., Mo.

## PEPPER'S NURSERIES.

(Established 1868.)

For sale at reduced prices, a general assortment of Fruit Trees and Small Fruits; also choice Ornamental Shrubs, Roses, etc. A limited supply of Cook's Seedling Apple, one and two years old. Catalogue and list of prices furnished on application. Address

**W. H. PEPPER,**  
Petaluma, Sonoma Co., Cal.

## Geo. F. Silvester,

IMPORTER, WHOLESALE AND RETAIL DEALER IN

## SEEDS,

Fruit and Evergreen Trees, Plants, Etc

ALFALFA, GRASS AND CLOVER SEEDS

In large Quantities and offered in Lots to suit Purchasers.

GREAT REDUCTION IN PRICES.

Seed Warehouse, 317 Washington Street, San Francisco.

## Santa Clara Valley Nursery,

B. S. FOX, Proprietor.

I offer for sale this season a large general assortment of Nursery stock,

FRUIT TREES, SMALL FRUITS,

Shade and Ornamental Trees

— AND —

PLANTS, ROSES, ETC.

Apple and Pear Seedlings

AT REDUCED PRICES.

Also the MYROBOLAN PLUM STOCK, which does not sucker.

To parties buying largely I offer Special Inducements.

Address B. S. FOX, San Jose, Cal.

**THOS. MEHERIN, Agent,**

516 Battery St., San Francisco.

1879-80.

## W. R. STRONG &amp; CO.,

Field, Garden, Lawn and Tree

## SEEDS.

Our stock is FULL, FRESH and RELIABLE. In these essential particulars we claim to be unsurpassed. We have largely increased our list of varieties by importations from the best growers in the East and Europe. We make specialties of

ALFALFA, RED CLOVER,

Timothy, Red Top, Kentucky Blue Grass, HUNGARIAN GRASS, MILLET,

Mesquit Grass, Lawn Grasses, Etc.

Also, DUTCH FLOWERING BULBS of every description. Catalogue mailed free on application. We also do a

Wholesale Commission Business,

Handling all kinds of California and Tropical, Green and Dried Fruits, Nuts, Honey and General Merchandise. All orders promptly attended to. Address

W. R. STRONG & CO.,

6, 8 and 10 J Street, Sacramento, Cal.

## HANNAY'S NURSERY.

San Jose, Cal.

I offer for sale this season, a large and well assorted stock of

Fruit, Shade and Ornamental Trees.

My trees are WELL GROWN and HEALTHY, and of the

Best Known Varieties.

JOHN HANNAY.

Successor to Hannay Bros.,

San Jose, Cal.

100,000

## AUSTRALIAN GUM TREES.

First-Class Plants.

Six to 12 inches high, transplanted into boxes, in good condition for transportation. Price, \$6 to \$12 per 1,000.

**JAS. T. STRATTON, Agent,**

Corner 12th Street and 9th Avenue,  
Brooklyn, Alameda Co., Cal.

## TAKE NOTICE!

To those contemplating planting ORANGE and LEMON

Trees, I would recommend only the Best Varieties of

THORNLESS TREES.

Catalogue containing full particulars furnished free on application. Address

**THOS. A. GAREY,**  
P. O. Box 193, Los Angeles, Cal.

## JAMES HANNAY'S NURSERY,

SAN JOSE, CAL.

I offer for sale at low prices a well assorted stock of one-year-old

Apple, Pear and Cherry Trees.

Also, a large stock of Apricot, Peach, Pear, Cherry and Plum, in the dormant bud, for \$80 per 1,000. Address

JAMES HANNAY, San Jose, Cal.

B. KOHLER,

Florist and Nurseryman,

St. Helena, Napa Co., Cal.,

Will send Grape Cuttings of the principal varieties grown in St. Helena District, Napa Valley, to any part of the United States at Moderate Charges.

Correspondence on Viniculture invited.

## Seedsman.

## J. Hutchison's Nurseries,

OAKLAND, CAL.

Established in 1852.

An immense stock of NEW and RARE PLANTS, Evergreen Trees and Ornamental Shrubbery.

## CYPRESS FOR HEDGES,

One to three years old.

Roses, Fuchias, Pinks, Magnolias, Camellias, Daphnes, Etc., Etc.,

In endless variety, at

## BEDROCK PRICES!!

SEEDS and BULBS of all kinds. Send for Catalogue.

## SEVIN VINCENT &amp; CO.,

Importers, growers of, wholesale and retail dealers in

## SEEDS

Field, Grass, Flower and Tree Seeds.

CLOVER, ALFALFA,

BULBS, FRUIT, ORNAMENTAL TREES, ETC.

We call the attention of farmers and country merchants to our unusually low prices. Trade price list on application.

We issue the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is handsomely illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

**SEVIN VINCENT & CO.,**  
607 Sansome Street, S. F.

## SEEDS!

**Thomas A. Cox & Co.,**

Importers and Dealers in

Vegetable, Flower, Field, Grass and Tree Seeds.

We wish to announce to country merchants and the trade generally that we are ready to supply all descriptions of Seeds of the New Crop of 1879.

Special prices on application. Vegetable and Flower Seeds put up in small packets for the retail trade.

## FRESH AND TRUE TO NAME.

We will send the following Seeds, postpaid, on receipt of price. Remit by P. O. Order or postage stamps:

Beets, per oz.....10c	Parsnips, per oz.....10c
Carrots, per oz.....10c	Radish, per oz.....10c
Cabbage, per oz.....25c	Spinach, per oz.....10c
Lettuce, per oz.....15c	Turnip, per oz.....10c
Onion, per oz.....15c	Tomato, per oz.....25c

We will mail to any address a collection of 20 packets of choice Flower or Garden Seeds for \$1.

Fruit and Ornamental Trees at Nursery Prices.  
**THOMAS A. COX & CO.,**  
409 Sansome Street, San Francisco.

## R. J. TRUMBULL &amp; CO.,

SUCCESSORS TO

R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST. Prices Unusually Low.

\*"Guide to the Vegetable and Flower Garden," will be sent FREE TO ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL & CO.,  
419 and 421 Sansome Street, S. F.

## J. P. SWEENEY &amp; CO.'S

## SEED WAREHOUSE,

409 & 411 Davis St., San Francisco.

ESTABLISHED IN 1853.

Keep constantly on hand the largest stock of FIELD, GARDEN, CONIFER, or

## CALIFORNIA TREE SEEDS,

On the Pacific Coast. Seeds all FRESH and GENUINE. Our Stock is large, especially of the following varieties:

ALFALFA, BLUE GRASS,

Red and White Clover, Red Top, Timothy, Australian Rye Grass, Mesquit Grass, Lawn Grass and Millet Seeds

Of different varieties. Field Seeds, Mangel Wurzel and Sugar Beets, Rutabagas, Carrot Seeds of all varieties, Peas, Beans, etc. Our assortment of GARDEN and FLOWER SEEDS are full and complete. Also, FRUIT and ORNAMENTAL TREES at Nursery Prices.

Trees For Sale at Lowest Market Rates.

For Catalogue, Price Lists, etc., apply as above.

## A NEW VARIETY!

Examined and endorsed by Agricultural Department at a Washington.

A Large and Luscious

## HYBRID TOMATO.

Superior to all other Species, taste and flavor assimilating orchard fruit.

This species of Tomato, the Yellow Large and Red Medium, each equally delicious in flavor, may be procured in packages of about 50 seeds, and will be sent to any address on receipt of 25 cents.

Address SEVERIN MILLER,

P. O. Box 394, Davenport, Iowa.

## SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED, together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.

## PRINGLE'S

## New Hybrid Wheats,

Champlain and Defiance.

Heads 6 in. long—128 bushels to the acre.

Illustrated circulars showing different methods of cultivation by which this and other wonderful yields were produced, mailed to all applicants. Price of each variety, \$2.00 per peck, \$7.00 per bushel. Bags containing two bushels, \$13.00. Prices for larger quantities on application. Trial packages by mail, 1 lb., 40 cts.; 3 lbs., \$1.00.

B. K. BLISS & SONS,  
P. O. Box 4129, 34 Barclay St., N. Y.

## EXOTIC GARDENS.

F. A. MILLER & CO., Mission St., opposite Woodward's Gardens. Send for Catalogue and Price List.

## ASSESSMENT NOTICE.

The California Fruit Growing Association.

Location of principal place of business, San Francisco.

Location of works, El Dorado county, California.

Notice is hereby given, that at a meeting of the Directors, held on the 24th day of November, 1879, an assessment (No. 10), of \$4.00 per share was levied upon the capital stock of the Corporation, payable immediately in United States gold coin, to the Secretary, at the office of the Company, 641 Sacramento street, San Francisco.

Any stock upon which this assessment shall remain unpaid on the 8th day of January, 1880, will be delinquent, and advertised for sale at public auction; and unless payment is made before, will be sold on Monday, the 2d day of February, 1880, to pay the delinquent assessment, together with costs of advertising and expenses of sale.

D. A. BROWN, Secretary,

Office—641 Sacramento Street.



**New York Dried Fruit Markets.**  
NEW YORK, December 20.—Foreign Fruits are quiet, ex-



cept for Raisins and Currants, the former being active at higher prices. Currants show every indication of an advance, the latest cable advices quoting 6c for choice; at the close new was held at 6c, old 5 1/2c. Figs are dull.

New York, December 23.—Malaga Raisins are very firm, at last quotations, but less active. Valencias have advanced 1/2c, and are now quoted at 8c. Prunes are in better demand; old are now held at 7c, new at 8 1/2c. Dried Apples are dull, as supplies increase; prices are easier; Southern sliced, 7 1/2c.

DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., December 24, 1879.

<b>BEANS &amp; PEAS.</b>					
Mayo, cti.....	10	@	20		
Butter.....	1	25	@	10	
Oatmeal.....	3	50	@	00	
Peas.....	1	37 1/2	@	50	
Red.....	90	@	00		
Pink.....	90	@	00		
Sm'l White.....	37 1/2	@	50		
Lima.....	6	00	@	50	
Field Peas, yellow.....	37 1/2	@	50		
do, green.....	95	@	00		
<b>BROOM CORN.</b>					
Southern.....	1 1/2	@	2		
Northern.....	2 1/2	@	3 1/2		
<b>CHEESE.</b>					
California.....	4	@	4 1/2		
German.....	6 1/2	@	7		
<b>DAIRY PRODUCE, ETC.</b>					
<b>BUTTER.</b>					
Cal. Fresh Roll, lb.....	25	@	28		
Fancy Brands.....	22 1/2	@	24		
Pickled Roll.....	18	@	22 1/2		
Western.....	12 1/2	@	15		
New York.....	—	@	—		
<b>CHEESE.</b>					
Chesse, Cal, lb.....	14	@	17		
N. Y. State.....	—	@	—		
<b>EGGS.</b>					
Cal. fresh, doz.....	32	@	35		
Ducks.....	—	@	—		
Oregon.....	—	@	—		
Eastern, by expr's.....	27 1/2	@	30		
Pickled here.....	—	@	—		
Utah.....	30	@	32 1/2		
<b>FEED.</b>					
Bran, ton.....	10	@	17 00		
Corn Meal.....	22	@	23 50		
Hay.....	8	@	13 00		
Middlings.....	—	@	—		
Oil Cake Meal.....	34	@	00		
Straw, bale.....	4	@	50		
<b>FLOUR.</b>					
Extra, City Mills.....	12 1/2	@	62 1/2		
do, Country Mills.....	5	@	60		
do, Oregon.....	5	@	62 1/2		
do, Walla Walla.....	5	@	62 1/2		
Superfine.....	3	@	64 1/2		
<b>FRESH MEAT.</b>					
Beef, 1st quality, lb.....	6	@	7		
Second.....	4 1/2	@	5 1/2		
Third.....	3 1/2	@	4 1/2		
Mutton.....	4 1/2	@	5 1/2		
Spring Lamb.....	5	@	7		
Pork, undressed.....	3 1/2	@	3 1/2		
Dressed.....	5	@	5 1/2		
Veal.....	5	@	6		
Milk Calves.....	6 1/2	@	7 1/2		
do, choice.....	6 1/2	@	7 1/2		
<b>GRAIN, ETC.</b>					
Barley, feed, cti.....	7 1/2	@	8 1/2		
do, Brewing.....	5	@	10 00		
Chevalier.....	1	50	@	1 75	
do, Coast.....	1	00	@	1 20	
Buckwheat.....	1	25	@	1 35	
Corn, White.....	92 1/2	@	95		
Yellow.....	95	@	100		
Small Round.....	97 1/2	@	102 1/2		
Oats.....	100	@	101 35		
Milling.....	100	@	101 50		
Rye.....	1	10	@	1 25	
Wheat, No. 1.....	2	00	@	2 05	
do, No. 2.....	1	92 1/2	@	1 97 1/2	
do, No. 3.....	1	70	@	1 75	
Choice Milling.....	2	05	@	2 07 1/2	
<b>HIDES.</b>					
Hides, dry.....	20	@	20 1/2		
Wet salted.....	9	@	10		
<b>HONEY, ETC.</b>					
Beeswax, lb.....	22 1/2	@	25 1/2		
Honey in comb.....	18	@	20		
do, No. 2.....	12 1/2	@	17		
Dark.....	10	@	15		
Extracted.....	10	@	12 1/2		
<b>NUTS—Jobbing.</b>					
Walnuts, Cal.....	12	@	14		
do, Chile.....	8	@	9		
Almonds, hds.....	10	@	10		
Soft sh'l.....	17 1/2	@	20		
Brazil.....	15	@	16		
Chestnuts, Italian.....	25	@	32 1/2		
Pecans.....	16	@	17		
Peanuts.....	8	@	9		

FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., December 24, 1879.

<b>FRUIT MARKET.</b>					
Apples, box.....	50	@	1 25		
Apricots, box.....	—	@	—		
Bananas, bunch.....	2	50	@	5 00	
Blackberries, ch'st.....	—	@	—		
Cherries, ch'st.....	—	@	—		
Citrons, Cal, 100.....	4	00	@	5 00	
Cocoanuts, 100.....	4	00	@	5 00	
Crab Apples.....	—	@	—		
Cranberries, bbl.....	10	@	14 00		
Currants, chest.....	—	@	—		
Figs, box.....	—	@	—		
Gooseberries.....	—	@	—		
Grapes, bx.....	55	@	75		
Damascus.....	—	@	—		
Muscad.....	50	@	75		
Isabelle.....	—	@	—		
Conchion.....	1	50	@	1 75	
Tokay.....	50	@	75		
Limes, Mex.....	5	00	@	6 50	
do, Cal, box.....	1	00	@	1 50	
Lemons, Cal M. 10.....	10	@	12 00		
Sicily, box.....	7	00	@	8 00	
Australian.....	—	@	—		
Nectarines, bsk.....	—	@	—		
Oranges, Cal M. 20.....	00	@	50 00		
do, small.....	—	@	—		
do, Tahiti.....	25	@	30 00		
do, Mexican.....	20	@	30 00		
Peaches, bsk.....	—	@	—		
do, Mountain.....	—	@	—		
Pears, bx.....	75	@	2 00		
Bartlett.....	—	@	—		
Beckel.....	—	@	—		
Pineapples, doz.....	6	00	@	6 00	
Plums, box.....	—	@	—		
Pomegranates.....	—	@	—		
Prunes, bsk.....	—	@	—		
Quinces, box.....	25	@	50		
Raspberries, ch'st.....	—	@	—		
St'wberries, ch'st.....	—	@	—		
<b>DRIED FRUIT.</b>					
Apples, sliced, lb.....	4	@	5		
do, quartered.....	3	@	4		
Apricots.....	15	@	18		
Blackberries.....	—	@	—		

Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, December 24, 3 P. M.

SILVER, 1 par.  
Gold Bars, 890@910. SILVER BARS, 10@18 1/2 cent. discount.  
EXCHANGE on New York, 20 on London bankers, 49 1/2 @ 49 3/4. Commercial, 50; Paris, 5 francs 50 cent; Mexican dollars, 93@95.  
LONDON CONSOL, 97 5/16; Bonds (4%), 106 1/2.  
QUOTATIONS in S. F., by the bank, 37 1/2 @ 38c.

THE NEW ALTHOUSE VANELESS MILL.

RAYMOND PATENT.

More being Sold than of any other Kind.

RECENTLY IMPROVED,

And Manufactured

Expressly for the Pacific Coast Trade.

The Bearings are Wood and Babbitt. It is the BEST MADE, the MOST PERFECT, MOST DURABLE and the

Cheapest First-Class Windmill in Use.

Our new Vaneless Mill will last a life-time with reasonable care. Mills set up in any part of the State. Contracts taken for the erection of Water Works. Buy the

NEW ALTHOUSE,

The Cheapest and Least Liabie to get out of Order.

L. H. WOODIN,

Office with Baker & Hamilton, 17 Front St., San Francisco

BERKSHIRES.

A Few Choice Young Sows in Farrow to Imported Boars For Sale.

PRICE, \$35 EACH, BOXED and DELIVERED at STOCKTON.

Also, 6 Fine Pigs

About 3 months old, one litter. Will sell the lot to one person for \$60, Boxed and Delivered at Stockton.

ALFRED PARKER,

Bellota, San Joaquin County, Cal.

Commission Merchants.

CHAS. RYHNER,

(Member of the S. F. Produce Exchange.)

GENERAL COMMISSION MERCHANT.

— Dealer in —

FLOUR, GRAIN, FEED AND PRODUCE.

216 Davis Street,

between Clay and Commercial, - SAN FRANCISCO.

Consignment of all kinds of Produce solicited.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

CHARLES NAUMAN.

FRANK NAUMAN.

C. & F. NAUMAN & CO.,

Wholesale Commission Merchants

— AND DEALERS IN —

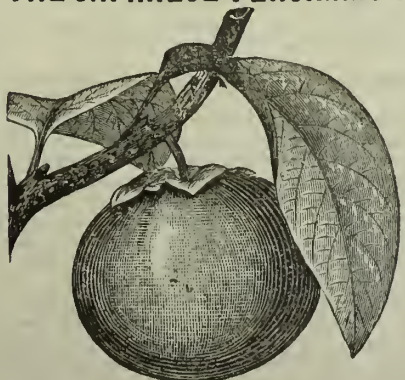
GRAIN, POTATOES, FRUIT, BUTTER, POULTRY, EGGS, GAME, ETC.

227 & 229 Washington St., San Francisco.

Consignments Solicited.

A MAGNIFICENT FRUIT

THE JAPANESE PERSIMMON



SEVEN BEST VARIETIES—ALL GRAFTED

Fruit grown at San Rafael, Cal., 10 inches in circumference.

1, 2 and 3 year old trees for sale.

AGENTS WANTED.

HENRY LOOMIS,

320 Sansome St. San Francisco.

50 Perfumed, Snowflake, Chromo, Motto Cards, name in gold and jet 10c. G. A. SPRING. E. Wallingford, Ct.

This paper is printed with ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety, 120 Sutter St., S. F.

New! The Very Best!

TRUE TO NAME!

FELIX GILLET'S NURSERY,

Nevada City, Cal.

SPECIALTIES:

NUTS OF ALL KINDS

— AND —

STRAWBERRIES.

Proeparturiens Walnut.

(Introduced in California in 1871, by FELIX GILLET.)



Proeparturiens Walnut.

The most precocious of all soft-shell varieties of Walnut, bearing even when three years old; hardy; a late bloomer; very productive. First bearing trees in California, at Felix Gillet's Nursery, fifth crop, 1879. (Full description in Descriptive Catalogue.)

ONE-YEAR-OLD TREES

Of that new and valuable variety sent to any part of California and the United States, by mail, FREE OF CHARGES, in packages of two feet; packed in damp moss and oiled paper, and guaranteed to arrive in as FRESH a condition as when leaving our Nurseries, at the following prices: \$1 per tree for less than half a dozen; \$8 per dozen,

\$50 Per Hundred.

Also, One-Year-Old Late or Serotina,

— AND —

JEWELER'S WALNUTS,

At the above Prices.

Marron de Lyon and Marron Combale

CHESTNUTS.

Italian and Spanish Filberts.

MEDLAR (Monstrueuse.)

BLACK MULBERRY (NOIR OF SPAIN.)

23 Varieties of English Gooseberries.

FRENCH, ENGLISH and DUTCH STRAWBERRIES.

French Ever-Bearing Raspberry.

FORTY VARIETIES OF GRAPES, Etc., Etc.

Send for Descriptive Catalogue and Price List

FELIX GILLET,

Nevada City, Cal.



Will be mailed FREE to all applicants, and to customers without ordering it. It contains four colored plates, 600 engravings, about 500 pages, and full descriptions, prices and directions for planting 1500 varieties of Vegetable and Flower Seeds, Plants, Roses, etc. Invaluable to all. Send for it. Address, D. M. FERRY & CO., Detroit, Mich.

STOCKTON

Telegraph Institute

and

NORMAL SCHOOL.

Open day and evening for both sexes. Expenses less than one-half the usual rates. Excellent board in private families from \$5 to \$10 per month. Address, for Catalogue, Journal and Circulars, F. R. CLARKE, Principal, Stockton, Cal.

AGENTS! READ THIS!

We will pay Agents a Salary of \$100 per month and expenses, or allow a large Commission, to sell our new and wonderful inventions. We mean what we say. Sample free. Address SHERMAN & CO., Marshall, Mich.

FOR SALE IN LOTS TO SUIT

PERUVIAN CUANO

First-Class for Fertilizing.

Apply at the office of

JOHN PARROTT, - 414 Montgomery St.

50 Perfumed, gilt edge & chromo Cards, elegant case, name in gold, 10c. ATLANTIC CARD CO., E. Wallingford, Ct.

60 Chromo, perfumed, Snowflake & Lace cards, name on all 10c. Game Authors, 15c. Lyman & Co., Clintonville, Ct.



BERRIES.

Queen of the Market.

The largest, handsomest, best hardy RED RASPBERRY, 3 inches around. POT GROWN PLANTS from healthy Root Cuttings, worth double the usual out-door suckers. Sent postpaid by mail \$2 per doz. Catalogues free.

W. PARRY,

Cinnaminson, New Jersey.

60 Elegant Perfumed Cards, Chromo, Motto, Lily, Etc., 15c. Gift with each pack. H. M. SMITH, Clintonville, Ct.



## Agricultural Articles.

## The Famous "Enterprise."

PERKINS' PATENT  
Self Regulating  
**WINDMILLS,**  
Pumps & Fixtures.



These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babitted boxes. Positively self regulating, with no coiled springs or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

**HORTON & KENNEDY,**

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

## MATTESON &amp; WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over eradic knots without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

**MATTESON & WILLIAMSON,**  
STOCKTON, CAL.

## COOLEY CREAMER.



Supersedes large and small pans for setting milk.

It requires no milk room. It requires capacity for one milking only.

Impure air, dust or flies cannot reach milk set in it.

It makes more butter, because it raises all of the cream, and the quantity is never lessened by unfavorable weather.

It makes better Butter. It requires less labor. It is cheaper. Butter made by this process took the Highest Award at the INTERNATIONAL DAIRY FAIR, held in New York, December, 1878, and at the Royal Agricultural Exhibition, held in London, June, 1879, and brings the highest price in all the great markets.

Send stamp for the DAIRYMAN to

**VERMONT FARM MACHINE CO.,**  
Bellows Falls, Vermont.

## The Boss Pruner.

Patented Jan. 8, 1878.

**ENTIRELY NEW!**

Works on a cog principle. Smallest size cuts one inch, and largest size two inches in diameter. Has been thoroughly tested, and given perfect satisfaction. Sold by

**GEORGE LARKIN,**  
Newcastle, Placer County, Cal.

## CARD.

The undersigned having purchased the business of the Marin and Sonoma County Land Office, and recognizing the necessity for a radical change in the matter of conducting it, have made arrangements to carry it on upon a basis and principles such as must insure satisfaction to our patrons. No shading descriptions permitted; all guaranteed. LINGLEY & BEATTY, 702 Market street.

Refer to Hon. C. Palmer, Hon. C. Clayton, R. McElroy, Esq., L. Shore, Esq.

N. B.—All descriptions of farms and city and Oakland property for sale and exchange. L. & B.

GILES H. GRAY.

JAMES M. HAVEN.

**GRAY & HAVEN,**

Attorneys and Counsellors-at-Law,

In building of Pacific Insurance Co.,

Corner California and Leidesdorff streets, San Francisco.

**JOHN ROGERS & SONS,**

GENERAL STOCK AND SALE YARD,

Corner Market and 9th Sts., San Francisco.

HORSES and MILCH COWS sold on commission. Also, dealers in HAY and GRAIN. Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. **STEVENS, BROS.,** Northford, Conn.

## SUB-IRRIGATION.

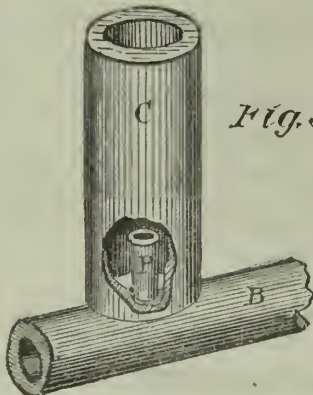
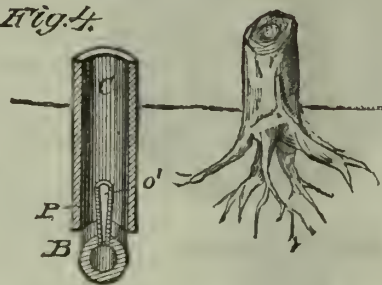


Fig. 3.

Fig. 4.



—FOR—

**Orchards, Vineyards, Small Fruits, Alfalfa, Lawns, Vegetables, Etc.**

The Asbestine System consists in conducting the water in concrete pipes laid below reach of the plow.

It saves from three-fourths to nine-tenths the water used in surface irrigation.

It is under perfect control, and can be applied wherever irrigation is needed.

The surface remaining dry there is no need of Summer Cultivation, either before or after irrigating.

The soil is never excessively wet and cannot bake, but remains moist, loose and at a nearly uniform temperature, promoting a long-continued Summer's growth.

Anything which the soil lacks as plant food (manure, lime, etc.) can be easily, directly and economically applied in liquid form; the pest of the vineyard—phylloxera—can thus be easily reached.

No grading is necessary, as the system works perfectly on hillsides and undulating land.

Roots cannot get into the pipe, neither can it suck mud—difficulties never overcome by any other system of sub-irrigation.

The pipe is made continuously with a recently patented machine which makes and lays it in the trench, following all the undulations and curves.

Water is not kept in the pipes; but is applied about twice a month.

Three men will easily lay 1,200 feet of two-inch pipe in 10 hours.

This system and machines used are fully protected by U. S. Patents.

Our pipe machine makes the cheapest and best tile drain known, and is especially valuable for making and laying pipe for conducting water from springs, out of canyons, etc.

For further information, circulars, etc., address **WILSON & BROWER**, General Agents for California, Sacramento, Cal., or

## Asbestine Sub-Irrigation Co.,

Los Angeles, Cal.

## Nathaniel Curry &amp; Bro.,

113 Sansome Street, San Francisco.



Sole Agents for the

**Sharps Rifle Co., of Bridgeport, Conn.**

FOR CALIFORNIA, OREGON, ARIZONA, NEVADA, WASHINGTON TERRITORY AND IDAHO.

Also Agents for W. W. GREENER'S Celebrated Wedgefast, Chokebore, Breech-loading DOUBLE GUNS; and all kinds of GUNS, RIFLES and PISTOLS made by the Leading Manufacturers of England and America. AMMUNITION of all kinds in quantities to suit.

## SECURE PATENTS



Through Dewey & Co.'s Scientific Press Patent Agency.

OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library containing official American and foreign reports, files of scientific and mechanical publications, etc. All worthy inventions patented through our Agency will have the benefit of an illustration or a description in the MINING AND SCIENTIFIC PRESS. We transact every branch of Patent business, and obtain Patents in all countries which grant protection to inventors. The large majority of U. S. and Foreign Patents issued to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most reliable advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free. **DEWEY & CO., PATENT AGENTS.**

A. T. DEWEY. W. B. EWER. GEO. H. STRONG.

## WELLS, RICHARDSON &amp; CO'S

PERFECTED

## BUTTER COLOR

Gives Butter the gilt-edge color the year round. The largest Butter Buyers recommend its use. Thousands of Dairywomen say IT IS PERFECT. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. **WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.**

M. W. DUNHAM

Just Imported 36 Head

FOR HIS OAKLAWN STUD OF

**Percheron-Norman HORSES.**



Largest and Most Complete Establishment of the Kind in the World.

More than 200 Stallions and Mares

Imported from Best Stud Stables of France.

Winners of First Prizes in Europe and America, awarded First Prizes and Gold Medals at the Universal Exposition at Paris, 1878, over all. First Prizes and Grand Medals at Centennial Exhibition, 1876.

The public appreciation of its merits is indicated by the great demand for stock from every part of the country. During the past twelve months, the provinces of New Brunswick, Canada, and the States of New York, Pennsylvania, Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Nebraska, Kansas, Texas, Louisiana, Colorado, Nevada, California and Oregon, and Utah, Washington and Idaho Territories have drawn supplies from its Stables.

100-page Catalogue—finest thing of the kind ever issued; 25 pictures of Stallions and Mares, sent free on application.

M. W. DUNHAM,

Wayne, DuPage County, Illinois.

N. B.—All Imported and Pure Native Bred Animals Recorded in Percheron-Norman Stud Book.

## ST. DAVID'S.

A FIRST-CLASS LODGING HOUSE.  
CONTAINS 113 ROOMS.

715 Howard St., near Third, San Francisco.

This House is especially designed as a comfortable home for gentlemen and ladies visiting the city from the interior. No dark rooms. Gas and running water in each room. The floors are covered with body Brussels carpet, and all of the furniture is made of solid black walnut. Each bed has a spring mattress, with an additional hair top mattress, making them the most luxurious and healthy beds in the world. Ladies wishing to cook for themselves or families, are allowed the free use of a large public kitchen and dining room, with dishes. Servants wash the dishes and keep up a constant fire from 6 A. M. to 7 P. M. Hot and cold baths, a large parlor and reading room, containing a Grand Piano—all free to guests. Price single rooms per night, 50 cts.; per week, from \$2.50 upwards.

R. HUGHES, Proprietor.

At Market Street Ferry, take Omnibus line of street cars to corner Third and Howard.

## THE DEAF HEAR

THROUGH THE TEETH!

PHYSICALLY, all Ordinary Conversation, Lectures, Concerts, etc., by NEW Channels, to the Nerves of Hearing, by a wonderful New Self-enclosed Invention, THE DENTAPHONE. For remarkable public tests, see the Deaf and Dumb—See New York Herald, Sept. 28, Christian Standard, Sept. 27, etc. It displaces all Ear-trumpets. Size of an ordinary Watch. Send for our FREE pamphlet. Address **AMERICAN DENTAPHONE CO., 257 Vine St., Cincinnati, Ohio.**

## WANTED!

Reliable, competent, active Agents for the sale of my

**Orange and Lemon Trees,**

In all the counties and cities of the State adapted to Citrus culture. The best of references required for competency and reliability. Address with references,

**THOS. A. GAREY,**

P. O. Box 188, Los Angeles, Cal.

## Mission Rock Dock and Grain Warehouse.

San Francisco, Cal.

40,000 tons capacity. Storage at lowest rates.

**CHAS. H. SINCLAIR, Supt.**

CALIFORNIA DRY DOCK CO. - - Proprietors.

Office—313 California Street, Room 3.

## SITUATION WANTED.

A Mechanic, 41 years of age, desires a situation on a Farm. Wages not so much of an object, for the first six months, as a wish to remove from the city for the winter, and to gain some general information of farm work, before going into this farming business for himself. Address,

**J. SHOERS,**

No 639 Mission St. S. F.

## CERTIFICATE OF CO-PARTNERSHIP.

We certify that we constitute a partnership transacting business in this State; its principal place of business is San Francisco, California; its name is **RANKIN, BRAYTON & CO.** The full names and respective places of residence of all its members are signed hereto. San Francisco, Dec. 6, 1879.

**IRA PACKARD RANKIN,** of San Francisco, Cal.  
**ALBERT PAULING BRAYTON** of Oakland, Cal.  
Duly acknowledged Dec. 9th, 1879, before James C. Ward, Notary Public. Endorsed: Fifth December 9th, 1879. Wm A. Stuart County Clerk. By Jerry Whalen, Deputy Clerk.



# LATEST WINCHESTER REPEATER.

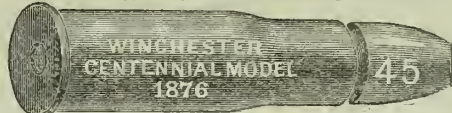
MODEL 1879—TARGET RIFLE—45 CALIBRE, 60 GRAINS POWDER.



With Pistol Grip, Vernier and Wind Gauge Sights.

Uses Central Fire Cartridges (straight shell) 45 calibre, 60 grain powder, 300 grains lead. This splendid Gun is perfection as a Sporting Rifle, for defense or as a target Rifle.

**CAUTION!** The W. R. Arms Co. manufacture Cartridges for their own arms, and persons are hereby cautioned against using those made by any other Cartridge Companies who have no interest in such arms or their efficiency, if they wish to be insured against accident.



The SAN FRANCISCO AGENCY is now fully supplied with this splendid Arm—Standard blued or extra finish—set or plain Trigger. Also with the

## New Winchester Express Rifle,

50 Calibre, straight Cartridge, 95 grs. powder, 330 grs. lead. Also the

## NEW HOTCHKISS REPEATER,

set out, using the U. S. Government Cartridge, 45 calibre, 70 grains powder. Both Sporting and Military styles of this fine Arm are ready for delivery to the trade. o a large and complete stock constantly on hand of Models, 1860, 1873 and 1876, as well as all other kinds of goods manufactured by the Winchester Repeating Arms Co., viz:

## CARTRIDGES,

Both RIM and CENTRAL FIRE, by the million, for all kinds of Rifles and Pistols.

Brass and Paper Shot Gun Shells, Primed Cartridge Shells, Reloading Tools, Primers, Percussion Caps and Gun Wads.

**JOHN SKINKER, 115 Pine St., S. F.,**

Sole Agent for the Pacific Coast.

## MONEY FOOD

For Farmers. For Hogs.

## CHEAP PORK.

## The Brazilian Artichoke,

Is the cheapest and best food for Hogs, being ahead of anything in existence for that purpose. 600 to 1,000 bushels to the acre. Little trouble. No harvesting. No feeding. The Hogs will help themselves if allowed to do so.

I have eight acres of Artichokes this year, and will furnish seed for half the price of last year, when my seed cost me 25 cents a pound.

PRICE—I will send by Express or common freight, 50 to 300 lbs. at 34 cents a pound. Over 300 lbs., 3 cts.; 1,000 lbs. and over, 2½ cts.; 3 lbs. by mail for \$1. I will send a circular with each package giving all information. Send all money in draft on San Francisco or P. O. Order on Hollister Post-office.

Winter is the best time to ship Artichokes. Frost does not hurt them.

150 lbs. plants an acre.

For further information send for circular. Address

J. H. F. GOFF,

San Felipe, Santa Clara County, Cal.

## THE WILSON ADJUSTABLE CHAIR,

With 30 Changes of Position.

Patented in the United States and Foreign Countries. BEST CHAIR IN THE WORLD.

Parlor, Combining  
LIBRARY, Beauty,  
Invalid Chair, Lightness,  
Rocker, Strength,  
BED or Simplicity  
LOUNGE, and  
READING POSITION, Comfort.

Same Chair in Cane Seating, very desirable for summer. Manufactured of the best of wrought iron and rivets. Castors made purposely for the Chair. Everything to an exact science. **IT WILL LAST A LIFE-TIME.**

Has been awarded Medals, Prizes and Diplomas for its superiority and merit wherever it has been exhibited.

Orders by mail promptly attended to. Goods shipped to any address, C. O. D. Send for Illustrated Circular.

Address the WILSON ADJUSTABLE CHAIR MFG CO., 535 Washington St., Boston

Sawing off a Log,  
Easy and Fast.

Our latest improved sawing machine cuts off a 2-foot log in 2 minutes. A \$100 PRESENT will be given to two men who can saw as much in the old way, as one man can with this machine. Circulars sent free. W. GILES, 741 W. Lake St., Chicago, Ill.

## CARP FISH FOR SALE

— BY —

LEVI DAVIS,

At Forestville, Sonoma County, California, IN LOTS TO SUIT.

## The New Beekeepers' Text Book.

By A. J. KING. The latest work on the Apilary, embodying accounts of all the newest methods and appliances. Fully illustrated. Sent by mail, post-paid, for \$1. DEWEY &amp; CO., 202 Sansome Street, S. F.

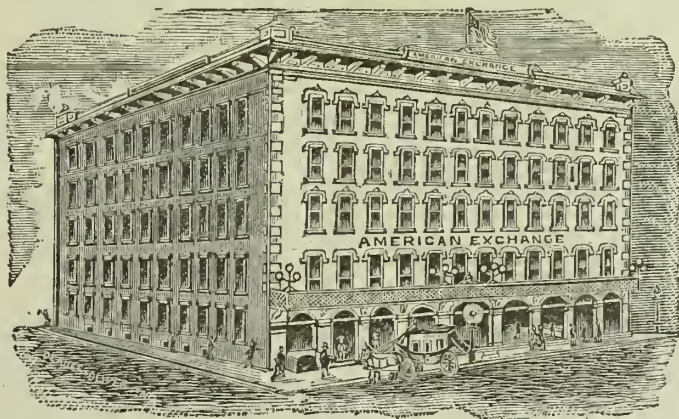
## The American Exchange Hotel,

SAN FRANCISCO, CAL.,

Is situated on Sansome street, next adjoining Bank of California, and is in the very center of the great city.

Sansome Street is one of the finest and principal business streets in S. F.

The Hotel is situated within two blocks of the U. Land Office and U. S. Surveyor General's Office; also within



two blocks of the City Hall, Supreme Court and all the District Courts; within two blocks of the Postoffice and Custom House. All places of amusement are convenient to the Hotel. Street cars for all parts of the city, pass the Hotel every minute.

## THE AMERICAN EXCHANGE HOTEL

Having been recently renovated and refurnished throughout is in every respect the BEST FAMILY HOTEL San Francisco. It has Two Hundred Rooms, well ventilated and neatly furnished, and being easy of access, fire-proof and sunny, is decidedly the Hotel for comfort and convenience for the traveling public.

— OFFICE OF THE —

## BLACK POINT PACKING AND SLAUGHTER HOUSE.

MERRY, FAULL &amp; CO., Proprietors.

## TO OWNERS OF LIVE STOCK!

We are prepared to receive on Consignment, CATTLE, SHEEP and HOGS, charging moderately for killing, delivery and guarantee, and making advances to shippers on receipt at our Yards, which are supplied with every convenience. We assure our customers a

## SQUARE DEAL and FULL MARKET PRICES

For their product, and invite their inspection of our facilities, which are the best on the Pacific Coast. We shall be pleased to give all information in our power as to Market Prices. Please address our

Principal Office, No. 125 &amp; 127 California Street, San Francisco.

In consequence of spurious imitations of

## LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signatures thus,

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA &amp; PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &amp;c., &amp;c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS &amp; CO., San Francisco.

## HOLIDAY MUSIC!

Six Christmas Carols. 25 Cts. New. By H. N. BARTLETT. Also many other fine Carols. Send for lists.

Christmas Gifts. Nothing is better than an Sheet Music, such as GEMS OF ENGLISH SONG, CLUSTER OF GEMS, SUNSHINE OF SONG, or one of the 30 others of similar style, costing from \$3 to \$4 each, and including each from 100 to 200 popular Songs or Pieces.

Christmas Gift. Nothing is better than a Band or Orchestral Instrument, a music box (large or small), a drum, or any Toy Instrument. Full stock. Send for lists.

Organists will do well to present themselves with DITSON &amp; CO.'S ORGAN SELECTIONS (\$1.50), containing 52 pieces by the best composers. May be used as Voluntaries.

The sweet Sunday School Song Book, WHITE ROBES, (30 cts.) will be a most acceptable present for a Sunday School.

The bright Temperance Song Book, TEMPERANCE JEWELS (30 cts.), just out, will give new interest to Lodge and Reform meetings.

Any book mailed for retail price.

OLIVER DITSON &amp; CO., BOSTON.

C. H. Ditson &amp; Co., 843 Broadway, N. Y.

P. JONES.

J. THOMPSON.

JONES &amp; THOMPSON,

Wholesale and Retail Dealers in

## Hay, Grain and Feed.

Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,

1535 Mission St., San Francisco.

M. COOKE.

R. J. COOKE

## PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order, AND IN SHOOKS.

Communications Promptly Attended to.

COOKE &amp; SONS, Successors to COOKE &amp; GREGORY.

## PLEASANT SUMMER READING.

### THE NEW PENELOPE

— AND —

## Stories of California Life.

By MRS. F. F. VICTOR.

The best delineations of Western character and incident ever produced on this coast. Agents wanted for this popular work. Easy sales and large commissions. Address

MRS. F. F. VICTOR,

721 Market St., S. F., Bancroft's Building, top floor.

PRICE, \$2.00.

## A Card to Grangers and Farmers.

HAY, GRAIN, HORSES and CATTLE.

The undersigned is now prepared to receive and sell Hay, Grain, Horses and Cattle that may be consigned to him at the Highest Market Rates, and will open a trade direct with the consumer without the intervention of middlemen. He also asks consumers of Hay and Grain and Stock buyers to co-operate with him, and thus have but one commission between producer and buyer. Address S. H. DEPUY, Nos. 11 and 13 Bluxome St., San Francisco.

TRADE



MARK.

## LITTLE'S CHEMICAL FLUID.

The New Non-Poisonous Sheep Dip and Disinfectant. Price reduced to \$1.00 per gallon. For directions and testimonials apply to FALKNER, BELL &amp; CO., Sole Agents, 430 California Street, S. F.

SEND FOR THE  
\$1.50

## Homœopathic Medicine Case.

Containing 12 principal remedies, with directions for use. Also Veterinary cases and books. Send for catalogue. Address BOERICKE &amp; TAFEL, Homœopathic Pharmacy, San Francisco.

F. A. ROBBINS.

MANUFACTURER OF

Canners and Soap Makers' Presses and Dies JEWELERS' TOOLS.

ELECTRICAL and MODEL MACHINERY.

No. 7 First St., San Francisco.

## Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through this office, at published rates.



## INDEX TO VOLUME XXVIII

-OF THE-

## PACIFIC RURAL PRESS.

From July, 1879, to January, 1880.

PAOR.	PAGE.	PAOR.	PAGE.	PAOR.	PAGE.	PAOR.	PAGE.
Acacia Scale Insect.....	376	Brain Work and Skull	23	Grange, Wheatland.....	404	Life, Heroism in.....	246
*Acorn Granaries, Indian.....	233	Brain Growth.....	407	Grange, Isabella Regia.....	241	Life, Power of.....	246
Activity and Energy.....	138	Braun, Food Value of.....	275	Grange, Midway.....	244	Light, Mission of.....	242
Adobe, Lime on.....	50	Bride's Dresses.....	102	Grangers' Insurance Co.....	340	Likings Prove Character.....	242
Adobe, Working.....	373	Bridges, Raising a Sunken.....	66	Grape Interest, Rise in.....	121	Lilies, Classification of.....	306
Age, Requirements of.....	154	Bringing our Sheaves.....	342	Grape Picker.....	85	Lilly, New Asiatic.....	402
Agriculture, California.....	344	*Brook, the.....	310	Grape Pome.....	309	Limburger.....	402
Agriculture, Commis-		Brown Dye for Silk.....	374	Grape Scale Insect.....	104	Lime Water.....	401
sion of.....	357	Budding.....	130	Grape Seed.....	84	Live, How to.....	358
Agriculture in England.....	230	Buds, Restraining Early.....	1	Grape Sugar from Rags.....	69	Los Angeles Co., 5, 21, 30,	130
Agriculture, Obsolete.....	230	Burial, Proper.....	342	Grape Yields.....	233	Los Angeles, Japan, 17, 114	114
Agriculture, State Board		Burr Clover.....	83	Grapes, Cal. in Indiana.....	20	Los Angeles Fair, 251, 297, 300	300
of.....	101, 276	Business, Keep a Cool		Grapes, Cal. in Phila.....	353	Lotus in N. Y.....	316
Agricultural Department.....	264	Head in.....	406	Grapes, Dried Mission.....	370	Lover, How to Get a.....	134
Agricultural Society, Na-		Head in.....	406	Grapes, Huasco.....	337	Lumber Interest.....	321, 340
tional.....	329	Head in.....	406	Grapes, Preserving.....	225, 353		
Agriologist, Honors to.....	40	Head in.....	406	Grapes, Sun Burned.....	101		
Alameda County.....	7	Head in.....	406	Grasshopper Eating Grub.....	200		
212, 223, 261, 305, 340, 372		Head in.....	406	Grasshoppers in Cal.....	89, 117		
Alaska and People.....	204, 265	Head in.....	406	Grazing and Bullwhack-	259		
Alaska, Timber in.....	291	Head in.....	406	Guaymas.....	291		
Alfalfa Dairying.....	122	Head in.....	406	Guernsey Cattle.....	209		
Alfalfa, How to Grow.....	130	Head in.....	406	Gun, The Greener.....	232		
Alfalfa, Irrigation of.....	41	Head in.....	406	Gussie's Ride.....	257		
52, 72		Head in.....	406				
Alfalfa for Sheep.....	213	Head in.....	406				
Alfalfa for Bees.....	372	Head in.....	406				
Alfalfa Growth.....	292	Head in.....	406				
Alfalfa Seed Yield.....	340	Head in.....	406				
Almond Culture.....	5, 20, 149	Head in.....	406				
160, 181, 184, 312, 372		Head in.....	406				
Almonds, Harvesting.....	24	Head in.....	406				
Alpine Flora.....	245	Head in.....	406				
Altitude, Peculiarities of.....	201	Head in.....	406				
Alum Poisonous.....	321	Head in.....	406				
Amador Co., 4, 20, 36, 53, 121		Head in.....	406				
America, Ancient.....	362	Head in.....	406				
Amusements, Our.....	292	Head in.....	406				
Angora Goat in Cal.....	372	Head in.....	406				
Apary, Bay State.....	372	Head in.....	406				
Aphis and its Enemies.....	390	Head in.....	406				
Aphis on Crysanthemums.....	232	Head in.....	406				
Apple Crab.....	333	Head in.....	406				
Apple, Rambo.....	259, 296	Head in.....	406				
Apple, Redfleshed.....	257, 273	Head in.....	406				
313		Head in.....	406				
Apple, Skinner.....	163	Head in.....	406				
Apple, Swar.....	264	Head in.....	406				
Apple Snowballs.....	71	Head in.....	406				
Apples and Citrus Fruits.....	51	Head in.....	406				
Apples in Southern Cal.....	251	Head in.....	406				
Apples in Fresno County.....	308	Head in.....	406				
Apricots, Seedling.....	25	Head in.....	406				
Archaeology.....	170	Head in.....	406				
*Architectural Designs.....	174	Head in.....	406				
*Arctic Regions, Map.....	25	Head in.....	406				
Argols.....	340, 371	Head in.....	406				
Arithmetic, Lesson in.....	375	Head in.....	406				
Arizona Cane Sugar.....	375	Head in.....	406				
Arizona Indians.....	33	Head in.....	406				
Arizona Railroads.....	316	Head in.....	406				
Artisan Wells, 5, 35, 117, 149		Head in.....	406				
226, 261, 293, 346		Head in.....	406				
Artichoke, Brazilian.....	325	Head in.....	406				
Australian Meat for Eng-		Head in.....	406				
land.....	249	Head in.....	406				
Babies, Lecture on.....	6	Head in.....	406				
Baby Jim.....	119	Head in.....	406				
Baby, Russian.....	35	Head in.....	406				
Bacon, Pled for.....	33	Head in.....	406				
Bacon Farm, Visit to.....	233	Head in.....	406				
Bag Pipes, 1870-79.....	103	Head in.....	406				
*"Ballroom Bash," Cal.....	103	Head in.....	406				
Banana in Cal.....	308, 369	Head in.....	406				
Banana, the, 99, 132, 145, 165		Head in.....	406				
151		Head in.....	406				
Barl y, Chevalier.....	200, 261, 292	Head in.....	406				
Barley, Frick's.....	4, 147	Head in.....	406				
Barley, Separating from		Head in.....	406				
Wheat.....	38, 200	Head in.....	406				
*Barl's Tenantry.....	98	Head in.....	406				
Bats and Insects.....	403	Head in.....	406				
Baths, Hot or Cold.....	343	Head in.....	406				
Bees and Bees.....	222, 277	Head in.....	406				
Bees and Fruit.....	131	Head in.....	406				
Bees, Handling with Elec-		Head in.....	406				
tricity.....	323	Head in.....	406				
Bees, Plants for.....	115, 274, 274	Head in.....	406				
Bees Stings.....	268	Head in.....	406				
Bees Stings, Peach Juice		Head in.....	406				
for.....	133	Head in.....	406				
Beet Pulp for Stock.....	37, 332	Head in.....	406				
Beets, Growing Sugar.....	35, 225	Head in.....	406				
261		Head in.....	406				
Beet Sugar Industry.....	18, 220	Head in.....	406				
322, 340, 369, 373, 387		Head in.....	406				
Beets, Sun-Dried.....	264, 313, 321	Head in.....	406				
Bennie's Little Fishes.....	151	Head in.....	406				
Berkshires, Pedigree in.....	106	Head in.....	406				
Berry Planting.....	163	Head in.....	406				
Be Yourself.....	108	Head in.....	406				
Bibles, Distribution.....	70	Head in.....	406				
Biulphide, Applying.....	101	Head in.....	406				
Blackberry Growing.....	132, 163	Head in.....	406				
Blackberry Root for Di-		Head in.....	406				
arrhea.....	87	Head in.....	406				
Blackberry Wine.....	71	Head in.....	406				
Blistering as a Remedy.....	133	Head in.....	406				
Bluestoning Wheat.....	354	Head in.....	406				
Bodie, Railway to.....	309	Head in.....	406				
Bodie, Fluids of.....	55	Head in.....	406				
Boiler Explosions.....	20, 36	Head in.....	406				
Bone Fertilizers.....	41, 107, 213	Head in.....	406				
252, 293, 350		Head in.....	406				
Borax for Butter.....	307, 332	Head in.....	406				
Borax for Hoarseness.....	112	Head in.....	406				
*Borax in Walnut Tree.....	89	Head in.....	406				
Borrowers not Wanted.....	342	Head in.....	406				
Bottle Garden.....	386	Head in.....	406				
Botanical Specimens.....	195	Head in.....	406				
Bouldin Island.....	242	Head in.....	406				
Bouquet Making.....	131	Head in.....	406				
Boy and the Duke.....	7	Head in.....	406				
Boys, Advice to.....	270	Head in.....	406				
Boys, Encourage the.....	109	Head in.....	406				
Breeding for Color.....	248	Head in.....	406				
*Illustration. †Poetry.		Head in.....	406				

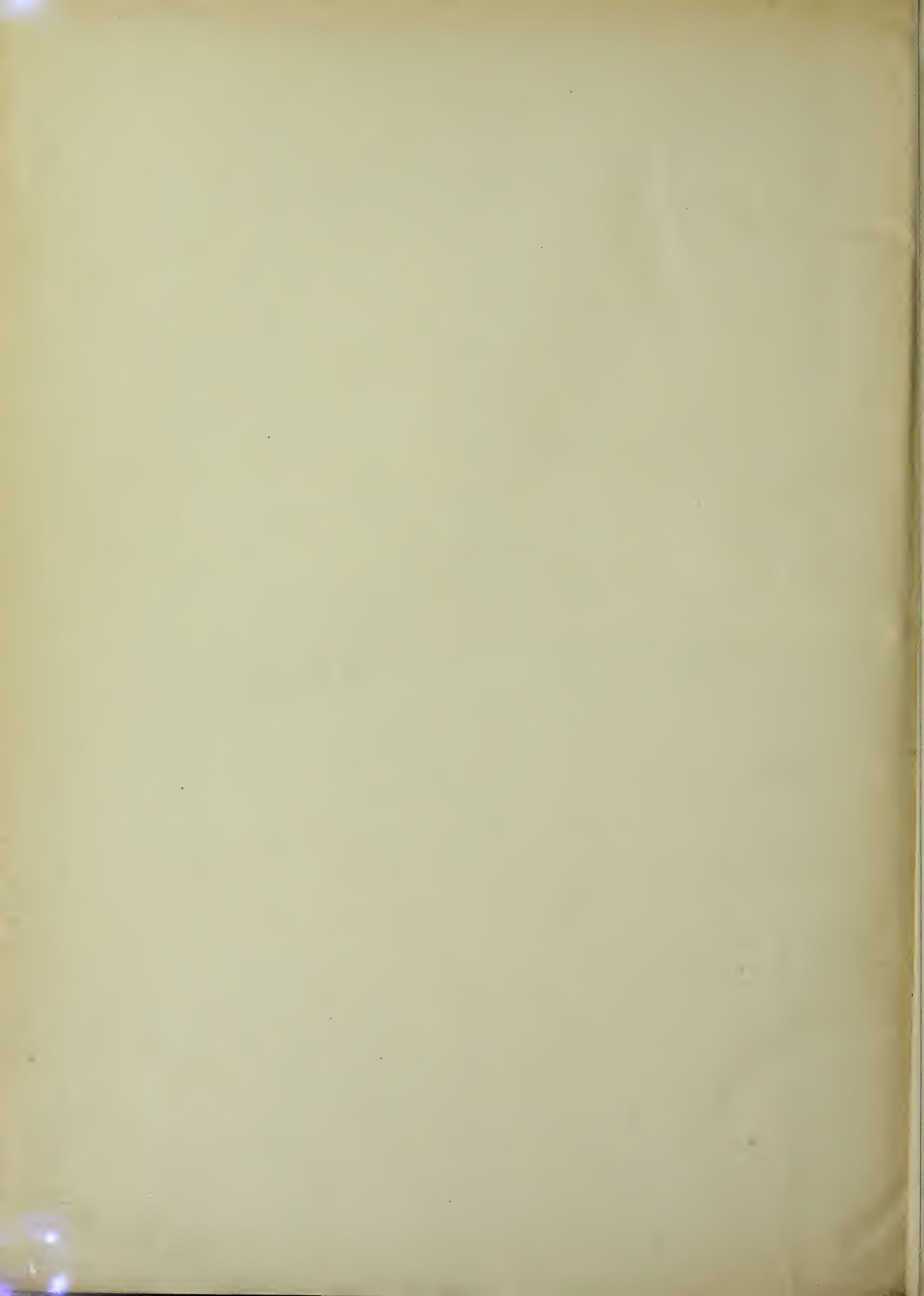
## Acknowledgement and Thanks.

LAKESIDE, Lake Co., Cal., Nov. 24, 1878.  
 MESSRS. DEWEY & CO.—Gentlemen: I hereby acknowl-  
 edge receipt of patent, for which I hereby accept my an-  
 nual fee. When I have any further business in this  
 line I shall certainly employ you. With kind regards,  
 Yours very truly,  
 CHAS. SLATTERBECK.















Ms 3118  
(



CALIFORNIA

STATE LIBRARY.



Extract from the Political Code.

SECTION 2296. Books may be taken from the Library by the MEMBERS OF THE LEGISLATURE, DURING THE SESSIONS THEREOF, and by other State officers at any time.

SEC. 2298. The Controller, if notified by the Librarian that any officer has failed to return books taken by him within the time prescribed by the Rules, and after demand made, must not draw his warrant for the salary of such officer until the return is made, or three times the value of the books, or of any injuries thereto, has been paid to the Librarian.

SEC. 2299. Every person who injures or fails to return any book taken is liable to the Librarian in three times the value thereof.

No person shall take or detain from the General Library more than two volumes at any one time, or for a longer period than two weeks. Books of reference shall not be taken from the Library at any time.—[Extract from the Rules.]

The foregoing Regulations will be strictly enforced.



